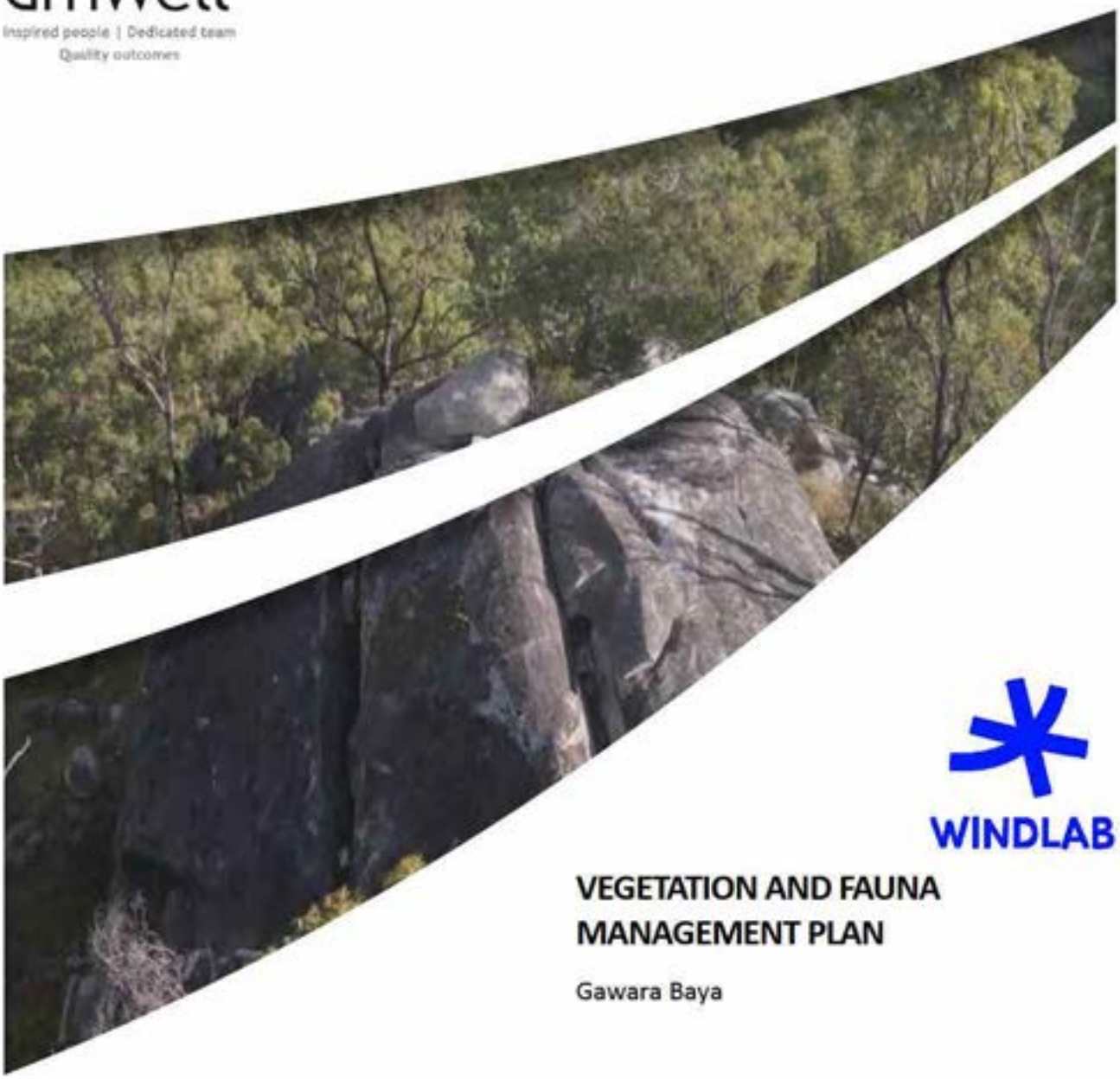
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VEGETATION AND FAUNA MANAGEMENT PLAN

Gawara Baya

FINAL

November 2025

WINDLAB

VEGETATION AND FAUNA MANAGEMENT PLAN

Gawara Baya

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Upper Burdekin Wind Farm Pty Limited

Project Director:	[redacted]
Project Manager:	[redacted]
Report No.	R01
Date:	November 2025

umwelt
Environmental & Social Consultants

This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

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	Name	Date	Name	Date
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Draft V2	[redacted]	28 January 2025		29 January 2025
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1.0 Introduction

1.1 Project Background

The Gawara Baya renewable energy project (the Project) includes up to 68 wind turbine generators (WTGs) and associated ancillary infrastructure including (but not limited to) Battery Energy Storage System (BESS), a 275-kilovolt (kV) transmission line corridor, collector substations, underground and overhead 33 kV electrical cabling, up to four permanent meteorological mast towers, access tracks, temporary construction compounds, laydown areas and a temporary accommodation camp. The Project proponent is Upper Burdekin Wind Farm Pty Ltd, a wholly owned subsidiary of Windlab Pty Ltd.

On 13 November 2023, the former Department of Housing Local Government Planning and Public Works (now the Department of State Development Infrastructure and Planning (DSDIP)) as represented by SARA granted Development Approval (SARA ref. 2211-32271 SDA) via Negotiated Decision for the Project, comprising:

- Development Permit for Material Change of Use for a Wind Farm (up to 69 turbines) and associated ancillary infrastructure.
- Development Permit for Operational Works for Clearing of Native Vegetation.
- This approval was replaced by an Other Change (SARA ref: 2408-42181) on 23 April 2025 to reflect layout changes and the reduction of WTGs from 69 to 68 and is current for period of six (6) years.

On 17 June 2024, Commonwealth Minister for Environment approved the Project under *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DCCEEW ref. 2021/9066). The approval was accompanied by conditions which requires Windlab to avoid and minimise impacts to key breeding areas and habitat to the Sharman's rock wallaby (*Petrogale sharmani*), and other species. To fulfill obligations under the EPBC Act, Windlab require changes to the Project, including revisions to the Development Footprint and micro-siting corridor.

This Vegetation and Fauna Management Plan (VFMP) has been prepared to satisfy Condition 15 of the Development Approval (SARA reference 2211-32271 SDA). The data presented within **Section 3.0** and **Section 4.0** of this VFMP has been taken from existing reports, specifically the Ecological Impact Report (2rog Consulting, 2025) and the Public Environment Report v5 (2rog Consulting, 2023b).

1.2 Project Location

The Project is located on an active cattle property approximately 65 kilometres (km) south-west of Ingham and 3 km north-east of Mount Fox in north Queensland (**Figure 1.1**). The Project is within the Charters Towers Regional Council Local Government Area (LGA). The land is currently used for cattle grazing, with limited pasture improvement or land clearing having occurred to date. The

region and the Study Area have been used as pastoral grazing land for livestock for more than 100 years.

1.3 Project Terms

1.3.1 Study Area

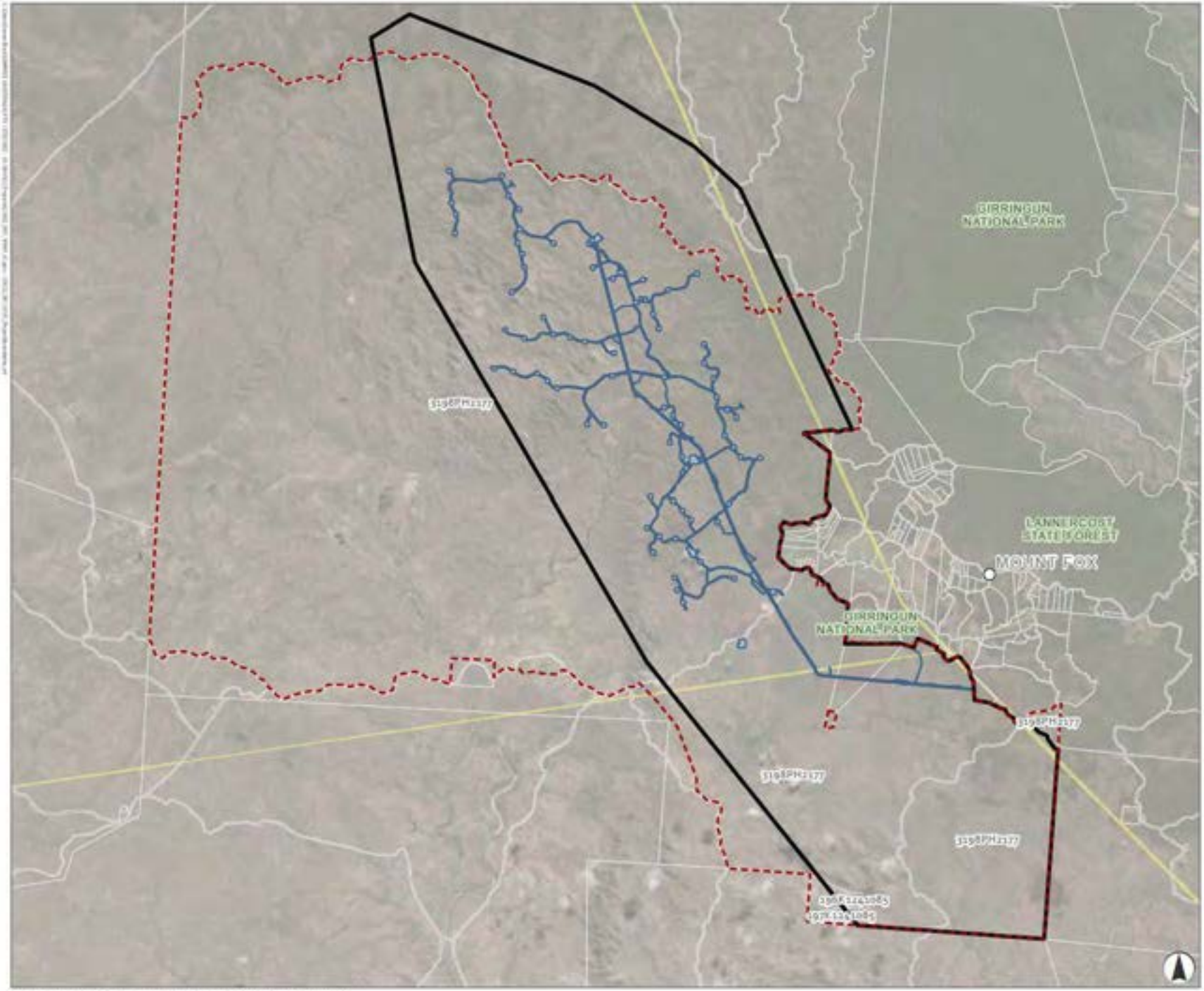
The 'Study Area' refers to and that has been subject to a variety of studies and surveys (**Figure 1.1**). It occurs over two properties, Kilclooney Station, Lot 3198 on PH2177 and Seaview Station Lot 2 on Plan SP205224.

1.3.2 Development Footprint

The 'Development Footprint' refers to the 600.3 hectares (ha) of land that will be utilised to facilitate the infrastructure elements associated with the construction of the Project (**Figure 1.1**). The Development Footprint occurs on one property, Kilclooney Station, Lot 3198 on PH2177. The Development Footprint is located within the Study Area.

FIGURE 1.1

Project Boundaries



Legend

- Populated Place
- Project Cadastral Boundary
- Study Area
- Development Footprint
- Cadastre
- Easement



0 2 4 6

Kilometres

Scale 1:190,000 at A4
GDA2020 MGA Zone 55

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1.4 Aim of Vegetation and Fauna Management Plan

This VFMP has been prepared by suitably qualified ecologists and details how potential impacts to vegetation, flora and fauna will be managed and mitigated, as well as providing the framework for monitoring these potential impacts during the construction phase of the Project. The aim of this VFMP is to meet Condition 15 of the Project's Development Approval (ref: 2408-42181 SDA). **Table 1.1** below outlines Condition 15 and the sections in this report that are relevant to the individual items.

Table 1.1 SARA Development Approval VFMP Conditions

Condition	Description	Section Addressed
15 (a)	Prepare a Vegetation and Fauna Management Plan (VFMP) in accordance with Condition 1.	This document
15 (b)	The VFMP must be prepared by a suitably qualified ecologist and include:	
	1. the location and extent of all site works including all proposed infrastructure and areas of earthworks.	**Section 1.5**
	2. measures to protect and recover fauna and to manage vegetation during clearing operations, including: • presence of a qualified fauna spotter/wildlife officer during clearing operations. • pre-clearing inspections. • staging and sequence of clearing. • recovery procedures. • the location and description of all significant vegetation to be retained and that to be removed. • a description of all measures to be used to protect significant vegetation and habitat features to be retained during construction.	**Section 5.0**

1.5 Project Description

The Project comprises of up to 68 WTG anticipated to generate approximately 400 MW of renewable energy, together with associated ancillary infrastructure including access tracks, laydowns, electrical reticulation, collector sub-stations, concrete batching plants and construction offices. The construction elements are described in **Table 1.2** and will be stored within the Project Site.

The Project has a total Development Footprint of 600.3 ha. Refer **Figure 1.2**.

Table 1.2 Project Components

Construction element	Description	Disturbance during construction

WTGs	• Up to 68 WTGs with dimensions of:
	  ○ tip height of 223 m
	  ○ hub-height of 140-148 m
	  ○ rotor diameter of 165 m
	• For construction, each WTG will require a hardstand, blade laydown area and rotor lift clearance with a footprint of approximately 2 ha. This includes temporary storage, fire and safety buffers. Hardstands (of approximately 0.8 ha) will be retained during operational life of wind farm.
	• WTG components will be stored in temporary laydown areas (3) prior to erection. Cranes will be used to install the WTGs. Tower erection usually takes 3-5 days per WTG.
		2 ha per WTG

Access roads	• Internal access roads, including:
	  ○ light vehicle access tracks
	  ○ WTG access tracks (including underground 33 kV electrical reticulation).
	• Existing roads/tracks will be used as a preference, with additional access tracks of up to 71 km of heavy vehicle access roads and 29 km of light vehicle access tracks constructed.
	• During construction, an additional 42 m may be required for drainage, reticulation, earthworks and construction activities – therefore, the roads will have a maximum clearing width of 50 m. Construction alignments will be optimised for the minimum width that allows for efficient construction.
		100 km in length
		10 m wide for light vehicle access tracks
		45 – 50 m wide for WTG access tracks

Construction element	Description	Disturbance during construction
	• Light vehicle access tracks will be a maximum width of 10 m (4 m wide within Sharman's rock wallaby key habitat area). Tracks will be unsealed. • Appropriate drainage structures will be installed as required.	
Site facilities	• An accommodation camp to house up to 500 personnel, including: o Transportable accommodation buildings, each room fully self-contained o Central kitchen, dining hall (dry mess), outdoor dining area (dry mess), laundry, gym o Car park facilities, including provision for 4 coach buses. • Up to two compounds for construction, operations and maintenance purposes will also be constructed. Construction site offices and accommodation will be approximately 10.3 ha and the permanent operation and maintenance facility will be approximately 1 ha.	11.3 ha total
On-site laydown and concrete batching	• Construction infrastructure, including: o up to three concrete batching plants; and o temporary laydown areas. • Three temporary laydown areas will be used for material stockpiles, temporary storage of turbine components, some onsite assembly and fabrication, vehicle parking and truck deliveries. • Three temporary concrete batching plants may be erected to supply concrete for turbine foundation. • Footprint of laydown areas and concrete batching areas will be approximately 12.6 ha total. • Material stockpiles will be managed via construction of sediment basins, silt fences, dust suppression and appropriate siting to mitigate any risk of contamination.	12.6 ha total
Monitoring masts	Up to three permanent meteorological / wind monitoring masts.	3.4 ha total

Construction element	Description	Disturbance during construction

Electrical infrastructure	• Electrical infrastructure, including:
	  ○ Transformers at each WTG site located within the WTG tower
	  ○ collector substations / Battery Energy Storage System (BESS)
	  ○ switchyard
	  ○ Underground 33 kV reticulation
	  ○ 33 kV overhead electrical transmission line and easement
	  ○ 275 kV overhead electrical transmission line and easement.
	• WTGs will be connected by predominantly underground transmission lines. Collection strings will be connected to two 275 kV site sub-stations. Connection will be into the national grid through a generator substation to constructed by Powerlink. The underground cabling will meet up to site substations.
	• Where practicable, the underground 33 kV reticulation will be placed adjacent to roads and will be progressively restored during operation of the Project.
		158.8 ha total

Other Elements		
Workforce	• The Project is expected to generate up to 500 jobs in the region during the construction period. • The exact number of staff on site each day will vary during the construction stage and during each construction element.	
Power	• Diesel generators will provide power to the work site.	
Waste	• Existing approved municipal landfill services will be used to dispose of non-hazardous waste. Hazardous waste quantities are expected to be small and will be removed from site and disposed of at approved waste facilities such as the Warrens Hill Landfill in Hinchinbrook shire.	
Transport and logistics	• Components for the Project will be manufactured at a variety of locations around Australia and overseas. Components delivered to the Project Site, predominantly from the Port of Townsville, via road, using the existing highway and road network. • The Project Site will be accessed via Charters Towers. No heavy vehicles will be required to traverse the Wet Tropics World Heritage Area. • Minor upgrades along the transport route will be required and are the responsibility of the main transport contractor.	

Construction element	Description	Disturbance during construction
Lighting	• Specific requirements for lighting may arise at sites only as a safety requirement and will be kept to a minimum. • Aviation lighting for WTGs is to be determined by a suitably qualified aviation consultant prior to completion of each individual WTG.	
Fuel and dangerous goods / hazardous materials	• Diesel fuel would be required for construction equipment. • On site fuel storage tanks would be fully lined and bunded and comply with AS1940 and AS-1692. • Dangerous goods storage would be in designated areas and comply with AS-1940, Queensland *Dangerous Goods Safety Management Act 2001* and associated codes.	
Fire management, emergency and incident response	• No controlled burning is proposed as part of the construction works. • Fire ignition risk from welding and other hot works, and risk of fires can increase with spread of weed species which can increase fuel load. • Water trucks will be on-site to implement fire response measures.	
Construction equipment and machinery	• The following equipment and machinery may be utilised during various stages of Project construction: o Site mobilisation: track loader, grader, backhoe, trucks, small crane and generators o Access roads and hardstands: track loaders, excavators, graders, trucks (with trailer), water carts and rollers o WTGs: excavators, rock breaker, concrete trucks, trucks (with trailer and vacuum), tower cranes, larger crawler cranes, medium crawler cranes, small crawler cranes and generators o Electrical reticulation works: trencher, backhoe, excavator, grader, tractor and small terrain crane. In some instance helicopters may be used for stringing of transmission lines. • Other equipment and machinery may be required, depending on the construction techniques nominated in the detailed design phase.	

1.5.1 Construction Phase Timing

Construction of The Project will be staged. The current program is provided in **Table 1.3**.

Table 1.3 Indicative Construction Timing

Commencement	Completion	Activities
Q2 2020	Ongoing	Monitoring
Q2 2026	Q2 2026	Site establishment and mobilisation
Q2 2026	Q4 2026	Civil construction
Q1 2027	Q4 2027	Electrical construction
Q4 2027	Q4 2028	WTG delivery and construction
Q2 2027	Q4 2029	Commissioning and testing
Q1 2029	Ongoing	Operation

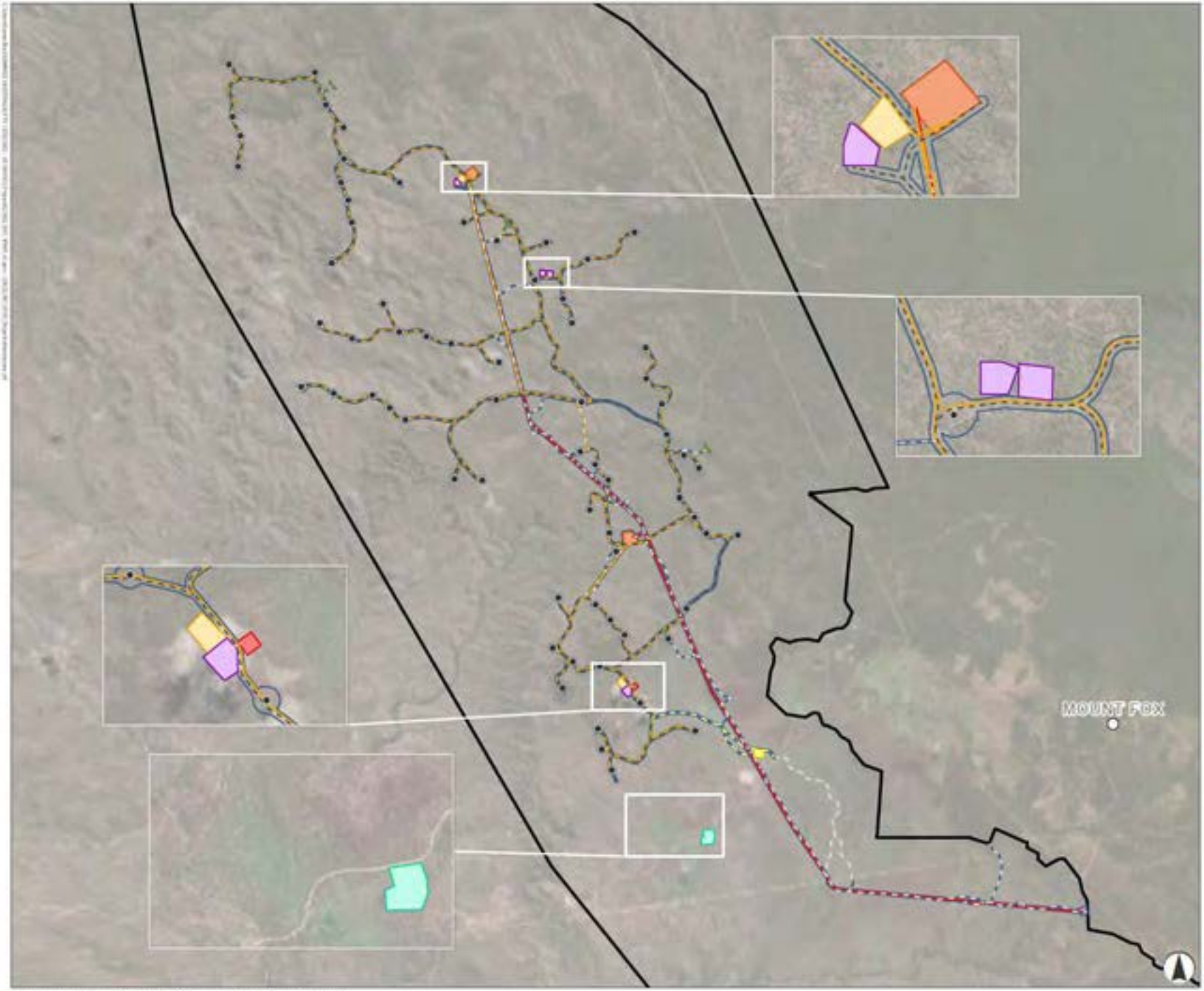


FIGURE 1.2

Project Infrastructure

Legend

- Populated Place
- Turbines
- Site Entrance Road
- Light Veichle Access Track
- Access Track
- 33kV Reticulation Network
- 275kV Overhead Transmission Line
- Study Area
- Development Footprint
- Temporary Laydown
- O M Permanent Laydown
- Switching Station
- Site Office
- Power Performance Masts
- Concrete Batching
- Accommodation Camp South
- Collector Substation / BESS

0 1 2 3

Kilometres

Scale 1:110,000 at A4
GDA2020 MGA Zone 55

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1.6 Existing Ecological Information

The reference documents that have been used to prepare this VFMP include the following:

- Final Public Environment Report: Gawara Baya (2rog Consulting, 2023b), including:
  - Section 2.0 Existing Environment
  - Section 3.0 Potential Impacts and Mitigation
  - Section 4.0 Impact Assessment – Threatened and Migratory Species
  - Appendix A: Environment Management Plan v7 (2rog Consulting, 2023a), including the following sub-plans:
    i. Fauna Management
    ii. Vegetation Management
    iii. Weed Management
    iv. Bushfire Management
    v. Noise
    vi. Air Emissions – Dust
    vii. Surface Water
    viii. Hazardous Materials and Spills
    ix. Waste Management
    x. Feral Predator Management
    xi. Sharman's Rock Wallaby
    xii. Northern Greater Glider.
  - Appendix E: Upper Burdekin Wind Farm – 2020 Ecological Assessment (Eco Logical Australia, 2020)
  - Appendix F: Upper Burdekin Wind Farm – 2022 Ecology Survey Report (Eco Logical Australia, 2022).
- Upper Burdekin Wind Farm – Ecological Impact Report (2rog Consulting, 2025).

2.0 Legislative Context

The legislation relevant to the VFMP is summarised in **Table 2.1**.

Table 2.1 Relevant Legislation

Relevant Legislation	Governing Agency	Summary	Project Relevance
Commonwealth Legislation			
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Department of Climate Change, Energy, the Environment and Water (DCCEEW)	The EPBC Act is Australia's key piece of environmental legislation. It outlines nine Matters of National Environmental Significance (MNES). Actions that adversely affect MNES may be deemed to be a controlled action under the EPBC Act.	The following MNES are relevant to the Project: • National Heritage Places • World Heritage Places • Threatened Species • Migratory Species • MNES will not be discussed in detail within this VFMP as the purpose of this plan is to satisfy Condition 15 of the Project's State development approval. Refer to **Section 1.1** for further details.
State Legislation			
Planning Act 2016 (Planning Act)	Department of State Development,	The Planning Act is Queensland's principal piece of planning legislation. It establishes the framework for plan-making and development assessment within the State.	This report has been prepared in accordance with Condition 15 of the Project's Development Approval (ref. 2211-32271 SDA).

Relevant Legislation	Governing Agency	Summary	Project Relevance
	Infrastructure and Planning	The Project was conditionally approved by State Assessment and Referral Agency (SARA) on 13 November 2023 (SARA reference 2211-32271 SDA).	
Nature Conservation Act 1992 (NC Act)	Department of the Environment, Tourism, Science and Innovation (DETSI)	The purpose of the NC Act is the conservation of nature by creating and managing protected areas; managing and protecting native wildlife; and managing the spread of non-native wildlife. In support of the NC Act, the *Nature Conservation (Animals) Regulation 2020* and *Nature Conservation (Plants) Regulation 2020* are subordinate legislation that outlines species for protection in accordance with categories set out in the NC Act consisting of Extinct, Extinct in the Wild, Critically Endangered, Endangered, Vulnerable, Near Threatened, Least Concern and Special Least Concern. The Flora Survey Trigger Map for Clearing Protected Plants in Queensland within Division 2 of *Nature Conservation (Plants) Regulation*	Where a proposed development will result in impacts to flora and fauna protected under the NC Act, authorisation from the Director General of the DETSI is required. The following values under the NC Act are relevant to the Project: • Threatened flora species. • Threatened fauna species. Threatened species listed under the NC Act will not be discussed in detail within this VFMP as the purpose of this plan is to satisfy Condition 15 of the Project's State development approval. Refer to **Section 1.4** for further details. High-risk areas for protected plants are mapped within the Study Area. A protected plants flora survey in accordance with the NC Act *Flora Survey Guidelines – Protected Plants* (Department of Environment and Science, 2020) is required prior to clearing native plants.

Relevant Legislation	Governing Agency	Summary	Project Relevance
		2020 identifies high-risk areas where Endangered, Vulnerable or Near Threatened native plants are present or are likely to be present. The map is used to determine requirements to be considered before clearing native plants.	To manage fauna breeding places that may occur within the Study Area, a Species Management Program for tampering with a protected animal breeding place in Queensland has been obtained for the Project.
Vegetation Management Act 1999 (VM Act)	Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development	The purpose of the VM Act is to regulate the clearing of vegetation in a way that conserves REs, to prevent the loss of biodiversity and maintain ecological processes. REs are vegetation communities in a bioregion that are consistently associated with a combination of geology, landform, and soil (Sattler & Williams, 1999). Under the VM Act, REs are assigned a conservation status based on an assessment of the pre-clearing and remnant extent of each RE.	The Project will result in a clearance of up to 600.3 ha of remnant and non-remnant vegetation. Refer to **Section 3.2** for further details.
Biosecurity Act 2014	Department of Primary Industries	The *Biosecurity Act 2014* lists flora pest species as either a Prohibited or Restricted biosecurity matter.	The *Biosecurity Act 2014* defines specific requirements for notification and management actions for all listed biosecurity matters, including specific requirements for the disposal of Restricted Matters.

3.0 Existing Ecological Information

3.1 Field Surveys

The results provided throughout **Section 3.0** are collated from field surveys that have been undertaken throughout the Study Area from 2019 to 2024. **Table 3.1** summarises the field surveys that have been completed, including the type of survey, survey dates, season, and field team.

Table 3.1 Field Surveys Completed within the Study Area

Field Survey Details[1]	Survey Dates	Season
Fauna Baseline Survey	3 – 7 September 2019	Spring (wet season)
Fauna Baseline Survey	13 – 19 September 2019	Spring (wet season)
Flora Baseline Survey	24 - 28 September 2019	Spring (wet season)
Flora and Fauna Baseline Survey	7 – 13 July 2020	Winter (dry season)
Fauna Baseline Survey	23 – 29 July 2020	Winter (dry season)
Flora and Fauna Baseline Survey	March 2022 (3 days)	Autumn (wet season)
Bird utilisation survey (BUS) White-throated needletail survey Red goshawk survey Roaming bird survey Microbat survey	March/April 2022	Autumn (wet season)
Bio Condition	May 2022 (6 days)	Autumn (wet season)

[1] Data taken from Ecological Impact Report (2rog Consulting, 2025)

Field Survey Details[1]	Survey Dates	Season
BUS Red goshawk survey Roaming bird survey Microbat survey Masked owl survey Flying-fox survey	August/September 2022	Spring (wet season)
BUS White-throated needletail survey Microbat survey	December 2022	Summer (wet season)
Magnificent brood frog survey	January/February 2023	Summer (wet season)
BUS White-throated needletail survey Microbat survey	February/March 2023	Summer (wet season)
BUS White-throated needletail survey Microbat survey	August – October 2023	Spring (dry season)
Red goshawk survey Roaming bird surveys	September 2023	Spring (dry season)
BUS Microbat survey	January - March 2024	Autumn (wet season)
Red goshawk survey	February – July 2024	Summer/Autumn/Winter (wet season)
Sharman's rock wallaby survey	March – July 2024	Autumn/Winter (wet season)
Magnificent brood frog survey	May 2024	Autumn (wet season)

3.2 Vegetation

The Study Area is characterised by open woodlands and forests dominated by *Eucalyptus* and *Corymbia* species. Small areas of rich vine thicket and simple notophyll vine forests occur, and major watercourses support riparian woodland communities with *Casuarina cunninghamii* and *Melaleuca* species. In addition to these communities, the presence of abundant exposed granite providing a niche environment, exists on prominent granite tors and rock pavements.

3.2.1 Threatened Ecological Communities

There are no threatened ecological communities (TECs) mapped within the Study Area or Development Footprint.

3.2.2 Vegetation Communities

A total of 69 regional ecosystems (REs) are mapped within the Study Area, based on both field surveys and State mapping in unsurveyed areas. Of these, 21 REs are mapped within the Development Footprint and are likely to be impacted by the Project (refer **Section 4.2.1**). The REs mapped within the Study Area are described in **Table 3.2** and illustrated on **Figure 3.1**.

Table 3.2 Study Area Vegetation Communities

RE[2]	Description	VM Act Class
7.12.16 a	Simple notophyll vine forest on wet and moist uplands, granite and rhyolite. Uplands of the cloudy wet to moist rainfall zones. Granite and rhyolite	Least Concern
7.12.24 a	*Eucalyptus portuensis, Corymbia intermedia, E. drepanophylla, E. platyphylla, E. tereticornis, C. tessellaris, Lophostemon suaveolens, Syncarpia glomulifera* open forest to woodland. Foothills, of the wet and moist rainfall zones	Least Concern
7.12.29	*Corymbia intermedia* and/or *Lophostemon suaveolens* open forest to woodland +/- areas of *Allocasuarina littoralis* and *A. torulosa* on uplands on granite and rhyolite	Least Concern
7.12.29 a	*Corymbia intermedia, Eucalyptus tereticornis, E. drepanophylla* open forest to low open forest and woodland with *Allocasuarina torulosa, A. littoralis, Lophostemon suaveolens, Acacia cincinnata, A. flavescens, Banksia aquilonia* and *Xanthorrhoea johnsonii*. Uplands, on granite and rhyolite	Least Concern
7.12.29 b	*Corymbia intermedia, Allocasuarina torulosa, Lophostemon suaveolens* open forest and woodland. Uplands, of the moist rainfall zone, on granite and rhyolite	Least Concern
7.12.29 c	*Lophostemon suaveolens* woodland and open forest. Uplands, of the moist rainfall zone, on granite and rhyolite. Floodplain (other than floodplain wetlands)	Least Concern
7.12.2e	Notophyll to mesophyll vine forest with *Archontophoenix alexandrae*. Swamps on granite. Palustrine wetland (e.g. vegetated swamp)	Of Concern
7.12.30 a	*Corymbia citriodora, Eucalyptus portuensis, C. intermedia, Syncarpia glomulifera* woodland to low woodland to open forest with *Callitris intratropica, Acacia calyculata* and *Xanthorrhoea johnsonii*. Uplands and highlands, of the moist and dry rainfall zones	Least Concern

[2] Data taken from Ecological Impact Report (2rog Consulting, 2025)

RE[2]	Description	VM Act Class
7.12.34	*Eucalyptus portuensis* and/or *E. drepanophylla*, +/- *C.* intermedia +/- *C. citriodora* (lemon scented gum), +/- *E. granitica* open woodland to open forest. Uplands on granite, of the dry rainfall zone	Least Concern
7.12.35	*Eucalyptus portuensis, E. tereticornis, Corymbia intermedia* woodland. Extensive dissected granites and rhyolites in the Kirrama - Oak Hills area	Of Concern
7.12.60 a	*Melaleuca viridiflora* woodland. Granite and rhyolite. Floodplain (other than floodplain wetlands)	Of Concern
7.12.60 b	*Corymbia clarksoniana*, and/or *C. intermedia*, +/- *Lophostemon suaveolens* open woodland to low open woodland with a prominent secondary tree layer of *Melaleuca viridiflora*, and often with *Xanthorrhoea johnsonii* in the ground stratum. Granite and rhyolite. Floodplain (other than floodplain wetlands)	Of Concern
7.12.60 a	*Eucalyptus tereticornis* open forest to tall open forest and woodland. Includes communities ranging from those dominated by *E. tereticornis* to mixtures of that species with *Corymbia intermedia, E. drepanophylla, Lophostemon suaveolens* and *Allocasuarina torulosa*. Foothills and uplands on granite and rhyolite, of the moist and dry rainfall zones	Least Concern
7.12.65 b	Rock pavement communities of the dry rainfall zone with Acacia leptostachya, Eucalyptus lockyeri subsp. exuta, Lophostemon confertus, L. suaveolens, Persoonia falcata, Ficus rubiginosa and Allocasuarina inophloia. Far northern areas including Adeline Creek	Least Concern
7.12.65 c	Low woodland and shrubland complex with *Lophostemon suaveolens, Corymbia citriodora, Eucalyptus lockyeri subsp. exuta, E. granitica, E. drepanophylla* and *E. portuensis*. Shrubs often occur in clumps or groves either as an understorey or scattered shrubland communities within the type and include *Lophostemon suaveolens, L. confertus, Acacia leptostachya, Allocasuarina inophloia* and *Melaleuca viridiflora*. Dry rainfall zone areas of abundant surface rock and shallow or skeletal soils	Least Concern

RE[2]	Description	VM Act Class
7.12.65 k	Granite and rhyolite rock outcrop, of dry western areas, associated with shrublands to closed forests of *Acacia spp.* and/or *Lophostemon spp.* and/or *Allocasuarina spp.* In the Mount Emerald area, shrubs may include *Acacia umbellata, Melaleuca borealis, Homoranthus porteri, Leptospermum neglectum, Melaleuca recurva, Melaleuca uxorum, Grevillea glossadenia, Corymbia abergiana, Eucalyptus lockyeri, Sannantha angusta, Pseudanthus ligulatus subsp. ligulatus, Acacia aulacocarpa, Leptospermum amboinense, Xanthorrhoea johnsonii* and *Jacksonia thesioides*. Ground-cover species may include *Borya septentrionalis, Lepidosperma laterale, Eriachne spp., Cleistochloa subjuncea, Boronia occidentalis, Cheilanthes spp., Coronidium newcastlianum, Schizachyrium spp., Tripogon loliiformis, Gonocarpus acanthocarpus and Eragrostis spp*. Dry western areas. Granite and rhyolite	Least Concern
7.12.66 b	*Lophostemon confertus* shrubland. Exposed rocky slopes on granite and rhyolite	Of Concern
7.12.69 b	*Eucalyptus drepanophylla, Corymbia clarksoniana* low woodland, with mixed *Acacia spp.* Uplands, of the dry rainfall zone	Of Concern
7.3.19a	Corymbia intermedia, Eucalyptus tereticornis, E. drepanophylla, Allocasuarina torulosa, A. littoralis, Lophostemon suaveolens woodland with Acacia cincinnata, A. flavescens, Banksia aquilonia and Xanthorrhoea johnsonii. Well-drained alluvium	Of Concern
7.3.26a	Casuarina cunninghamiana, Eucalyptus tereticornis, Lophostemon suaveolens, Melaleuca leucadendra, M. fluviatilis, Buckinghamia celsissima, Mallotus philippensis woodland and forest with an understorey of Melaleuca viminalis and Bursaria tenuifolia. Fringing forests of larger streams. Riverine wetland or fringing riverine wetland	Of Concern
7.3.28d	*Eucalyptus tereticornis* open woodland. Small groves of *E. platyphylla* occur as a lower layer in some areas. Seasonal swamp of broad drainage lines in uplands. Moist rainfall zone. Floodplain (other than floodplain wetlands)	Of Concern

RE[2]	Description	VM Act Class
7.3.39a	Ephemeral freshwater swamp. Drainage depressions in upland situations. Palustrine wetland (e.g. vegetated swamp)	Of Concern
7.3.39c	*Eucalyptus tereticornis* open forest, tall open forest and woodland including communities ranging from those dominated by *E. tereticornis* to mixtures of that species with *Corymbia intermedia*, *E. drepanophylla*, *Lophostemon suaveolens* and *Allocasuarina torulosa*. Uplands on alluvium. Contains palustrine wetland (e.g. in swales)	Of Concern
7.3.43a	*Tristaniopsis exiliflora* and *Xanthostemon chrysanthus* layered open forest, and closed forest. Common associated species include *Grevillea baileyana, G. hilliana*, and *Blepharocarya involucrigera*. Rubble terraces of streams. Riverine wetland or fringing riverine wetland	Of Concern
7.3.49a	*Melaleuca viridiflora +/- Eucalyptus spp. +/- Lophostemon suaveolens* open forest to open woodland. Humic gleyed texture contrast soils with impeded drainage, on alluvial plains	Of Concern
7.3.8x	*Eucalyptus portuensis +/- Corymbia intermedia*, open forest to woodland of uplands on weathered soils of a remnant surface	Least Concern
7.5.2	Eucalyptus portuensis, Corymbia intermedia, E. tereticornis, Lophostemon suaveolens, Syncarpia glomulifera open forest and woodland. Laterite	Of Concern
7.5.2a	Eucalyptus portuensis, Corymbia intermedia, E. tereticornis, Lophostemon suaveolens, Syncarpia glomulifera open forest and woodland. Deep weathered soils of basalt origin	Of Concern
7.5.2b	Eucalyptus portuensis +/- Corymbia intermedia +/- Corymbia clarksoniana +/- Eucalyptus tereticornis +/- Lophostemon suaveolens tall open forest to woodland with a mid-layer of Acacia flavescens, Allocasuarina torulosa, and a grassy ground layer. Weathered soils of a remnant surface	Of Concern

RE[2]	Description	VM Act Class
7.5.2c	*Eucalyptus portuensis, Corymbia intermedia, E. drepanophylla* woodland to low woodland with *Acacia flavescens* and *Allocasuarina littoralis*. Includes small areas of *Themeda triandra* grassland. Laterite and weathered soils of a remnant surface	Of Concern
7.5.2d	Corymbia intermedia, Eucalyptus platyphylla, Lophostemon suaveolens, E. drepanophylla woodland to low woodland with Melaleuca viridiflora. Laterite	Of Concern
7.5.2e	*Eucalyptus portuensis, Corymbia citriodora*, and *E. drepanophylla* woodland to open forest of uplands on weathered soils of a remnant surface	Of Concern
7.5.3	*Eucalyptus tereticornis* open woodland. Small groves of *E. platyphylla* occur as a lower layer in some areas. Seasonal swamp of broad drainage lines in uplands. Moist rainfall zone. Floodplain (other than floodplain wetlands)	Of Concern
7.5.3a	*Corymbia citriodora, Eucalyptus portuensis, E. drepanophylla, C. intermedia* woodland to low woodland with *Acacia calyculata* and *Xanthorrhoea johnsonii*. Laterite	Of Concern
7.5.4a	*Corymbia intermedia +/- Eucalyptus tereticornis* woodland and open forest with *Allocasuarina torulosa, A. littoralis, Lophostemon suaveolens, Acacia flavescens, Banksia aquilonia* and *Xanthorrhoea johnsonii*. Weathered soils and laterite of a remnant surface	Of Concern
7.5.4b	*Corymbia intermedia, Allocasuarina torulosa, Lophostemon suaveolens* woodland and open forest. Laterite	Of Concern
7.5.4c	*Corymbia intermedia +/- Eucalyptus tereticornis +/- Lophostemon suaveolens* open forest to low open forest with *Allocasuarina torulosa, A. littoralis, Acacia flavescens* and *Banksia aquilonia*. Deep weathered soils of basalt origin	Of Concern
7.5.4f	*Corymbia intermedia, Allocasuarina torulosa, Lophostemon suaveolens* open forest and woodland. Deep weathered soils of basalt origin	Of Concern
7.8.10	*Eucalyptus tereticornis, E. drepanophylla* (or *E. granitica*), *E. portuensis, Corymbia intermedia* woodland to open forest, or *E. moluccana* woodland to open forest. Uplands and highlands on basaltic euchrozem-krasnozem, of the dry rainfall zone	Of Concern

RE[2]	Description	VM Act Class
7.8.18a	*Corymbia intermedia, Eucalyptus tereticornis, E. granitica* open forest to woodland with *Allocasuarina torulosa, A. littoralis, Lophostemon suaveolens, Acacia cincinnata, A. flavescens, Banksia aquilonia* and *Xanthorrhoea johnsonii*. Basalt	Of Concern
7.8.18c	*Corymbia intermedia, Allocasuarina torulosa, Lophostemon suaveolens* open forest to woodland. Basalt	Of Concern
9.11.1a	Low woodland to low open woodland of *Eucalyptus melanophloia +/- E. persistens +/- E. crebra +/- Corymbia dallachiana +/- C. peltata +/- E. brownii +/- Acacia julifera*). *E. shirleyi* may sometimes be dominant. The shrub layer is usually absent but scattered juvenile canopy species, *Petalostigma spp., Denhamia cunninghamii* and *Hakea spp.* may occur. The ground layer is dense grassy and includes *Themeda triandra, Cymbopogon bombycinus* and *Heteropogon contortus*. Occurs on skeletal soils of slopes and crests of undulating rises and low hills of folded metasediments and other metamorphic rocks	Least Concern
9.11.2	*Eucalyptus crebra* (or several other ironbark species) *+/- Corymbia spp.* woodland on shallow texture contrast soils on low metamorphic hills and lowlands	Least Concern
9.11.2a	Woodland to open woodland of *Eucalyptus crebra +/- Corymbia dallachiana +/- C. erythrophloia +/- C. clarksoniana +/- Eucalyptus spp. +/- Corymbia spp.* An open to mid-dense sub-canopy layer can occur and include canopy species, *Bursaria incana, Hakea spp.*, and *Acacia spp.* The shrub layer is sparse to open and can include canopy species, *Denhamia cunninghamii, Grewia retusifolia, Erythroxylum australe, Carissa spp., Hakea spp.* and *Acacia spp.* The ground layer is grassy and dominated by *Heteropogon contortus, Themeda triandra* and *H. triticeus*. Occurs on metamorphic hills and rises	Least Concern
9.11.4a	Open forest to open woodland of *Eucalyptus granitica, Corymbia clarksoniana* and/or *C. intermedia, C. citriodora +/- E. portuensis +/- C. dallachiana +/- E. tereticornis*. Other ironbark species may also occur, namely *E. crebra, E. drepanophylla* in the south and *E. cullenii* in the north. An open sub-canopy can occur and include canopy species, *Erythrophleum chlorostachys* and *Grevillea glauca*. The mid-dense shrub layer includes *Acacia flavescens, Grevillea glauca, Petalostigma spp., Bursaria incana* and *Denhamia cunninghamii*. *Xanthorrhoea johnsonii* may also occur in a lower shrub layer. The mid-dense ground layer is grassy and dominated by *Heteropogon contortus* and *Themeda triandra*. Occurs on metamorphic hills	Least Concern

RE[2]	Description	VM Act Class
9.11.5	*Eucalyptus persistens* +/- *E. crebra* woodland on low metamorphic hills	Least Concern
9.11.9	Semi-deciduous vine thicket on metamorphic soils (not limestone)	Of Concern
9.12.19	*Eucalyptus crebra* or *E. granitica* +/- *Corymbia citriodora subsp. citriodora* +/- *E. portuensis* mixed woodland on igneous hills	Least Concern
9.12.1a	Woodland to low open woodland of *Eucalyptus crebra* +/- *Corymbia dallachiana* +/- *C. erythrophloia* +/- *C. clarksoniana* +/- *Corymbia spp. E. exilipes* or *E. granitica* can sometimes occur as a dominant. An open sub-canopy can occur with canopy species as well as *Geijera salicifolia, Petalostigma pubescens, Denhamia cunninghamii, Bursaria incana* and *Acacia spp*. An open shrub layer usually includes canopy and sub-canopy species and *Carissa lanceolata*. The sparse to dense ground layer is dominated by *Heteropogon contortus* and *Themeda triandra*. Occurs on a variety of landforms from undulating plains to steep hills	Least Concern
9.12.1e	Grassland with isolated emergent trees of *Eucalyptus crebra* (sens. lat.) +/- clumps of shrubs of *Acacia decora* and/or *A. leptostachya* and/or *Jacksonia thesioides* and/or *Allocasuarina inophloia*. Occurs on granite hills	Least Concern
9.12.2	*Eucalyptus portuensis, Corymbia citriodora subsp. citriodora, E. granitica* or *E. crebra, C. intermedia* or *C. clarksoniana* mixed woodland on steep hills and ranges on igneous hills close to Wet Tropics boundary	Least Concern
9.12.21	*Eucalyptus crebra* or *E. drepanophylla* and *Corymbia spp.* open woodland on flat to undulating country on igneous rocks	Of Concern
9.12.22	*Eucalyptus drepanophylla, Corymbia clarksoniana* or *C. intermedia* and *C. dallachiana* woodland on steep rugged igneous ranges	Least Concern

RE[2]	Description	VM Act Class
9.12.4c	Low woodland to low open woodland of and *Eucalyptus shirleyi* and/or *E. melanophloia* and *Callitris intratropica* +/- *Corymbia peltata* +/- *C. leichhardtii* +/- *Acacia spp.* A sparse subcanopy layer can include canopy species, *Dolichandrone alternifolia*, *Alphitonia pomaderroides* and *Petalostigma pubescens*. The shrub layer contains juvenile canopy species +/- *Xanthorrhoea johnsonii*. Dominants in the grassy ground can include *Schizachyrium* fragile, *Themeda triandra* or *Heteropogon spp.* Occurs predominantly on sandy shallow soils derived from granite or rhyolite on rolling low hills to hills	Least Concern
9.12.8	Semi-evergreen vine thicket on rocky outcrops and shallow soils of igneous rocks	Least Concern
9.12.8a	Semi-evergreen vine thicket (5-10m) commonly containing *Gossia bidwillii, Gyrocarpus americanus, Drypetes deplanchei, Canarium australianum, Ficus spp.* (figs), *Brachychiton spp., Alectryon connatus, Pleiogynium timorense, Strychnos lucida, Cupaniopsis anacardioides, Callitris intratropica, Cochlospermum gillivraei* and *Acacia spp.* An emergent layer (10-14 m) is sometimes present and can include *G. americanus, Brachychiton spp., Eucalyptus crebra* and *Callitris intratropica*. An open to dense shrub layer commonly includes *Sersalisia sericea, Carissa ovata, Capparis spp., Erythroxylum australe* and *Larsenaikia ochreata*. The ground layer is often bare with a wide range of scattered grasses and forbs. Occurs on granitic or rhyolite outcrops and associated slopes and outwash	Least Concern
9.12.x	Unvegetated rock. Creek beds and banks. Riverine wetland or fringing riverine wetland. There is no RE for this environment in bioregion 9. Here it is analogous to RE 7.3.28d, however it is not alluvial	Least Concern
9.3.1	*Eucalyptus camaldulensis* and/or *E. tereticornis* +/- *Melaleuca spp.* +/- *Casuarina cunninghamiana* fringing woodland on channels and levees	Least Concern
9.3.13	*Melaleuca spp., Eucalyptus camaldulensis* and *Casuarina cunninghamiana* fringing open forest on streams and channels	Least Concern
9.5.5	*Corymbia clarksoniana, Eucalyptus portuensis, E. crebra* and *C. citriodora subsp. citriodora* in mixed open forests on red kandosols on Tertiary surfaces	Least Concern

RE[2]	Description	VM Act Class
9.5.5a	Mixed woodland to open forest of *Eucalyptus crebra, Corymbia clarksoniana* and *C. citriodora subsp. citriodora +/- E. portuensis* with a generally open sub-canopy of canopy species +/- *Callitris intratropica* and *Acacia spp.* The open shrub layer often contains juvenile canopy species, *Petalostigma pubescens, Acacia flavescens* and other *Acacia spp. Themeda triandra* is the dominant species in a dense grassy ground layer. Occurs on Tertiary plateaus and remnants	Least Concern
9.5.5f	Woodland to open forest of *Corymbia intermedia +/- Eucalyptus portuensis +/- E. tereticornis +/- Lophostemon suaveolens*. A sub-canopy layer and shrub layer often occurs and contain canopy species as well as *Acacia flavescens, Grevillea glauca* and *Melaleuca viridiflora*. The moderate to dense grassy cover is usually dominated by *Themeda triandra* or *Mnesithea rottboellioides*. Occurs on Tertiary sandplains	Least Concern
9.7.3b	Woodland of *Eucalyptus portuensis +/- Corymbia trachyphloia +/- C. citriodora subsp. Citriodora +/- C. clarksoniana +/- C. intermedia +/- E. crebra +/- E. howittiana*. A sparse sub-canopy can contain canopy species +/- *Grevillea glauca*. A sparse to mid-dense shrub layer is often present and includes canopy species, *Acacia spp.* (wattle), *Grevillea spp. +/- Pultenaea spp.* There is a mid-dense grassy cover of *Themeda triandra*. Occurs on lateritised weathering profiles overlying land zone 11 or 12 geologies and on lateritised edges of granite breakaways and Tertiary plateaus in subregion 6	Least Concern
9.8.13	*Iseilema spp.* and/or *Dichanthium spp.* tussock grassland on basalt plains	Least Concern
9.8.4a	Woodland to open woodland of *Eucalyptus crebra* or E. *granitica +/- Corymbia intermedia +/- C. dallachiana +/- C. tessellaris*. Scattered canopy species and *Lophostemon suaveolens* can sometimes occur in the sub-canopy. The shrub layer is absent to sparse. The ground layer is dense and grassy and is dominated by *Themeda triandra* and *Heteropogon contortus*. Occurs on basalt plains and rocky basalt plains and hills with varying depths of soil	Least Concern
9.8.4b	Open woodland to woodland of *Eucalyptus tereticornis +/- E. crebra +/- Corymbia dallachiana +/- C. clarksoniana +/- E. leptophleba +/- C. tessellaris*. The mid-layer is absent to occasionally scattered plants. The ground layer is densely grassy and includes *Heteropogon contortus* and/or *Dichanthium spp.* Occurs on basalt plains and rocky basalt plains and hills with varying depths of soil	Least Concern

RE[2]	Description	VM Act Class
9.8.4c	Open woodland to woodland of *Eucalyptus moluccana* +/- *E. crebra* (sens. lat.) +/- *E. platyphylla*. A very open sub-canopy containing canopy species often occurs. There is no shrub layer though there can be scattered canopy species and *Denhamia cunninghamii*. The grassy ground layer is dominated by *Heteropogon contortus*. Occurs on basalt plains and rocky basalt plains and hills with varying depths of soil	Least Concern
9.8.7	Semi-evergreen vine thicket on cones, craters and rocky basalt flows with little soil development	Least Concern
9.8.7x	Semi-evergreen vine thicket with many codominant species, many vines and without clearly defined layers. Includes *Gyrocarpus americanus, Brachychiton australis, Pleiogynium timorense, Bridelia leichhardtii, Psydrax odorata, Cupaniopsis anacardioides, Diospyros humilis* and *Homalium brachybotrys*. Can occur as a closed forest with *Alstonia scholaris, Terminalia sericocarpa, Nauclea orientalis, Ficus racemosa* and *F. virens* on creeks and around springs or as an open woodland of *Corymbia tessellaris* and/or *Eucalyptus tereticornis* with an open mid layer of vine thicket species. Occurs on lava flows, cones and craters and rocky substrates with no soil development on Quaternary and Tertiary basalts. NB the variant in the survey area is not strictly analogous to either of the two communities listed under this RE, in that it contains a tall (to 26 m) emergent layer of *Argyrodendron trifoliolatum*. It occurs on a rocky lava slope above Four-Mile Creek	Least Concern



Image Source: ESRI Basemap (2024) | **Data Source:** Qld DoR (2024)

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FIGURE 3.1.A

Field Verified Regional Ecosystems

Legend

- Populated Place
- Study Area
- Development Footprint

Field Verified Regional Ecosystems

- 7.12.30a
- 7.12.34
- 7.5.2a
- 9.11.2a
- 9.12.1a
- 9.12.2
- 9.12.2/9.12.1a
- 9.3.1
- 9.5.5a
- 9.7.3b
- Non-remnant



0 0.2 0.4 0.6

Kilometres

Scale 1:20,000 at A4
GDA2020 MGA Zone 55

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3.3 Flora

3.3.1 Flora Diversity

Field surveys confirmed the presence of 379 flora species from 96 families (2rog Consulting, 2025). The most represented plant families were Poaceae (36 species), Myrtaceae (34 species), Mimosaceae (23 species), Asteraceae (22 species) and Fabaceae (20 species) (2rog Consulting, 2025).

The field surveys also identified 18 introduced flora species representing 4.7% of the total flora recorded, described further in **Section 3.3.1.2** below.

3.3.1.1 Threatened Flora Species

Commersonia reticulata (Byttneriaceae, syn. *Androcalva reticulata*) is the only listed threatened flora species that is known to occur within the Study Area (**Table 3.2**). It was not present within the Development Footprint. The closest known record of *Commersonia reticulata* is approximately 200 m from a proposed access track and 350 m of proposed turbine (27N) (**Figure 3.2**). Approximately 50 individuals were observed growing on a small rock pavement.

Refer to Table 3.3 **Table 3.3 Threatened Flora Species Likelihood of Occurring within Study Area**

Scientific Name	EPBC Act Status	NC Act Status	Likelihood of Occurring
Acacia longipedunculata	-	Near Threatened	Potential
Acacia tingoorensis	-	Vulnerable	Likely
Commersonia reticulata	-	Vulnerable	Known
Corchorus subargenteus	-	Vulnerable	Potential
Corymbia leptoloma	Vulnerable	Vulnerable	Potential
Corybas cerasinus	-	Near Threatened	Potential
Cycas platyphylla	Vulnerable	Vulnerable	Potential
Dichanthium setosum	Vulnerable	Least Concern	Potential
Drosera adelae	-	Near Threatened	Potential
Glossocardia orthochaeta	-	Endangered	Potential
Homoranthus cummingii	Vulnerable	Critically Endangered	Potential

Scientific Name	EPBC Act Status	NC Act Status	Likelihood of Occurring
Homoranthus porteri	Vulnerable	Vulnerable	Potential
Marsdenia brevifolia	Vulnerable	Vulnerable	Potential
Oenanthe javanica	-	Near Threatened	Potential
Phaius pictus	Vulnerable	Vulnerable	Potential
Phalaenopsis amabilis subsp. rosenstromii	Endangered	Endangered	Potential
Rhomboda polygonoides	Vulnerable	Vulnerable	Potential
Solanum graniticum	Endangered	Endangered	Potential

for the species that are known, likely or have the potential to occur within the Study Area (2rog Consulting, 2023a). Known threatened species records are illustrated on **Figure 3.2**. Additionally, there are three areas of Protected Plant Flora Survey High Risk Trigger Area (Version 10.0) that intersect the Study Area (Department of the Environment, Tourism, Science and Innovation, 2023), indicating the potential presence of threatened flora species or species habitat (**Figure 3.2**).

Table 3.3 Threatened Flora Species Likelihood of Occurring within Study Area

Scientific Name	EPBC Act Status	NC Act Status	Likelihood of Occurring[3]
Acacia longipedunculata	-	Near Threatened	Potential
Acacia tingoorensis	-	Vulnerable	Likely
Commersonia reticulata	-	Vulnerable	Known
Corchorus subargenteus	-	Vulnerable	Potential
Corymbia leptoloma	Vulnerable	Vulnerable	Potential
Corybas cerasinus	-	Near Threatened	Potential
Cycas platyphylla	Vulnerable	Vulnerable	Potential
Dichanthium setosum	Vulnerable	Least Concern	Potential
Drosera adelae	-	Near Threatened	Potential
Glossocardia orthochaeta	-	Endangered	Potential
Homoranthus cummingii	Vulnerable	Critically Endangered	Potential
Homoranthus porteri	Vulnerable	Vulnerable	Potential
Marsdenia brevifolia	Vulnerable	Vulnerable	Potential
Oenanthe javanica	-	Near Threatened	Potential
Phaius pictus	Vulnerable	Vulnerable	Potential
Phalaenopsis amabilis subsp. rosenstromii	Endangered	Endangered	Potential
Rhomboda polygonoides	Vulnerable	Vulnerable	Potential
Solanum graniticum	Endangered	Endangered	Potential

[3] Data taken from Ecological Impact Report (2rog Consulting, 2025)

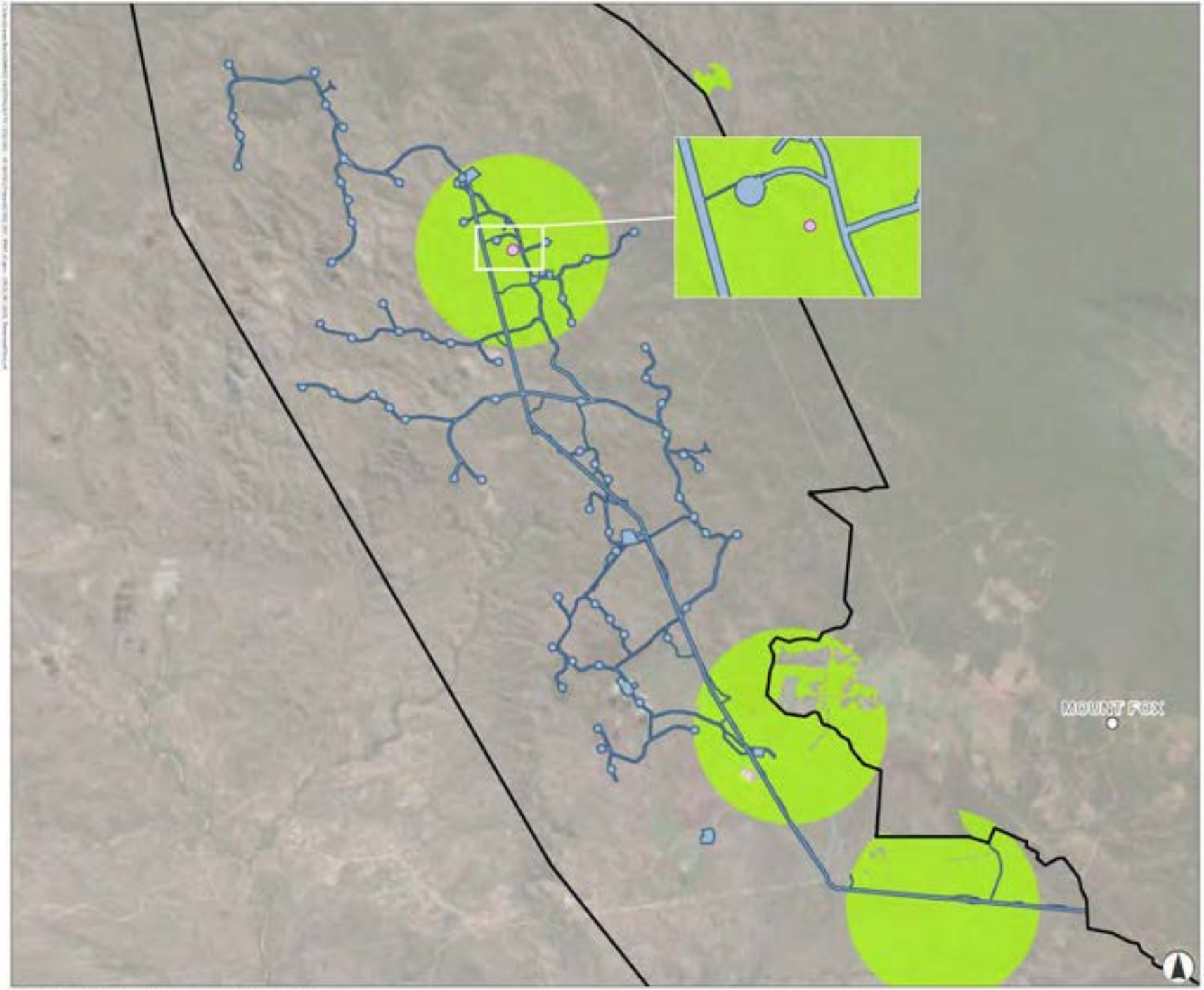
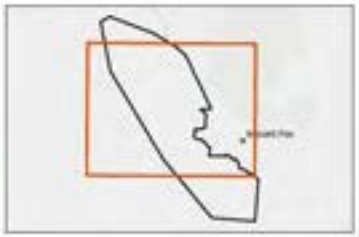


FIGURE 3.2

Threatened Flora Species Records

Legend

- Populated Place
- Study Area
- Development Footprint
- Protected Plants Trigger Areas
- *Commersonia reticulata* records



0 1 2 3

Kilometres

Scale 1:110,000 at A4
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Image Source: ESRI Basemap (2024) | **Data Source:** Qld DoR (2024)

3.3.1.2 Introduced Flora

Of the 18 introduced flora species identified within the Study Area (2rog Consulting, 2023a), two species are identified as Category 3 Restricted Matters under the *Biosecurity Act 2014* and Weeds of National Significance (WoNS) (refer **Table 3.2**). WoNS are weed species that have been agreed by Australian governments using an assessment process that prioritised these weeds based on their invasiveness, potential for spread and environmental, social, and economic impacts. High biomass grasses increase fire risk as well as smoother the ground, reducing plant germination and threatened species growth and recovery.

Introduced flora classified as Category 3 Restricted Matters or WoNS, as well as high biomass grasses will be the target of management within this VFMP referred to as 'weed species' within this report (see
Section 5.0). Commonly recorded high biomass grasses include *Themeda quadrivalvis* and *Megathyrsus maximus*.

Table 3.4 Introduced Flora Identified During Field Surveys (2rog Consulting, 2023a)

Scientific Name	Common Name	Biosecurity Act Category	WoNS	Occurrence	Relative Density
Ageratum conyzoides	bluetop	N/A	No	limited	low
Argemone ochroleuca	Mexican poppy	N/A	No	limited	low
Asclepias curassavica	red cotton bush	N/A	No	limited	low
Bidens pilosa	cobbler's pegs	N/A	No	widespread	low
Lantana camara	lantana	3	Yes	widespread	low to high
Macroptilium atropurpureum	siratro	N/A	No	widespread	low
Megathyrsus maximus	guinea grass	N/A	No	widespread	moderate
Melinis repens	red natal grass	N/A	No	widespread	low
Mesosphaerum suaveolens	hyptis	N/A	No	widespread	high

Scientific Name	Common Name	Biosecurity Act Category	WoNS	Occurrence	Relative Density
Phytolacca octandra	inkweed	N/A	No	limited	low
Praxelis clematidea	praxellis	N/A	No	very widespread	moderate
Senna obtusifolia	sicklepod	N/A	No	limited	low
Sida rhombifolia	Paddy's lucerne	N/A	No	widespread	
Sphagneticola trilobata	Singapore daisy	N/A	No	limited	low
Sporobolus jacquemontii	American rat's tail grass	3	Yes	limited	low
Stylosanthes hamata	Caribbean stylo	N/A	No	widespread	low
Stylosanthes humilis	Townsville stylo	N/A	No	widespread	low
Themeda quadrivalvis	grader grass	N/A	No	limited	high

3.4 Fauna

3.4.1 Broad Habitat Types

Baseline vegetation and habitat surveys confirmed 13 broad habitat types (2rog Consulting, 2023b), which are presented in **Table 3.5** and their extent depicted on **Figure 3.3.**

Table 3.5 Broad Habitat Types within the Study Area

Broad Habitat Type[4]	Description	Microhabitat Features
Riparian forest	Tall forest (20-25 m) of *Casuarina*, *Melaleuca* and eucalypts growing along major watercourses, narrow alluvial flats, and benches constrained by steep banks.	Flowering *Eucalyptus* and *Melaleuca* spp. provide seasonal foraging resources for flying-fox species, including the spectacled flying-fox. Eucalypts provide good quality refuge and foraging habitat for koalas during the dry season. Emergent *E. tereticornis* provide potential nesting habitat red goshawk.
Open woodland on basalt plains	Open woodland dominated by *Eucalyptus crebra* or other ironbark species with shrub layer absent. Ground layer consists of native grasses *Heteropogon contortus* and *Themeda triandra*.	*E. crebra* containing small hollows provide potential roosts for microbats including the bare-rumped sheathtail bat. Larger hollows may provide habitat for greater glider. *E. crebra* also provides food for koalas.
Very open woodland on metamorphic and low hills	Open woodland dominated by *Eucalyptus crebra* or other ironbark species. Mid-dense to very sparce shrub layer of *Acacia* spp. Ground layer of native grasses and forbs with sparse exotics.	Areas of species richness ≥ 2 containing hollow bearing trees provide foraging and shelter habitat for greater glider. Native ground cover near areas of granite shelter sites provides foraging habitat for Sharman's rock wallaby. Eucalypts provide food for koalas.
Open woodland to open forest on granite or tertiary surfaces	Sparsely structured open woodland to open forest of *Eucalyptus* and *Corymbia*. Shrub layer of *Acacia* and *Melaleuca*. Open ground cover of predominantly native grasses.	Boulders provide shelter for various mammals and reptile species. Areas of complex stacked boulders containing crevices provide denning and shelter habitat for Sharman's rock wallaby.

[4] Data taken from Ecological Impact Report (2rog Consulting, 2025)

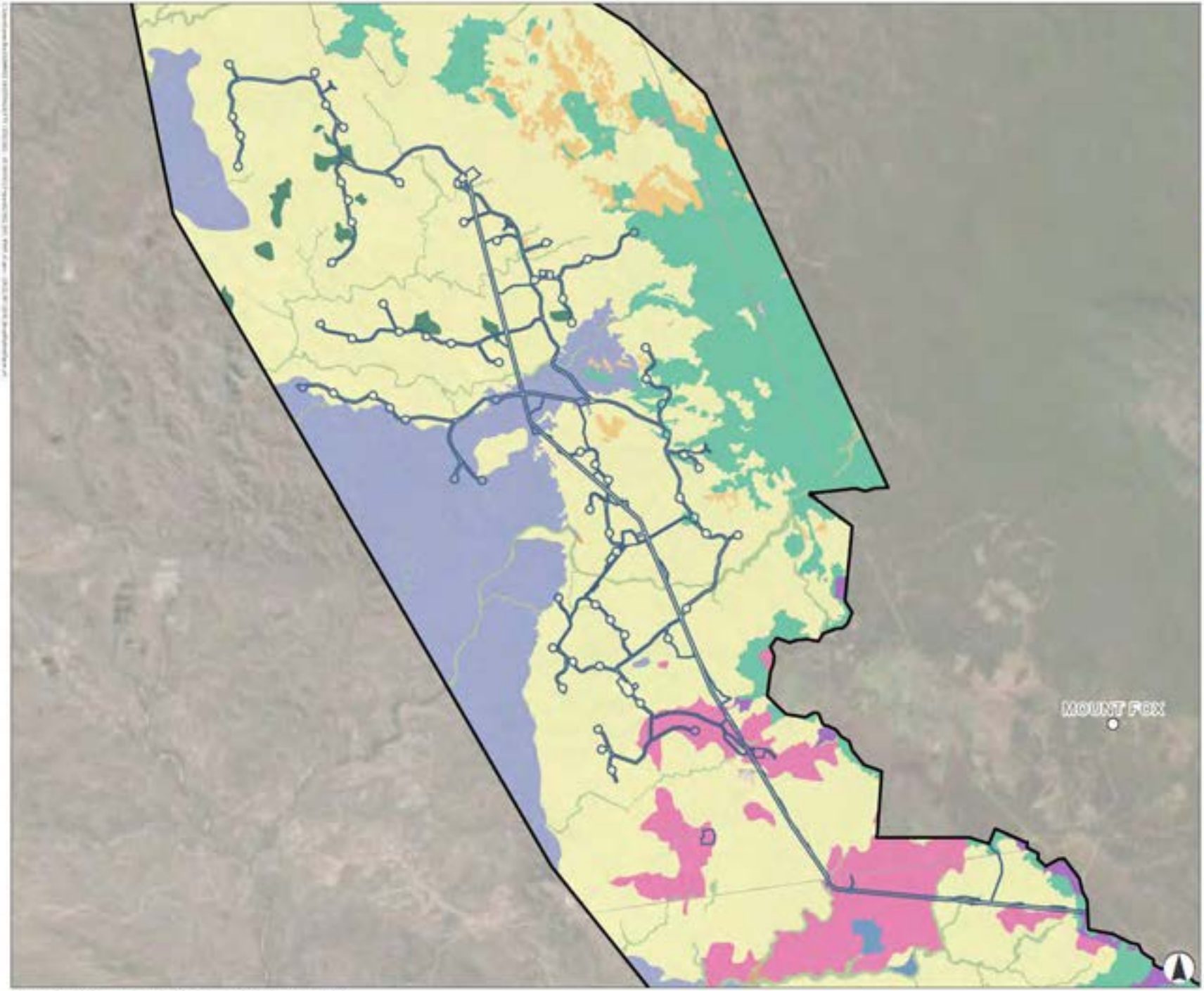
Broad Habitat Type[4]	Description	Microhabitat Features
	Large boulders and boulder stacks are common, occasionally forming steep rugged ranges and granite stacked cliff faces alongside valleys.	Caves and crevices within granite cliff faces and jump-ups also provide suitable habitat for Sharman's rock wallaby. Caves provide roost sites for micro-bat species including the greater large-eared horseshoe bat, and the leaf-nosed diadem bat. Large hollows located near riparian vegetation provide den sites for greater glider. Scattered fruit trees provide foraging resources for the spectacled flying-fox.
Woodland on lateritised surface	Woodland dominated by *Corymbia citriodora* and infrequent other eucalypts. Sparse shrub layer and moderately dense ground layer of native grass.	*C. citriodora* provides foraging habitat for koala. Small-medium hollows my provide habitat for the bare-rumped sheathtail bat. Flower eucalypts may provide foraging habitat for flying-fox species.
Open forest to woodlands on uplands	Open forest to tall open forest and woodland of *Eucalyptus* and *Corymbia* species. Some areas include *Allocasuarina* which occupy the upper and sub-canopy. Shrub layer is variable and may include *Acacia flavescens*, *A. calyculata*, *Lophostemon suaveolens*, *Melaleuca viridiflora*, and *Xanthorrhoea johnsonii*. Ground layer is typically dense, made up of native grass species, and moist with litter but may vary in density.	Areas of tall forest and woodland within 1 km of permanent water provide breeding and foraging habitat for red goshawk, and denning and foraging habitat for masked owl. *Allocasuarina* provides habitat for glossy black cockatoo. Dense *Allocasuarina* understory provides flyways and foraging opportunities for greater large-eared horseshoe bat. *Eucalyptus* and *Corymbia* species provide food and shelter for koala and spectacled flying-fox. Large hollows provide denning habitat for greater glider and greater large-eared horseshoe bat. Boulders provide shelter for various mammals and reptile species, and thick grass cover provides habitat for small mammals.

Broad Habitat Type[4]	Description	Microhabitat Features
Rock pavements	Sparse shrubby and grassy vegetation around the margins of rock pavements. Low tree and shrub cover includes *Eucalyptus portuensis, C. intermedia, Lophostemon suaveolens, Allocasuarina littoralis*, and *Acacia* spp. Grasses include *Themeda triandra, Arundinella nepalensis* and *Aristida* sp.	Rocks provide shelter and basking habitat for various mammals and reptile species. Areas of complex stacked boulders with deep and abundant crevices provide potential habitat for Sharman's rock wallaby. *Allocasuarina* provides potential foraging habitat for glossy black cockatoo. Large, hollowing *Eucalyptus* and *Corymbia* within or fringing rock pavement vegetation provide breeding habitat for glossy black cockatoo.
Open forest with *Allocasuarina* spp. dominant or codominant in the canopy	Open Allocasuarina littoralis forest with a mixture of Corymbia intermedia, Eucalyptus crebra, and Eucalyptus portuensis. Shrub layer of Acacia flavescens and A. torulosa.	*Allocasuarina* provides potential foraging habitat for glossy black cockatoo and greater large-eared horseshoe bat. Large, hollowing *Eucalyptus* and *Corymbia* provide breeding habitat for glossy black cockatoo, greater glider, and masked owl.
Floodplain	Open woodland dominated by *Eucalyptus platyphylla* with associated *Corymbia* species. On clay soils with low drainage. Sparse mid and ground layers.	*E. platyphylla* containing medium-large hollows provide roots for bare-rumped sheathtail bat and shelter for greater glider. *Eucalyptus* foliage provides foraging resources for koala and greater glider. Hollows and a grassy understory provide nesting and foraging habitat for masked owl.
Tussock grassland	Grassland to very open grassland of *Iseilema* spp. (flinders grass) with a mixture of other grass species such as *Dichanthium* spp., *Bothriochloa* spp., *Heteropogon contortus* and *Aristida* spp. Occurs in the Study area on undulating basalt plains	Tussock grassland habitat is often situated amongst and in-between areas of open woodland. This habitat provides important foraging resources for threatened species Sharman's rock wallaby, which seek shelter in the nearby granite boulder stacks.

Broad Habitat Type[4]	Description	Microhabitat Features
	amongst open woodland and vine thicket communities.	
Simple or notophyll vine forest (rainforest)	Species-rich rainforest with well developed structure, dominated by *Archontophoenix alexandrae*, *Elaeocarpus* spp., *Buckinghamia celsissima*, *Cardwellia sublimis* and *Syzygium* spp. The ground layer comprised tree and vine seedlings.	Fruiting trees provide potential foraging habitat for a range of closed forest dwelling birds, frogs, reptiles, and mammals. A rocky stream of fresh water provides a water source for fauna species.
Vine thicket	Dense, low (5-10 m), species-rich vine thicket with tall emergent trees in fire protected gullies near major watercourses.	Dense vegetation and rock crevices provide shelter for various small mammals and reptiles and roosting opportunities for greater large-eared horseshoe bat. Fruiting flora species provide foraging habitat for flying foxes and insect prey for microbats, including the threatened spectacled flying fox and diadem leaf-nosed bat.
Melaleuca swamps	Vegetated swamps dominated by *Melaleuca* spp. with sedge dominated ground layers. Sparse shrub layer contains *Acacia* spp., *Banksia aquilonia*, *Melastoma malabathricum* and *Xanthorrhoea johnsonii*.	Permanent water provides frog habitat. *Melaleuca* spp. Provide foraging resources for arboreal mammals (sugar glider, squirrel glider), flying foxes (e.g. spectacled, little red), microbats (including diadem leaf-nosed bat) and various bird species.

FIGURE 3.3

Broad Habitat Types

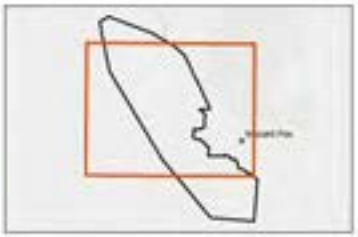


Legend

- Populated Place
- Study Area
- Development Footprint

Broad Habitat Type

- Floodplain
- Open forest to woodlands on uplands
- Open forest with Allocasuarina spp. dominant or co-dominant in the canopy
- Open woodland on basalt plains
- Open woodland to open forest on granite or Tertiary surfaces
- Riparian forest
- Rock pavement
- Simple or notophyll vine forest
- Tussock grassland
- Very open woodland on metamorphics and low hills
- Vine thicket
- Woodland on lateritised surface



0 1 2 3

Kilometres

Scale 1:110,000 at A4
GDA2020 MGA Zone 55

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Image Source: ESRI Basemap (2024) | **Data Source:** Qld DoR (2024)

3.4.2 Fauna Diversity

Over 200 fauna species were identified throughout the Study Area (Eco Logical Australia, 2020, 2022). Fauna assemblages are provided in **Table 3.6.**

Table 3.6 Fauna Assemblages in Study Area

Animals	Observations
Birds	A total of 135 bird species have been recorded in the Study Area, comprising raptors, nocturnal species, aquatic species and forest and woodland species.
Bats	Two flying fox species have been recorded, plus 25 microbat species have been recorded on ultrasonic bat detection devices.
Terrestrial mammals	Sixteen species have been identified, including seven small mammal species, eight macropod species and one monotreme.
Arboreal mammals	Six arboreal mammals have been recorded in the Study Area.
Reptiles	Twelve reptile species have been recorded on an incidental basis and included lizards, snakes and turtles.
Amphibians	Six amphibian species have been recorded throughout the Study Area.

3.4.2.1 Threatened Fauna Species

Table 3.7 outlines the species listed as threatened under the EPBC Act and NC Act that are known or have the potential to occur within the Study Area (2rog Consulting, 2023a). Known species records are illustrated on **Figure 3.4** to **Figure 3.7.**

Table 3.7 Threatened Fauna Species Likelihood of Occurring within Study Area

Common Name	Scientific Name	EPBC Act Status	NC Act Status	Presence in Study Area[5]
Mammals				
Sharman's rock wallaby	*Petrogale sharmani*	Vulnerable	Vulnerable	Known
Koala	*Phascolarctos cinereus*	Endangered	Endangered	Known
Greater glider (northern)	*Petauroides minor*	Vulnerable	Vulnerable	Known

[5] Data taken from Ecological Impact Report (2rog Consulting, 2025)

Common Name	Scientific Name	EPBC Act Status	NC Act Status	Presence in Study Area[5]
Spectacled flying-fox	*Pteropus conspicillatus*	Endangered	Endangered	Known
Greater large-eared horseshoe-bat	*Rhinolophus robertsi*	Vulnerable	Vulnerable	Known
Bare-rumped sheathtail bat	*Saccolaimus saccolaimus nudicluniatus*	Vulnerable	Endangered	Known
Diadem leaf-nosed bat	*Hipposideros diadema*	-	Near Threatened	Known
Grey-headed flying-fox	*Pteropus poliocephalus*	Vulnerable	-	Potential
Reptiles				
Atherton delma	*Delma mitella*	Vulnerable	Near Threatened	Potential
Amphibians				
Magnificent brood frog	*Pseudophryne covacevichae*	Vulnerable	Vulnerable	Known
Birds				
Red goshawk	*Erythrotriorchis radiatus*	Endangered	Endangered	Known
Masked owl (northern)	*Tyto novaehollandiae kimberli*	Vulnerable	Vulnerable	Known
White-throated needletail	*Hirundapus caudacutus*	Vulnerable & Migratory	Vulnerable	Known
Southern cassowary	*Casuarius casuarius johnsonii (southern population)*	Endangered	Endangered	Potential
Glossy black-cockatoo (northern)	*Calyptorhynchus lathami erebus*	-	Vulnerable	Potential

Common Name	Scientific Name	EPBC Act Status	NC Act Status	Presence in Study Area[5]
Latham's snipe	*Gallinago hardwickii*	Vulnerable & Migratory	Vulnerable	Potential, recorded outside the Study Area

3.4.2.2 Migratory/Special Least Concern Fauna

Table 3.8 outlines the species listed as migratory and/or special least concern under the EPBC Act and NC Act that are known or have the potential to occur within the Study Area (2rog Consulting, 2023a). Species records are presented on **Figure 3.8.**

Table 3.8 Migratory/Special Least Concern Species Likelihood of Occurring within Study Area

Common Name	Scientific Name	EPBC Act Status	NC Act Status	Presence in Study Area[6]
Mammals				
Short-beaked echidna	*Tachyglossus aculeatus*	-	Special Least Concern (non-migratory)	Known
Birds				
Fork-tailed swift	*Apus pacificus*	Migratory	Special Least Concern (migratory)	Known
Oriental cuckoo	*Cuculus optatus*	Migratory	Special Least Concern (migratory)	Known
Eastern osprey	*Pandion haliaetus*	Migratory	Special Least Concern (migratory)	Known
Barn swallow	*Hirundo rustica*	Migratory	Special Least Concern (migratory)	Potential

[6] Data taken from Ecological Impact Report (2rog Consulting, 2025)

3.4.2.3 Pest Species

Eight introduced fauna species have been observed within the Study Area (2rog Consulting, 2023a). Of these, the following are known to have ongoing negative impacts on native fauna:

- Wild dogs (Canis familiaris)
- Cats (Felis catus)
- Cane toads (Bufo marinus)
- Pigs (Sus scrofa).

3.5 Wetlands and Watercourses

The Study Area is traversed by numerous watercourses comprised of both minor drainage lines (stream order one) through to major watercourses (stream order five). The largest watercourses traversing the Study Area are Michael Creek and Douglas Creek. The major watercourses support well-developed riparian woodland communities with *Casuarina cunninghamii* and *Melaleuca* species.

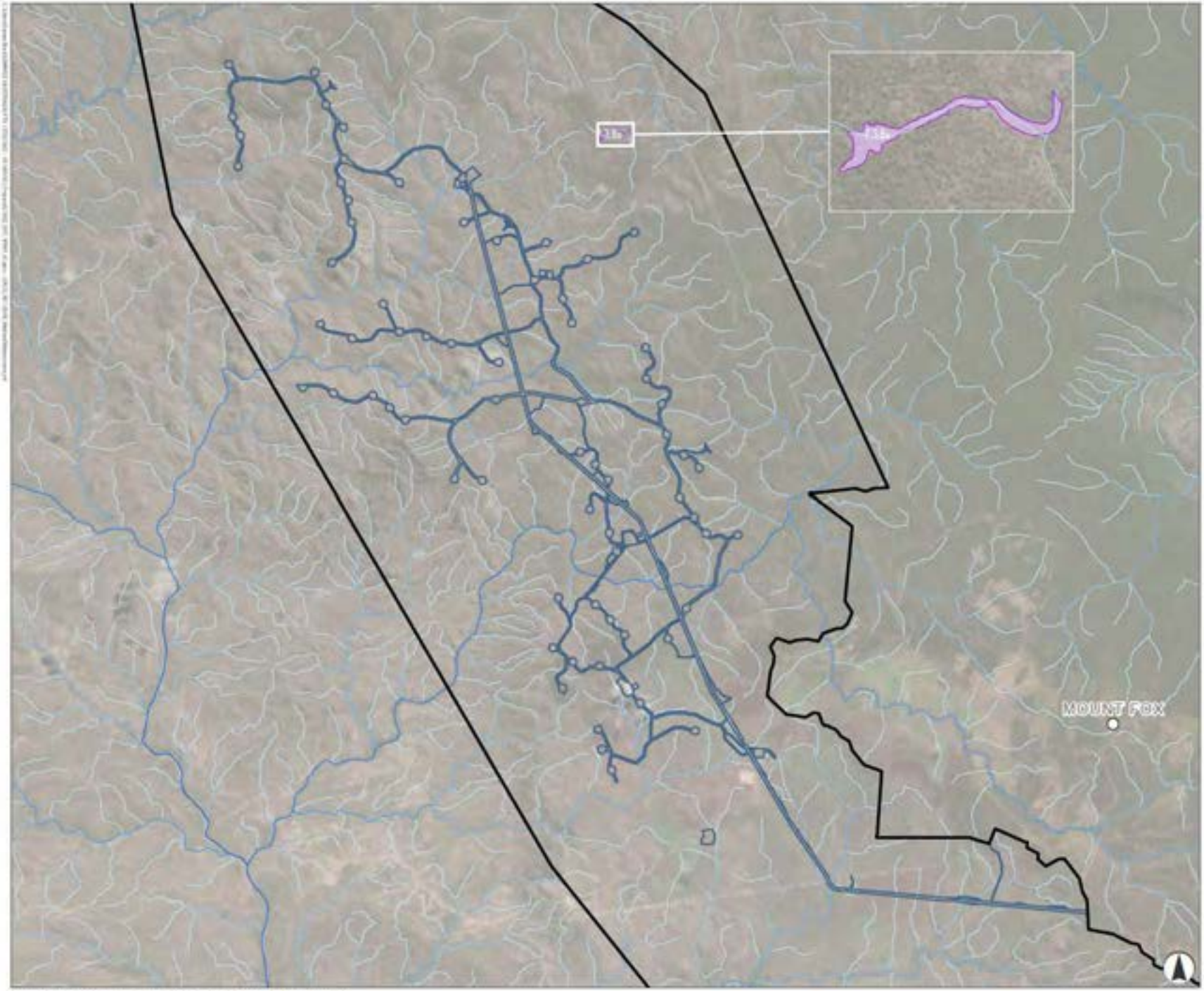
Additionally, one *Melaleuca* wetland is mapped within the Study Area, identified as RE 7.3.8x (Eco Logical Australia, 2020).

No aquatic field surveys have been undertaken to categorise the diversity of aquatic species. However, there are no threatened fully aquatic species potentially occurring within the Study Area. The first order streams and seepages with eucalypt woodland/open forest on granitic rock between 700 and 800 metres above sea level (asl) are mapped as suitable breeding and foraging habitat for the magnificent brood frog (*Pseudophryne covacevichae*), which was identified in the Study Area during targeted surveys (2rog Consulting, 2023b).

The wetlands and watercourses within the Study Area are illustrated on **Figure 3.9.**

FIGURE 3.9

Wetlands and Watercourses

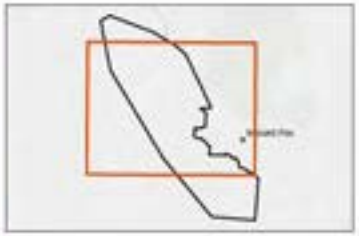


Legend

- Populated Place
- Study Area
- Development Footprint
- Melaleuca Wetland

Stream Order

- 1
- 2
- 3
- 4
- 5
- 6



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Kilometres

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4.0 Potential Impacts

4.1 Construction Activities

Construction activities have the potential to impact on flora and fauna through:

- Clearing, trimming and earthworks for construction, including in sensitive habitats (e.g. denning, roosting and foraging habitats).
- Inadvertent clearing of vegetation outside of the Development Footprint.
- Open trench excavations for underground cabling.
- Increased vehicle movement associated with construction of the wind farm.
- Fire ignition.
- Spills of hydrocarbons, hazardous materials or wastewater discharges.
- Pollution of waterways from sediment run-off.
- Noise, dust and vibration impacts.

4.2 Impacts to Ecological Values

Construction of the Project will result in direct and indirect impacts to ecological values identified within the Study Area and Development Footprint (**Section 3.0**), including:

- Loss of native vegetation (clearing and trimming), including Of Concern vegetation communities.
- Loss of habitat, including habitat for threatened flora and fauna species, and migratory species.
- Habitat disturbance and degradation, including habitat for threatened flora and fauna species, and migratory species. The introduction and spread of weed and pest species, edge effects, fire and contaminant release are all aspects that contribute to the reduction in habitat quality.
- Direct injury and mortality of fauna (including vehicle strike).
- Fragmentation of habitat and wildlife corridors.

Further detail of these impacts is provided below in **Section 4.2.1** to **Section 4.2.5.3**.

4.2.1 Clearing of Native Vegetation and Trimming

As per the vegetation communities mapping, the Project will result in the removal of up to 600.1 ha of vegetation within the Development Footprint. The RE's that are likely to be impacted are outlined in **Table 4.1**. Clearing totals include permanently cleared areas and areas requiring select trimming of tall trees.

Table 4.1 Regional Ecosystems within the Development Footprint

RE	VM Act Status	Short Description	Extent of Construction Clearing (ha)[7]
7.3.26a	Of Concern	*Casuarina cunninghamiana, Eucalyptus tereticornis, Lophostemon suaveolens, Melaleuca leucadendra, M. fluviatilis, Buckinghamia celsissima, Mallotus philippensis* woodland and forest with an understorey of *Melaleuca viminalis* and *Bursaria tenuifolia*. Fringing forests of larger streams	0.4
7.5.2b	Of Concern	*Eucalyptus portuensis, Corymbia intermedia, E. tereticornis, Lophostemon suaveolens, Syncarpia glomulifera* open forest and woodland. Deep weathered soils of basalt origin	0.3
7.5.2c	Of Concern	*Eucalyptus portuensis, Corymbia intermedia, Corymbia clarksoniana, Eucalyptus tereticornis, Lophostemon suaveolens* tall open forest to woodland with a mid layer of *Acacia flavescens, Allocasuarina torulosa*, and a grassy ground layer. Weathered soils of a remnant surface	2.8
7.5.4b	Of Concern	*Corymbia intermedia, Allocasuarina torulosa, Lophostemon suaveolens* woodland and open forest. Laterite	2.1
7.5.4f	Of Concern	*Corymbia intermedia, Allocasuarina torulosa, Lophostemon suaveolens* open forest and woodland. Deep weathered soils of basalt origin	1.0
7.8.18a	Of Concern	*Corymbia intermedia, Eucalyptus tereticornis, E. granitica* open forest to woodland with *Allocasuarina torulosa, A. littoralis, Lophostemon suaveolens, Acacia cincinnata, A. flavescens, Banksia aquilonia* and *Xanthorrhoea johnsonii*. Basalt. Contains Palustrine	0.4
7.12.24a	Least Concern	*Eucalyptus portuensis, Corymbia intermedia, E. drepanophylla, E. platyphylla, E. tereticornis, C. tessellaris, Lophostemon suaveolens, Syncarpia glomulifera* open forest to woodland	10.4

[7] Data taken from Ecological Impact Report (2rog Consulting, 2025)

RE	VM Act Status	Short Description	Extent of Construction Clearing (ha)[7]
7.12.29a	Least Concern	*Corymbia intermedia, Eucalyptus tereticornis, E. drepanophylla* open forest to low open forest and woodland with *Allocasuarina torulosa, A. littoralis, Lophostemon suaveolens, Acacia cincinnata, A. flavescens, Banksia aquilonia* and *Xanthorrhoea johnsonii*. Uplands, on granite and rhyolite	2.6
7.12.30a	Least Concern	*Corymbia citriodora, Eucalyptus portuensis, C. intermedia, Syncarpia glomulifera* woodland to low woodland to open forest with *Callitris intratropica, Acacia calyculata* and *Xanthorrhoea johnsonii*. Uplands and highlands, of the moist and dry rainfall zones	29.7
7.12.34	Least Concern	*Eucalyptus portuensis, E. drepanophylla, C. intermedia, C. citriodora, E. granitica* open woodland to open forest on uplands on granite	20.6
9.3.13	Least Concern	*Melaleuca spp., Eucalyptus camaldulensis* and *Casuarina cunninghamiana* fringing open forest on streams and channels	0.4
9.5.5a	Least Concern	Mixed woodland to open forest of *Eucalyptus crebra, Corymbia clarksoniana , C. citriodora subsp. Citriodora, E. portuensis* with a generally open sub-canopy of canopy species +/- *Callitris intratropica* and *Acacia spp.*	39.8
9.7.3a	Least Concern	Open woodland to woodland of *Eucalyptus crebra, Corymbia clarksoniana, E. exserta, C. citriodora subsp. citriodora, E. howittiana*. An absent to mid-dense sub-canopy or shrub layer can include *Petalostigma pubescens, Allocasuarina inophloia, Melaleuca nervosa, Grevillea glauca* and *Bursaria incana*	10.2
9.7.3b	Least Concern	Woodland of *Eucalyptus portuensis, Corymbia trachyphloia, C. citriodora subsp. Citriodora, C. clarksoniana, C. intermedia, E. crebra,* *E. howittiana*. A sparse sub-canopy can contain canopy species +/- *Grevillea glauca*	7.7
9.8.4a	Least Concern	Woodland to open woodland of *Eucalyptus crebra* or *E. granitica, Corymbia clarksoniana* or *Corymbia intermedia, C. dallachiana, C. tessellaris*	55.7

RE	VM Act Status	Short Description	Extent of Construction Clearing (ha)[7]
9.11.2a	Least Concern	Woodland to open woodland of *Eucalyptus crebra, Corymbia dallachiana, C. erythrophloia, C. clarksoniana, Eucalyptus spp., Corymbia spp.*	4.6
9.11.4a	Least Concern	Open forest to open woodland of *Eucalyptus granitica, Corymbia clarksoniana, C. intermedia, C. citriodora subsp. citriodora, E. portuensis, C. dallachiana, E. tereticornis.*	29.9
9.12.1a	Least Concern	Woodland to low open woodland of *Eucalyptus crebra, Corymbia dallachiana, C. erythrophloia, C. clarksoniana, Corymbia spp., E. exilipes* or *E. granitica* can sometimes occur as a dominant.	85.7
9.12.2	Least Concern	*Eucalyptus portuensis, Corymbia citriodora subsp. citriodora, E. granitica* or *E. crebra, C. intermedia* or *C. clarksoniana* mixed woodland on steep hills	252.6
9.12.19	Least Concern	*Eucalyptus crebra* or *E. granitica, Corymbia citriodora subsp. citriodora, E. portuensis* mixed woodland on igneous hills	23.1
9.12.22	Least Concern	*Eucalyptus drepanophylla, Corymbia clarksoniana* or *C. intermedia* and *C. dallachiana* woodland on steep rugged igneous ranges	14.6
11.12.13a	Least Concern	*Eucalyptus acmenoides, E. drepanophylla, E. exserta* woodland. Coastal hills and ranges on often rocky acid-volcanic derived soils	2.5
Non-remnant	N/A	Cleared vegetation	3.0
Total			600.1

4.2.2 Removal of Threatened Flora Habitat

Clearing for construction of the Project will have direct impacts on flora, including the removal of suitable habitat for potentially occurring threatened flora species.

Commersonia reticulata (Byttneriaceae, syn. *Androcalva reticulata*) was the only listed threatened species detected within the Study Area. The species was found in two populations in RE 9.12.2/9.12.1a, outside of the Development Footprint. Populations comprised of approximately 50 and 20 plants respectively, both in single dense clusters. This species is Vulnerable under the NC Act and does not have an EPBC Act listing. It has only been recorded from four localities in North Queensland.

There will be no direct impacts to threatened flora species or populations, with avoidance of *Commersonia reticulata* individuals within the Development Footprint. The predicted impact to threatened flora species due to potential habitat removal in the Development Footprint is outlined in **Table 4.2**.

Table 4.2 Direct Impacts to Threatened Flora Habitat

Scientific Name	Common Name	Area of Habitat to be Cleared within the Development Footprint (ha)[8]
Acacia longipedunculata		53.9
Acacia tingoorensis	Tingoorensis wattle	53.9
Commersonia reticulata		11.0
Corymbia leptoloma	Yellowjacket	46.7
Corybas cerasinus	Red helmet orchid	14.5
Cycas platyphylla		10.0
Dichanthium setosum		62.0
Glossocardia orthochaeta		0.4
Homoranthus cummingii		0.4
Homoranthus porteri		0.4
Marsdenia brevifolia		53.9

[8] Data taken from Ecological Impact Report (2rog Consulting, 2025)

Scientific Name	Common Name	Area of Habitat to be Cleared within the Development Footprint (ha)[8]
Oenanthe javanica		5.0
Phaius pictus		0.0
Phalaenopsis amabilis subsp. rosenstromii		0.0
Rhomboda polygonoides		0.0
Solanum graniticum	Granite nightshade	63.6

4.2.3 Removal of Fauna Habitat

The clearing for construction of the Project will have direct impacts on fauna due to the removal of breeding and/or foraging habitat. The Development Footprint includes the maximum area associated with construction of the infrastructure elements and encompasses approximately 600.3 ha.

Direct impacts to the broad habitat types identified within the Study Area are outlined in **Table 4.3.**

Table 4.3 Direct Impacts to Broad Habitat Types

Broad Habitat Type	Area (ha) within Study Area	Area within Development Footprint (ha)[9]
Riparian forest	620.5	5.0
Open woodland on basalt plains	1,357.0	53.5
Very open woodland on metamorphic and low hills	3,336.1	47.1
Open woodland to open forest on granite or tertiary surfaces	19,115.2	466.3
Woodland on lateritised surface	125.2	5.7
Open forest to woodlands on uplands	3,981.6	17.9
Rock pavements	437.1	0.4

[8] Data taken from Ecological Impact Report (2rog Consulting, 2025)

Broad Habitat Type	Area (ha) within Study Area	Area within Development Footprint (ha)[9]
Open forest with *Allocasuarina* spp. dominant or codominant in the canopy	124.2	0.4
Floodplain	48.2	1.3
Tussock grassland	3.8	0.0
Simple or notophyll vine forest (rainforest)	2.6	0.0
Vine thicket	6.7	0.0
Melaleuca swamps	2.7	0.0

The predicted impact to threatened and migratory species due to the removal of habitat is outlined in **Table 4.4**.

Table 4.4 Direct Impacts to Species Habitat

Species	Maximum Area of Habitat to be Cleared (ha)[10]
Threatened Fauna Species	
Sharman's rock wallaby (*Petrogale sharmani*)	590.6
Koala *(Phascolarctos cinereus)*	597.6
Greater glider (northern) (*Petauroides minor*)	579.6
Spectacled flying-fox (*Pteropus conspicillatus*)	597.6
Grey-headed flying-fox (*Pteropus poliocephalus*)	597.6
Greater large-eared horseshoe-bat (*Rhinolophus robertsi*)	543.1
Bare-rumped sheathtail bat (Saccolaimus saccolaimus nudicluniatus)	543.1
Diadem leaf-nosed bat (*Hipposideros diadema*)	543.1
Atherton delma (*Delma mitella*)	0.0

[10] Data taken from Ecological Impact Report (2rog Consulting, 2025) and provided by 2Rog

Species	Maximum Area of Habitat to be Cleared (ha)[10]
Magnificent brood frog (*Pseudophryne covacevichae*)	0.0
Red goshawk (Erythrotriorchis radiatus)	600.3
Masked owl (northern) (*Tyto novaehollandiae kimberli)*	579.6
White-throated needletail (*Hirundapus caudacutus*)	0.0[11]
Southern cassowary (*Casuarius casuarius johnsonii* (southern population))	5.0
Glossy black-cockatoo (northern) (*Calyptorhynchus lathami erebus*)	18.3
Latham's snipe *(Gallinago hardwickii)*	0.0
Migratory/Special Least Concern Species	
Short-beaked echidna *(Tachyglossus aculeatus)*	600.3
Fork-tailed swift *(Apus pacificus)*	0.0[12]
Oriental cuckoo (*Cuculus optatus*)	5.0
Eastern osprey (*Pandion haliaetus*)	Michael and Douglas Creeks
Barn swallow (*Hirundo rustica*)	5.0

4.2.4 Habitat Fragmentation

The Study Area is predominantly covered by remnant vegetation and contains large tracts of well-connected native vegetation. Consequently, there is potential that the clearing for the construction of the Project may disrupt movement across the Study Area i.e., fragmentation of landscape habitat features. Habitat fragmentation may also occur within areas of the Study Area where

[11] The removal of vegetation is unlikely to influence the species as the species is almost exclusively aerial when in Australia. The species has not been observed roosting within the Project Area. If roosting habitat occurs it is likely to be located within areas of denser vegetation within tall open forest to woodlands on uplands within the east of the Project Area. Impacts from ground level activities are considered low and proposed Project activities are unlikely to result in a Significant Residual Impact to the species as per the Significant Impact Assessment – Matters of National Environmental Significant Report: Upper Burdekin WindFarm Report prepared for WindLab (2rog Consulting, 2025).

[12] The removal of vegetation is unlikely to influence the species as the species is almost exclusively aerial when in Australia. Impacts from ground level activities are considered low and proposed Project activities are unlikely to result in a Significant Residual Impact to the species as per the Significant Impact Assessment – Matters of National Environmental Significant Report: Upper Burdekin WindFarm Report prepared for WindLab (2rog Consulting, 2025).

isolated patches of vegetation have been created by the Development Footprint associated with Project infrastructure elements. Species with low dispersal ability, such as greater glider (southern and central), present within these isolated patches may become cut-off or partially cut-off from the local or regional population. Individuals persisting within isolated habitat patches may undergo a slow population decline due limited available of essential microhabitat resources, deleterious impacts from stochastic events (e.g. fire/disease) as well as an absence of genetic diversity, usually afforded by accessible neighbouring populations.

Threatened species known or considered likely to occur in the Study Area that are considered most susceptible to fragmentation impacts as a result of the construction of the Project include the Sharman's rock wallaby and greater glider (northern).

4.2.5 Habitat Disturbance and Degradation

In addition to direct habitat removal, the construction of the Project has the potential to disturb and degrade habitat for flora and fauna species. Key drivers of such disturbance include:

- Edge effects
- Weed and pest incursion
- Dust emissions
- Noise
- Light emissions
- Erosion and sedimentation
- Contamination from spills and leaks
- Increased risk of fire incursion.

Section 4.2.5.1 to **Section 4.2.5.4** includes key activities that contribute to habitat degradation.

4.2.5.1 Edge Effects

Edges and their effects can be created through clearing of vegetation, such as new edges created by roads. The distance the effect spreads from the edge, known as edge permeability, can be highly variable and depends upon many factors such as vulnerability of the ecosystems, degree of change in land use, intensity of this use and chance events (Murcia, 1995). Edge effects can lead to habitat degradation as the vegetation communities located on the boundary of a vegetated patch are more susceptible to light, wind, temperature changes and weed incursion.

The main environmental impacts to new edges created by the Project are considered to include:

- Modification of microclimate where new edges are created due to greater penetration of light and wind into the vegetation. Temperature extremes are greater, and humidity of air is generally less at the edge than in the interior of vegetation.
- Physical disturbance to vegetation at the edge. Ongoing damage to the edge of vegetation may occur due to grading and weed control of road edges and vehicle use. Similarly, unsealed tracks can facilitate an increase incident of fire ignitions.
- Changes to soil properties including compaction of the soil, less organic matter and more erodible.
- Introduction of weeds and pathogens through mud and dirt which falls off vehicles.
- Changes to vegetation through the above listed impacts.

Threatened flora species that are at risk of being impacted by edge effects include *Drosera adelae*, *Glossocardia orthochaeta*, *Phaius pictus* and *Rhomboda polygonoides.* The habitat these species are known to occur and include vegetation communities with dense community structures like rainforests which are particularly sensitive to edge effects.

4.2.5.2 Invasion and Spread of Weeds and Pest Species

Vegetation clearing and other construction activities such as vehicle and machinery movement, ground disturbance activities and the introduction of soil and materials to site have the potential to introduce and / or disperse weeds and pests as per the following:

- Increased infestations of existing weed species in the Study Area.
- Introduction of new weed species in the Study Area.
- Providing vectors for the introduction and dispersal of pest fauna into the Study Area.

Weed incursion has the potential to impact the Study Area through the degradation and availability of flora and fauna habitat through detrimental changes in vegetation community structure and composition. The changes in vegetation structure and composition can also result in increased fuel loads and more frequent and intense fires. Changes in vegetation structure and condition can also result in increased risk of erosion, further degrading and reducing the availability of habitat.

Pest fauna are already present within the Study Area, however vegetation clearing facilitate new movement pathways for pest fauna into the Study Area. Pest fauna can degrade habitat through spreading weed vegetation and grazing on native vegetation. Pest fauna may also directly destroy habitat through, for example, trampling and digging (e.g., pigs). Predation by feral predators including cats and wild dogs have the potential to impact fauna through negative pressure on species populations. Feral cat and wild dog were observed on numerous occasions throughout the Development Footprint. Attack from domestic or wild dog is cited as a key threatening process to koala and is likely a common predator of Sharman's rock wallaby and other native fauna species. Predation by feral cat is also cited as a threatening process to Sharman's rock wallaby.

4.2.5.3 Dust

Dust emissions may be generated by construction activities including:

- Vegetation and soil clearing.
- Construction of hardstand areas, including moving and shaping material.
- Wheel-generated dust from unsealed access roads.

Excessive deposition of dust on leaves of plants can suppress growth and photosynthesis and result in reduced habitat quality for fauna, especially during periods of little to no rainfall. High levels of airborne dust particles can irritate the respiratory systems of fauna and potentially result in ingestion of dust-coated seeds and other foods. Excessive deposition of dust on open water bodies may also degrade water quality, and overall habitat quality for fauna.

4.2.5.4 Noise

Noise levels greater than existing ambient noise levels are expected in the short-term during construction within the Development Footprint. Sources are likely to consist of noise in short,

intense pulses from mobile plant equipment, and more prolonged noise, with consistent vibration, pitch and volume from generators and pumps, in addition to noise from vehicles.

Construction noise impacts will be temporary, lasting for up to 36 months from the first mobilisation to site through to testing and commissioning phase.

4.2.5.5 Light

Impacts from increased light levels include disorientation from or attraction toward artificial sources of light; mortality from collisions with structures; and effects on light-sensitive cycles of species (e.g., breeding and migration for fauna and flowering in plants). An increase in artificial lighting can also increase the abundance and efficiency of predators. This could result in fauna avoiding some areas due to an increased perceived risk of predation and or become more vulnerable to being predated.

During construction of the wind farm, site lighting will be kept to the minimum required for safety (including security). Night works will be specific to time-critical construction activities; however these are expected to be infrequent and transient in nature at any particular location. Activity and lighting during night works poses a risk to all nocturnal species, including koala, greater glider (central and southern), masked owl (northern), and the threatened bats. It is also significant risk to the Sharman's rock wallaby, as they are predominately active at night. The foraging behaviour of this species is directly linked to the perceived predation pressure, as *Petrogale* are more vigilant on bright moonlit nights (when visibility is higher) and are less likely to emerge from shelter to feed (Carter and Goldizen 2003 in Hayes, (2019)).

4.2.5.6 Soil Erosion and Sedimentation

Impacts associated with erosion and sedimentation include compaction of soil, loss of soil structure, nutrient degradation and increased soil salinity all of which can lead to reductions in the carrying capacity of the terrestrial environment by reducing the value of habitat.

Erosion can lead to increased sedimentation in waterways which can be damaging to their ecological health. Removal of vegetation and disturbance to the soil profile through clearing and construction activities can lead to soil erosion, which in turn can lead to increased input of sediment into waterways.

Mobilised coarse sandy-sediment tends to accumulate in areas of slow-flow and may smother bottom-dwelling organisms and their habitats. Deep permanent river pools, that are vulnerable habitats for aquatic fauna and refuges for wildlife during summer and drought, may become filled by coarse sediments, which may render them ineffective in relation to their ability to support aquatic and terrestrial species.

Large sediment accumulations can cause upstream flooding or deflect the flow into the adjacent stream bank or even onto adjacent land, causing further erosion and transported sediments can fill the deep permanent pools of river and degrade this critical refuge habitat.

Increased erosion and sedimentation in first order streams are a known key threat to the magnificent brood frog.

4.2.5.7 Contaminants

Inappropriate disposal of liquid and solid wastes, including spills and leaks from transfers (fuel, chemicals) and inadequate storage could result in point-source contamination of surrounding land, including habitats of threatened and migratory species. Direct adverse impacts include toxic impacts on vegetation (resulting in degradation or loss), direct toxic impacts on fauna (from contact, inhalation or ingestion) or indirect impacts on threatened species from habitat loss. Direct adverse impacts on surface and groundwater quality are also possible.

4.2.5.8 Fire

Construction activities have the potential to increase the risk of fire which can result in loss of flora and fauna species and vegetation communities. It can also degrade habitat for flora and fauna species. Aspects of the Project that could lead to increased fire incursion include:

- Introduction of ignition sources including vehicles and machinery and equipment such as generators.
- Welding, grinding and other hot works.
- Introduction or spread of weed species which can increase fuel load.
- Mulch stockpiles that are stacked higher than the recommended limits leading to spontaneous combustion or other ignition sources.

4.2.6 Injury and Mortality of Fauna

Physical injury or fatalities to fauna species have the potential to occur during construction activities that involve vegetation clearing, earthworks and trenching. Fauna may be injured or killed during construction principally through:

- Strike from moving vehicles/machinery – a key issue primarily for ground dwelling species, particularly those with poor mobility.
- Entrapment in habitat features during vegetation removal – particularly during tree felling for species that use tree hollows or hollow logs for roosting and denning.
- Entrapment in trenches/excavations – a key issue for ground dwelling species (reptiles and small mammals), particularly those that are active at night and cannot detect trenches to avoid.

The species which are most at risk of injuries and mortality are those that are cryptic, difficult to detect (i.e. harder to locate by fauna spotter-catchers) and/or have poorly developed dispersal mechanisms (i.e. glider species; small reptiles). Additionally, species that nest or roost in trees or tree hollows during the day (including gliders and owls), may find it difficult to move away from roosts or active breeding places during construction activities. This similarly applies to the Sharman's rock wallaby, who may hide deeper within their shelter site when scared or threatened.

Vehicle collision may result in fauna injury or mortality during the construction of the Project. The construction of the Project infrastructure, as well as the general use of access tracks and roads across the Development Footprint will result in increased vehicle movements that may cause injury or death to fauna by vehicle strike. Mammals, reptiles, amphibians and birds are all at risk of vehicle strike, particularly those species that may utilise roads for thermoregulation, movement pathways or as foraging habitat.

In addition, entrapment of wildlife in trenches or other excavations associated with the Project may also cause physical trauma to fauna. For example, open trenches for underground utilities are known trap a wide variety of wildlife and can often result in fauna mortality. Species most likely to become trapped in pits or other excavations during construction of the Project are ground dwelling species that are capable of moving across modified areas and arboreal species which descend to the ground to disperse.

4.2.7 Invasion and Spread of Pathogens and Disease

There is a potential to increase the spread of pathogens that threaten native biodiversity values. Pathogens specific to the Project include:

- Soil-borne pathogen Phytophthora *cinnamomi* (Phytophthora). Phytophthora is a soil-borne plant pathogen that attacks the roots of susceptible plants. It destroys the root system and reduces the ability of the plant to absorb water and nutrients. This causes symptoms referred to as 'dieback' which can lead to plant death. Any activity that moves soil, water or plant material can spread Phytophthora.
- *Austropuccinia psidii* which causes the disease Myrtle rust. Myrtle rust is caused by an exotic fungus, which affects trees and shrubs in the Myrtaceae plant family. Myrtaceae is the largest plant family in Australia and includes native plants such as tea tree (*Melaleuca* spp.) and eucalypts (*Eucalyptus* spp., *Angophora* spp., and *Corymbia* spp.). Myrtle rust attacks young, soft, actively growing leaves, shoot tips and young stems, as well as fruits and flower parts. This pathogen is spread through its spores, and can be spread on clothes, hair and skin, infected plants, equipment, insects and animals, and via wind dispersal.
- *Batrachochytrium dendrobatidis* (Chytrid fungus). Chytridiomycosis is an infectious disease that affects amphibians worldwide. It is caused by the chytrid fungus (*Batrachochytrium dendrobatidis*), a fungus capable of causing sporadic deaths in some amphibian populations and 100 per cent mortality in others. Individual frogs are thought to contract the disease when their skin comes into contact with water containing spores from infected animals. This pathogen is a significant threat to the magnificent brood frog population within the Study Area. Clinical signs of chytridiomycosis in juvenile and adult frogs may include erythema of ventral surfaces, abnormal posture such as splayed limbs, depression, slow righting reflex, abnormal skin shedding and ulceration and tetanic spasms upon handling.
- Psittacine circoviral (beak and feather) disease (PCD). This disease has been recorded in over 38 species of captive and wild psittacine birds (parrots and their allies) in Australia. Due to the nature of the virus all Australian psittacine species are susceptible to infection. It is often fatal to birds that contract it, and most species do not respond to treatment. The distribution of the disease and the factors involved in its spread are not well understood. The virus multiplies in

the liver and can be transmitted orally or in faeces or feathers. It is one of the smallest and most resistant disease-causing viruses and probably remains alive for many years in tree hollows and other nest sites.

All of these pathogens are present within north Queensland, including within the Wet Tropics World Heritage Area, and are listed as a key threatening process under the EPBC Act.

5.0 Management and Mitigation Measures

5.1 Pre-clearing Process

5.1.1 Flora

Pre-clearing surveys will target potentially occurring threatened flora and weed species. The field survey will include:

- Threatened species searches, to inform the micro siting process and to identify potential indirect impacts on threatened flora. It should be noted that pre-clearing surveys will also occur within areas 5 m either side of the Development Footprint.
- Weed surveys to record the presence and abundance weed species. Areas containing infestations will be treated prior to the commencement of site disturbance and any construction activities.
- Protected plant survey in accordance with the *Flora Survey Guidelines – Protected Plants* (Department of Environment and Science, 2020). Three high-risk areas as identified on the Protected Plants Flora Survey Trigger Map intersect the Development Footprint (Department of the Environment, Tourism, Science and Innovation, 2023).

Given the diversity of flowering times, it is difficult to conduct a single survey for all species. It is therefore proposed to carry out pre-clearing surveys within the flowering period of most of the species with a known or potential likelihood of occurrence (i.e. summer) and characterise the area to be cleared in terms of risk for the other species (i.e. occurrence of good quality habitat). Any areas with a high risk of occurrence of a threatened species will be mapped and checked by a qualified botanist during its flowering period, if this is possible, before clearing. Otherwise, it is proposed to have a suitably qualified ecologist present when areas identified as high risk during the pre-clearing surveys are cleared. The definition of a suitably qualified ecologist is in accordance with the *Flora Survey Guidelines – Protected Plants* (Department of Environment and Science, 2020).

Where threatened species have been identified then the following information will be recorded:

- GPS location
- Collector, date and time
- Species (scientific and common name)
- Number or density of individuals
- Habitat
- Vegetation communities known to occur in
- General notes on the feature identified
- Collect a reference specimen.

If threatened flora species are located within the Development Footprint, the plants or population area including a 5 m buffer must be demarcated, and the Unexpected Finds Procedure followed (Refer **Section 5.2.2**). No direct or indirect impacts to a newly confirmed population will be permitted without prior consultation with DCCEEW and/or DETSI.

5.1.2 Fauna

A suitably qualified and experienced person will undertake a pre-clearing survey no more than 30 days prior to clearing works occurring within the site. This will aim to identify fauna breeding places, fauna habitat, and fauna species, and appropriate action determined if found.

The person will locate, record and mark habitat features that are not to be removed, and that are to be relocated, in a manner which clearly identifies and demarcates the habitat features such as flagging with tape. Habitat features include:

- Hollow bearing limbs
- Hollow bearing trees
- Mistletoe bearing trees
- Complex rock fissures
- Boulder piles
- Ground timber.

Other features which will be recorded, marked and/or mapped during the pre-clearing survey include:

- Areas of important habitat for threatened and migratory species, to be used in the micro-siting process.
- Flying-fox roosts in accordance with the Interim policy for determining when a flying-fox congregation is regarded as a flying-fox roost under section 88C of the Nature Conservation Act 1992 (Queensland Parks and Wildlife Service, 2021).
- Active breeding places, in accordance with the appropriate Species Management Program (low and/or high risk).
- Watercourses and wetlands to be protected with erosion and sediment control methods.
- Suitable areas for stockpiling and laydown.
- Suitable locations for nest boxes and glider poles.

5.2 Vegetation Clearing Process

Vegetation clearing will be undertaken within the Development Footprint with all vegetation within this area to be removed.

While some logs and other habitat features may be identified during pre-clearance surveys and retained for use in retained vegetation or rehabilitation of temporary disturbance areas, most

cleared vegetation will be mulched. Mulching reduces volumes for management and facilitates re-use for site stabilisation and rehabilitation activities. Where practicable, processed vegetative materials may be retained in place and spread over the existing ground surface. If retained, materials will spread evenly with a maximum thickness of 0.5 m. In areas adjacent to retained vegetation, the use of clean water diversion drains and geofabric, or similar, may be required to mitigate associated sedimentation impacts.

Removal of trees is expected to generate a substantial volume of vegetative material. Approximate quantities that may be generated and stockpiled for subsequent utilisation in rehabilitation areas (or retained vegetation) will be determined during the detailed design process. Remaining materials will either be retained in-situ or require disposal.

There will be no on-site burning of cleared vegetation due to the proximity of surrounding bushland and heightened risk of bushfire. Excess materials will be disposed off-site in accordance with QLD legislative requirements.

5.2.1 Clearing Supervision

As per the requirement of Condition 5 (b) of the Project's Development Approval (SARA reference 2211-32271 SDA), a qualified fauna spotter/wildlife officer will be present during clearing operations. This person(s) will be responsible for inspecting habitat features and/or vegetation immediately prior to the commencement of clearing and responsible for recovery of fauna and/or habitat features during the clearing process.

All operators undertaking the clearing are to operate under the instructions of the qualified fauna spotter/wildlife officer to ensure safe operations and effective management of flora and fauna values.

5.2.2 Unexpected Finds Procedure

There are currently no threatened flora species that are known to occur within the Development Footprint. If threatened flora species are identified during the pre-clearing survey or during construction, the following steps will be carried out:

1. Stop work immediately in the location of the unexpected find to avoid any potential impacts.
2. Demarcate the area of the unexpected find with a minimum 5 m 'no-go' zone.
3. Notify the Environment Manager and log an incident under the appropriate classification.
4. Environment Manager is to arrange for an ecologist to conduct an assessment of the significance of the likely impact, develop management options, and notify DETSI and/or DCCEEW as appropriate.
5. If a significant impact is likely to occur:
    - Consult with DETSI and/or DCCEEW

- Obtain approvals, licences or permits as required.

6. Re-begin work once advice is sought and necessary approvals, licences and permits are in place, authorised by the Environment Manager.
7. Include the threatened species in subsequent inductions, toolbox talks and update this VFMP.

5.3 Management Measures

The mitigation and management measures proposed in **Table 5.1** are relevant to all species and vegetation communities identified within the Study Area and have been developed to reduce and manage Project-related impacts to biodiversity values. The Environment Manager will be responsible for the implementation of the mitigation and management measures proposed in **Table 5.1.** Refer to **Section 6.1** for further details pertaining to the roles and responsibilities related to this VFMP.

Mitigation and management measures have been developed with the aim to achieve the following management objectives:

- No exceedance of approved disturbance limits.
- No native fauna mortality.
- No loss of known populations of threatened flora and fauna species.
- Identification of all threatened flora species within the Development Footprint during pre-clearing surveys.
- Clear communication and delineation of 'no-go' areas where impacts will be avoided during construction.
- No introduction or spread of invasive weed species or pest fauna species within areas reasonably attributable to Project disturbance and in areas of the Study Area under the control of the proponent.
- Successful management of invasive weeds within the Development Footprint.
- Progressive stabilisation of disturbed areas and rehabilitation of the Development Footprint following construction, where not required for ongoing operations.
- Implementation of erosion and sediment control and dust suppression measures.
- No incidence of fire as a result of hot works or unmitigated risks associated with Project activities.
- No release of contaminants into the environment, including spills, leaks or inappropriate storage.
- Minimal impacts to native flora and fauna from construction light and noise.

Table 5.1 Management Actions for Fauna and Vegetation Communities

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
Clearing of native vegetation				
Clearing will not exceed approved disturbance limits	• Microsite and optimise the placement of infrastructure within the Study Area. • Trees immediately adjacent to work areas are to be trimmed rather than cleared. • Vegetation clearing and clearing of fauna habitat features are to be kept to the minimum required to facilitate construction activities. • 'No-go' zone (5 m buffer) demarcation and signage will be installed where Of Concern remnant REs occur immediately adjacent to areas of disturbance and/or earthworks, to avoid any inadvertent clearing or destruction.	Prior to commencement of any site disturbance construction activities.	Pre-clearing survey report.	**Trigger:** • Clearing exceeds approved disturbance limits. **Corrective Actions** • Immediately notify Environment Manager. • Cease activity and/or remove equipment from the area outside the Development Footprint. • Immediate restoration and rehabilitation of native vegetation. • Treat weeds and manage spread. • Reinstate or install additional demarcating fencing or flagging. • Review clearing procedures.
	• All activities including site access, laydown of plant and equipment and construction activities must be contained within the finalised Development Footprint.	Prior to commencement of any site disturbance construction activities.	Pre-clearing survey report.	

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				• Re-educate / train site personnel on management requirements and practices.
	• Identify stockpile locations during the pre-clearing survey for storing soil and vegetation for rehabilitation purposes.	These locations will be mapped for communication to the Contractor personnel ahead of the commencement of onsite works.	• Pre-clearing survey report. • Construction audits. • Visual inspection of stockpiles for evidence of erosion or instability.	**Trigger:** Stockpiles occurring on or impacting on retained habitat. **Corrective Actions:** • Stockpiles are relocated to appropriate location. • Rehabilitation is undertaken to retained habitat where necessary. • Review site procedures.
Maintain vegetation (including canopy trees) where the transmission line crosses a major riparian zone (e.g.,	• Removal of riparian vegetation at creek and crossing will be minimised and vegetation connectivity across riparian zones will be maintained where possible. • Trees that have been approved for removal will be clearly marked with flagging tape prior to construction.	At all times during clearing.	Pre-clearing survey report.	**Trigger:** • Removal of trees that are not marked for clearing. **Corrective Actions:** • Immediately notify Environment Manager. • Cease activity and review clearance procedures and approved clearance areas.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
Douglas Creek and Michael Creek).				• Install additional demarcating fencing or flagging.
Clearing is contained within the Development Footprint.	'No-go' areas, including clearing limits will be clearly demarcated using visual aids (i.e. flagging tape, barricade webbing, signage or similar, depending on the duration of the disturbance). The following activities are not to occur in the 'no-go' areas: • Storage and mixing of materials. • Vehicle parking. • Liquid disposal. • Machinery repairs and/or refuelling. • Construction of site office or shed. • Combustion of any material. • Stockpiling of soil, rubble, debris, or habitat features/vegetation to be relocated. • Any filling or excavation including trenching, topsoil skimming and/or surface excavation. • 'No-go' zone demarcation will be inspected regularly and maintained until the risk of	At all times during clearing.	Construction audits.	**Trigger:** • Extent of works not clearly demarcated. • Clearing outside of the Development Footprint. • Construction activities undertaken in 'no-go' areas. **Corrective Actions:** • Immediately notify the Environment Manager. • Cease activity and/or remove equipment from habitat area. • Immediate restoration and rehabilitation of native vegetation. • Treat weeds and manage spread.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	disturbance within the 'no-go' area is eliminated. • Where habitat trees are immediately adjacent to areas of earthworks, install tree protection demarcation to the drip line of the tree. Spatial files (shapefile format) will be provided detailing the Development Footprint and clearing extents.			• Reinstate or install additional demarcating fencing or flagging. • Review clearing procedures. • Re-educate / train site personnel on management requirements and practices.
Vegetation loss				
Rehabilitate and restore all areas of temporary use.	Progressively rehabilitate and revegetate work areas as soon as reasonably practicable to avoid extended periods of soil exposure, as per the Preliminary Rehabilitation Plan (Umwelt, 2025).	Following construction	• Construction audits. • Post-clearing survey report.	**Trigger:** Rehabilitation is deemed to be unsuccessful. **Corrective Actions:** • Assess if rehabilitation occurred according to the Preliminary Rehabilitation Management Plan. • Determine potential reasons for the lack of rehabilitation success, utilising expert advice as required.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				• Take the necessary actions required to address the lack of success. • Make changes to rehabilitation procedures as required to minimise the likelihood of reoccurrence.
Removal of threatened flora species or habitat				
All site personnel informed of protected flora species. New individuals or populations of threatened flora species are identified within the Development Footprint.	• All site personnel to be introduced through a site induction, to protected flora species which have the potential to occur within the site. • Pre-clearing surveys will be undertaken within appropriate habitat for threatened species known and likely to occur within the Development Footprint (refer to **Table 4.2**) and 5 m either side of the Development Footprint to inform the micro-siting process). If any individuals or populations are located during the targeted surveys, a detailed account of their occurrence will be recorded including number of individuals, GPS location and extent. The plants or population area must be demarcated and avoided via micro-siting. No direct or indirect impacts will be	Prior to personnel entering and working on site.	• Training registers. • Pre-clearing survey report.	**Trigger:** Identification and/or removal of threatened flora species within Development Footprint **Corrective Actions:** • Stop work immediately to avoid further impacts. • Follow the Unexpected Finds Procedure (Section 5.2.2).

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	permitted without prior consultation with DCCEEW and DETSI (see **Section 5.2.2**). • Protected plant surveys in accordance with the *Flora Survey Guidelines – Protected Plants* (Department of Environment and Science, 2020) will be undertaken within the high-risk areas identified on the Protected Plants Flora Survey Trigger Map.			
The retention and avoidance of *Commersonia reticulata* individuals.	• *Commersonia reticulata* has been identified within the Study Area, but not within the Development Footprint. The closest known record is approximately 159m west of the Development Corridor. Refer to **Figure 3.2.** • If a new population of *Commersonia reticulata* is identified during construction within the Development Footprint then flagging tape and signage will be placed around the known individual or population. • If a new individual or population is identified during pre-clearing surveys then no direct or indirect impacts will be permitted without prior consultation with DCCEEW and DETSI (see **Section 5.2.2**).	At all times during clearing.	• Construction audits. • Training registers. • Pre-clearing survey report. • Post-clearing survey report.	**Trigger:** Removal of new populations of *Commersonia reticulata* within Development Footprint **Corrective Actions:** • Stop work immediately to avoid further impacts. • Contact the Environment Manager and clearly demarcate areas (e.g. bunting, fencing and signage) where new populations of *Commersonia reticulata* been identified.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				• Consult DETSI and/or DCCEEW to obtain relevant permits and approvals. • A suitably qualified ecologist is to determine the likelihood of a significant impact.
Removal of fauna habitat				
High-value fauna habitat features to be retained are identified prior to construction.	A qualified and experienced fauna spotter-catcher will complete a pre-clearing survey prior to the commencement of clearing to identify the specific high-value fauna habitat features that cannot be removed or relocated under the conditions of the Species Management Program (high-risk of impacts). The person will locate and record the following specific habitat features which cannot be removed. Habitat features may include specific: • Hollow bearing limbs. • Hollow bearing trees. • Mistletoe bearing trees. • Complex rock fissures.	Within one month of site disturbance.	• Pre-clearing survey report. • Training registers.	**Trigger:** High-value habitat features marked to be retained are removed. **Corrective Actions:** • Stop work. • Fauna spotter-catcher to determine the reason behind the inadvertent clearing. • Corrective actions applied. • DETSI to be immediately contacted.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	• Boulder piles. • Ground timber.			• Re-educate / train site personnel.
High-value fauna habitat features to be removed are identified prior to construction.	During the pre-clearing survey, the fauna spotter-catcher will locate, record and mark the following specific habitat features which are to be removed, in a manner which clearly identifies and demarcates the habitat features using flagging tape. Habitat features include: • Hollow bearing limbs. • Hollow bearing trees. • Mistletoe bearing trees. • Complex rock fissures. • Boulder piles. • Ground timber. • Sequential clearing of native vegetation will occur to minimise impacts to native fauna species during the clearing process. This includes clearing towards adjacent habitats to encourage movement to these areas. • In the first instance, high-value habitat features should be retained. If this is not possible, the habitat features should be	Within one month of site disturbance.	Pre-clearing survey report.	NA

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	removed according to the methods detailed below.			
Staged habitat removal process.	Clearing of habitat features will be completed using a two-stage approach, with the objective to allow sufficient time for resident fauna time to evacuate habitat prior to clearing. Stage 1 Clearing: • Removal/pruning of non-habitat trees, shrubs and other vegetation at least 24 hours before habitat features are removed. • This vegetation is to be removed from within the vicinity (20m) of the habitat feature, to prevent fauna from using it as habitat. • Habitat features are tapped with machinery to encourage fauna to leave prior to removal 24 hours later. • The fauna spotter-catcher will be on site during Stage 1 clearing to rescue any animals disturbed by the Stage 1 clearing. Stage 2 Clearing: Remove remaining habitat features at least 24 hours after Stage 1 clearing.	• Stage 1 clearing: 24 hours prior to site disturbance. • Stage 2 clearing: during site disturbance.	• Pre-clearing survey report. • Habitat features are not to be removed without the presence of a fauna spotter-catcher.	**Trigger:** Clearing of fauna habitat features is not done according to the staged plan. **Corrective Actions:** • Stop work. • Consult the fauna-spotter catcher. • Re-educate / train site personnel.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	• Fauna spotter-catcher to inspect each feature immediately prior to its removal (where possible). • Habitat features to be removed under the supervision of the fauna spotter-catcher. • Trees with large hollows (as identified by a fauna spotter catcher) will be cleared using the "slow drop" technique to minimise any likely injury to gliders residing in the hollow.			
Relocate suitable habitat features.	• Where habitat features (hollow bearing limbs, hollow bearing trees, mistletoe bearing trees, complex rock fissures, boulder piles and ground timber) are to be removed, these should be considered for relocation to areas of undisturbed habitat. The Pre-clearing Survey Report will identify the habitat features present and include details on retention within the Development Footprint or relocation to areas of undisturbed habitat. • Identify habitat features suitable for relocation to undisturbed areas immediately adjacent to the Development Footprint. • Habitat features must be of a size where these can be safely handled and relocated.	Prior to and at all times during construction.	Pre-clearing survey report.	**Trigger:** Suitable habitat features are mulched, burnt or inappropriately discarded. **Corrective Action:** • Recover and reclaim for relocation in adjacent habitat. • Re-educate / train site personnel.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	• Where habitat features are too heavy to be moved by site personnel, placement by machine will be limited to the full extension of the machine while its tracks remain with the Development Footprint. • The fauna-spotter catcher is to provide necessary mapping of these habitat features to support the implementation of mitigation controls during felling and clearing activities. • The habitat features are to be stored in an appropriate location until it is relocated. An appropriate location for storage includes in previously cleared areas, where it does not pose an increased risk of fire.			
Removal of tree hollows				
Continued presence of northern greater glider within 'islands' created by transmission	• Where den trees cannot be avoided, install three greater glider nest boxes for every den tree removed within the immediate vicinity. Where suitable, include a mix of nest boxes and creation of hollows in live trees. • Install glider poles in appropriate locations. Final locations and placement of glider poles to be guided by greater glider activity, final clearing widths, advice from the fauna	Nest boxes: Up to one month prior to clearing to provide alternative shelter for hollow-dependent fauna.	• Pre-clearing survey report. • Post-clearing survey report.	**Trigger:** • A hollow bearing limb or tree is required to be removed. • Connectivity between greater glider habitat is fragmented. **Corrective Action:**

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
line and access tracks.	spotter-catcher and site constraints. Glider poles will include refuge from predators. • If a threatened species is found to be occupying a hollow at the time of removal, then this hollow section may be reattached to a recipient tree within the nearby retained areas as selected and directed by the fauna spotter-catcher. • The relocated hollow section and nest boxes should be well secured in the recipient tree in a manner that will not compromise the current or future health of that tree.	Glider poles: as soon as practicable after construction.		• Install nest boxes and glider poles.
Removal of rock piles in Sharman's rock wallaby habitat				
Minimal impacts to retained rock piles in Sharman's rock wallaby habitat.	• Sharman's Rock Wallaby Breeding Habitat identified during previous investigations to be inspected in pre-clearance surveys prior to construction. • No clearing and construction works will be undertaken within 450 m of occupied rock clusters. • Where there is an identified occupied Sharman's rock wallaby rock cluster within 500 m of construction activities, construction	At all times during construction.	• Pre-clearing survey report. • Continued monitoring of rock piles during construction. • Post-clearing survey report.	**Trigger:** Construction work is occurring within 500 m of a rock pile and night work is scheduled. **Corrective Actions:** • Stop work. • Construction schedule is to be amended to avoid night work.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	will be scheduled outside of dusk hours where practical to minimise disturbance. • Travel will be avoided on the section of an access track should it sit within 500 m of an occupied rock cluster where practical. Should travel be necessary along that section of road, travel speeds will be reduced to 5 - 10 km / hr. • Construction personnel access to occupied rock pile habitat is prohibited.			
Removal of flying-fox roosts				
No impacts to flying-fox roosts without approval by DETSI and/or DCCEEW.	• No flying-fox roosting camps are known to be present, however congregations or roosts will be confirmed during the pre-clearing survey. • If a camp is confirmed, stop work, reassess impact, and develop site-specific management plan, or ensure Development Footprint/disturbing activities do not encroach camp or surrounds (within 200 m of camp).	Prior to and at all times during construction.	Pre-clearing survey and report.	**Trigger:** A flying-fox camp is disturbed or destroyed without appropriate approval. **Corrective Actions:** • Stop work immediately to avoid further impacts. • Consult DETSI and/or DCCEEW to obtain relevant permits and approvals. • If a threatened species has been impacted, a suitably

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				qualified ecologist is to determine the likelihood of a significant impact. • Re-begin work once advice is sought and necessary approvals, licences and permits are obtained.
Injury or mortality of fauna				
All site personnel informed of protected fauna species and site rules for interactions with fauna.	All site personnel to be introduced through a site induction, to protected fauna species which have the potential to occur within the site. Site induction will include training in the following: • Impairment or killing of native fauna may incur penalties. • Information will be provided in relation to protected and/or dangerous fauna which may be encountered on site, i.e. venomous snakes. • Only designated and trained personnel are allowed to handle and remove fauna. • Tampering with an animal breeding place may also incur penalties.	Prior to personnel entering and working on site.	• Training register. • Environmental incidents register.	**Trigger:** • Site personnel (other than the suitably qualified spotter-catcher) handling or killing native fauna. • Tampering with an animal breeding place outside of the measures specified in the approved and appropriate (low or high risk) DETSI Species Management Program as per the Nature Conservation (Animals) Regulation 2020. **Corrective Actions:**

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				• Injured fauna is to be taken immediately to the nearest vet or wildlife carer. • Any injuries or mortality to fauna discovered or caused by staff are to be reported to the Environment Manager Immediately. Fauna Spotter-catchers must report injuries and mortality as per their contract/ service agreement and relevant approvals. • Re-educate / train relevant site personnel on management requirements, practices and site rules. • Where a threatened species is injured or killed, notify DCCEEW and/or DETSI within 48 hours of the incident. • Assess prescribed mitigation measures and update VFMP where required.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
Minimise mortality of native fauna during clearing works.	• All clearing will be undertaken in the presence of a suitably qualified fauna spotter-catcher with a current Damage Mitigation Permit. • Exclusion zones will be established around identified active breeding places, such as nests, burrows, dens etc. Where there is the potential an active breeding place will be tampered with, this will only be done in accordance with an approved Species Management Program. • Any tree which houses a koala as well as any tree with a crown that overlaps that tree will not be cleared until the koala vacates the tree on its own volition. • Frog fencing will be placed around all areas of mapped habitat for the magnificent brood frog that is found immediately outside the approved location to be cleared. Any fauna that requires relocation will be relocated using appropriate animal hygiene. These include: • Wash hands between handling of different animals.	At all times during construction and clearing activities.	• Construction audits. • Environmental incidents register. • Post-clearing survey report.	**Trigger:** • Native fauna injured or killed during construction. • Clearing occurring without a spotter-catcher being present. • Magnificent brood frog found within the area being cleared. **Corrective Actions:** • Injured fauna is to be taken immediately to the nearest vet or wildlife carer. • Confirm the integrity of the frog fencing. • Any injuries or mortality to fauna discovered or caused by staff are to be reported to the Environment Manager Immediately. Fauna Spotter-catchers must report injuries and mortality as per their contract/

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	• Handling of frogs will be done with the use of disposable and pre-rinsed vinyl gloves. Do not handle multiple individuals wearing the same gloves. • Animals are to be immediately bagged in a suitably sized calico bag or plastic zip lock bag for amphibians. Do not reuse bags or use a single bag for multiple individuals. • Any fauna that requires relocation will be relocated to the closest area of suitable habitat outside of the Development Footprint. • Clearing will be undertaken in a sequential manner to allow fauna present sufficient time and space to move out of the area of their own accord, rather than being forcefully moved. Any fauna which are relocated will be documented throughout the course of construction. This record will include: • Species. • Location found. • Location of relocation area. • Condition of the animal.			service agreement and relevant approvals. • Where a threatened species is injured or killed, notify the Environmental Manager immediately and notify DCCEEW and DETSI within 48 hours of the incident. • Assess prescribed mitigation measures and update VFMP where required.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	If any threatened fauna species are observed during construction, work will cease in the immediate vicinity of the sighting until it has relocated, or it has been removed by a suitably qualified spotter-catcher. The fauna spotter-catcher will provide a suitable record to the Environment Manager. As per the Public Environment Report, any red goshawk nest trees detected must be avoided and a 400 m permanent exclusion zone applied to turbine placement.			
Minimise mortality of native fauna from excavation and trenches.	Construction of trenches will be managed to minimise fauna injury and mortality by: Trenches must be filled as soon as reasonably practicable. • Where trenches are required to remain open for more than 24 hours, inspections of the trenches must be completed minimum of twice daily (more on hot days) and any fauna that are trapped will be relocated in a safe and suitable relocation area.	At all times during construction and clearing activities.	• Construction audits. • Environmental incidents register.	**Trigger:** • Native fauna injured or killed in an open trench. • Open trenches do not have the appropriate fauna egress points or fauna respite points. **Corrective Actions:** • Injured fauna is to be taken immediately to the nearest vet or wildlife carer.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	• No trenches are to be backfilled without the completion of a fauna check prior to backfilling. • Where trenches are required to remain open for more than 72 hours, fauna egress points (ramps) and fauna respite points (e.g. a wet hessian sack) are to be established every 50m of open trench.			• Any injuries or mortality to fauna discovered or caused by general staff are to be reported immediately to the Environment Manager. Fauna Spotter-catchers must report injuries and mortality as per their contract/ service agreement and relevant approvals. • Where a threatened species is injured or killed, notify the Environmental Manager immediately and notify DCCEEW and/or DETSI within 48 hours of the incident. • Assess prescribed mitigation measures and update VFMP where required.
Minimise mortality of fauna from vehicle strike.	• Enforce a maximum speed limit of 40km/hr on built access tracks. Speeds on public roads are to be observed. • Travel will be avoided on the section of an access track should it sit within 500 m of occupied Sharman's rock wallaby Breeding	At all times during construction and clearing activities.	• Construction audits. • Environmental incidents register. • Training register.	**Trigger:** • Vehicles travelling above speed limits. • Vehicles observed not using designated tracks.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	Habitat where practical. Should travel be necessary along that section of road, travel speeds will be reduced to 5 - 10 km / hr. • Vehicles to remain on designated access tracks and roads as far as practicable. • Many animals become more active at dawn and dusk. As far as practicable, avoid vehicular movements to/from site outside of daylight hours. Where this is unavoidable, drive to the conditions and reduce speed along vegetated stretches of road.			• Native fauna injured or killed as a result of vehicle strike. **Corrective Actions:** • Injured fauna is to be taken immediately to the nearest vet or wildlife carer. • Any injuries or mortality to fauna discovered or caused by general staff are to be reported immediately to the Environment Manager. Fauna Spotter-catchers must report injuries and mortality as per their contract/ service agreement and relevant approvals. • Re-educate / train site personnel on management requirements, practices and site rules. • Where a threatened species is injured or killed, notify the Environmental Manager immediately and notify

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				DCCEEW and/or DETSI within 48 hours of the incident. • Assess prescribed mitigation measures and update VFMP where required.
• Weed, pest and pathogen control				
No increase in weed and pest presence and abundance within and adjacent to the Development Footprint. No new weeds or pests becoming established.	• Weed, pest and pathogen management and control practices will be implemented throughout construction to minimise the risk of spread into and out of the Project and between construction sites. • All management objectives, management measures, monitoring and recording, and corrective actions from the potential spread of weeds and pests from construction activities will be detailed in a Weed and Pest Management sub-plan as part of a Construction Environmental Management Plan (CEMP) prepared in accordance with the SARA development approval.	At all times during construction and clearing activities.	• Pre-clearing survey report. • Construction audits.	**Trigger:** • New weed species or new infestations are identified within the Development Footprint. **Corrective Actions:** • Infestations are identified and mapped. • Source of infestation is investigated and addressed. • Infestations are controlled via appropriate use of herbicide or other control techniques.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				• Implement any rehabilitation as required. • Review hygiene procedures as update Weed and Pest Management sub-plan if required.
No incidence of chytrid fungus in magnificent brood frog habitat.	The potential introduction/spread of chytrid fungus in magnificent brood frog habitat will be mitigated through the requirement for state and federal disease control protocols to be implemented throughout all phases of the Project. These include: *Hygiene protocols for the control of diseases in Australian frogs* (Murray et al., 2011). *Technical Manual: Interim hygiene protocol for handling amphibians* (Department of Environment and Heritage Protection, 2016).	At all times during construction and clearing activities.	Visual inspections.	**Trigger:** • Identification of sick or dead frogs. **Corrective Actions:** • Stop works that are directly adjacent to or upstream of magnificent brood frog habitat where sick or dead frogs have been located. • Dead amphibians or live animals showing clinical signs of chytrid disease should be collected using gloves and sent for disease diagnosis to: School of Public Health, Tropical Medicine and Rehabilitation

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
				Sciences. James Cook University, Douglas Campus. • Consult with DETSI and DCCEEW. • Resume work once advice is sought with clear guidance going forward. • Update/amend this VFMP.
Erosion and sediment				
No increase in erosion or sedimentation.	Potential impacts of erosion and sedimentation on the magnificent brood frog will be mitigated through the development and implementation of an Erosion and Sediment Control Management Plan (Windlab, 2024b). Specifically including: Where stream crossings are not maintained as level crossings, it is a requirement that for access tracks crossing drainage lines in magnificent brood frog habitat, culverts must be installed which facilitate adequate flow of water and movement of magnificent brood frog up and down stream. Establishment of adequate	At all times during construction and clearing activities.	• Construction audits. • Visual inspections.	**Trigger:** • Erosion and sediment controls are not installed or have failed. • Visible increase in erosion or sedimentation. **Corrective Actions:** • Notify Environment Manager immediately to record incident in register. • Rectify control measures as per Erosion and Sediment Control Management Plan.

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
	erosion control devices to be prevent the sedimentation of drainage lines within the Study Area, specifically those mapped as magnificent brood frog habitat.			• Undertake an assessment of the Erosion and Sediment Control Management Plan and update where required.
Noise				
Minimal impacts to native fauna from construction noise	• The Study Area is remote and there are few anthropogenic sources of noise. • All management objectives, management measures, monitoring and recording, and corrective actions from the increase in noise and vibration from construction activities will be detailed in a Noise and Vibration sub-plan as part of CEMP prepared in accordance with the SARA development approval.	At all times during construction and clearing activities.	Monitoring program to be implemented during construction.	**Trigger:** • Monitoring reveals noise levels are above acceptable levels. • A noise or vibration complaint is made. **Correction Actions:** • Investigated cause. • Implement corrective actions.
Dust generation				
Minimal impacts to native flora and fauna from	• The Study Area traverses remote areas where there are limited anthropogenic air emission sources. • All management objectives, management measures, monitoring and recording, and	At all times during construction and clearing activities.	• Visual inspections. • Dust deposition monitoring using	**Trigger:** • Dust deposition in vegetated areas. **Corrective Actions:**

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
construction dust.	corrective actions in response to dust generation from construction activities will be detailed in a Dust Management sub-plan as part of CEMP prepared in accordance with the SARA development approval.		a dust deposition gauge.	• Investigate cause. • Rectify the issue by implementing appropriate measures, including increasing water frequency of dust suppression measures.
Light spill				
Minimal impacts to native fauna from construction lighting.	Where works are undertaken at night, direction lighting will be used and directed away from vegetated areas. A Construction Lighting Plan showing locations and design of construction lighting is to be provided to the fauna spotter-catcher for all sections. Lighting needs to demonstrate how baffles can effectively stop illumination spill over into habitat areas.	At all times during construction and clearing activities.	Fauna spotter-catcher to inspect lighting and provide compliance certificate.	**Trigger:** • Light spill into vegetated areas. • Lighting does not comply with the Construction Lighting Plan. **Corrective Actions:** • Rectify the issue by installing appropriate baffles. • Update the Construction Lighting Plan as necessary.
Contaminants				

Performance Criteria	Management Action/s	Timing	Monitoring Activity	Trigger/Corrective Actions
No incidence of spills or contaminants affecting native vegetation or waterways.	The Study Area is remote with few potential sources of contamination. All management measures, monitoring and recording, and corrective actions in response to the risk of the spill of contaminants during construction activities will be detailed a CEMP prepared in accordance with the SARA development approval.	At all times during construction and clearing activities.	Visual inspections.	**Trigger:** Spills or contaminants entering native vegetation communities or waterways. **Corrective Actions:** • Investigate cause. • Undertake maintenance and remediation as required.
Fire				
No incidence of fire on site as a result of Project activities.	Gawara Baya is situated in an area of moderate bushfire intensity risk, however the Study Area includes patches of high and very high potential bushfire intensity and is adjacent to a large area of high potential bushfire intensity. All management objectives, management measures, monitoring and recording, and corrective actions in response to the increase in fire risk as a result of construction activities are detailed in the Bushfire Management Plan (Windlab, 2024a).	At all times during construction and clearing activities.	Identification of a fire in the Study Area.	**Trigger:** On-site fire. **Corrective Actions:** • Investigate cause. • Undertake fire suppression measures. • Modify systems as per the Bushfire Management Plan.

5.4 Threatened Species Management Measures

Table 5.2 below has been provided by 2Rog to address the SARA information request Item 10, fifth dot point stating, *"Provide an updated EMP with updated mitigation measures for threatened fauna and/or flora where relevant."*

Table 5.2 Threatened Species Mitigation Measures

MNES Species	Mitigation Measure[13]
Threatened Fauna	
Sharman's rock wallaby	• No clearing or construction activities within 450 metres of occupied Sharman's Rock Wallaby Breeding Habitat[14] (refer to **Appendix A**). • No clearing or construction outside of daylight hours[15] on any day until the expiry of this approval unless it is for time-critical construction (e.g., concrete pours). • Undertake a monitoring and control program for feral predators (cat/dog) across disturbance areas particularly within 500 m of occupied Sharman's Rock Wallaby Breeding Habitat[16].
Koala	Undertake a monitoring and control program for feral predators (cat/dog) across disturbance areas particularly and riparian zones.
Northern greater glider	Pre-clearance surveys to be undertaken within potential Greater Glider Habitat (refer to **Appendix A**) to identify the presence of den trees which may support the species. These trees will be clearly marked, and GPS locations recorded. Pre-clearance surveys will be completed no more than 48 hours prior to clearing commencing. Conduct staged and sequential clearing within potential habitat, including: • Retaining den trees to second phase of clearing to provide opportunity for arboreal fauna to self-vacate, and • maximise connectivity. • Trees with large hollows (as identified by a fauna spotter catcher) will be cleared using the "slow drop" technique to minimise any likely injury to gliders residing in the hollow.

[13] Provided by 2Rog (2025)
[14] I.e., no clearing outside of Approved Final Development Footprint (which incorporates 450 m setback to occupied Sharman's Rock Wallaby Breeding Habitat).
[15] Means the time between sunrise and sunset on the same day as specified for that day by Geoscience Australia for Mount Fox, Queensland.
[16] Feral Predator Management Plan (FPMP) currently in development. In accordance with Condition 61 of the EPBC 2021/9066 Approval, FPMP to be finalised and approved by DCCEEW prior to any clearing or construction of the Project (the Action) commencing.

MNES Species	Mitigation Measure[13]
	• The use of barbed wire within Development Footprint will be prohibited unless otherwise required by legislation or specific industry standards (e.g. relating to sub-station security). • Where barbed wire is installed by the Approval Holder in the Development Footprint, the Approval Holder must affix and maintain visibility tags or tape at every 30 cm length of the barbed wire until the barbed wire is removed. • Ensure clearing for linear infrastructure is not greater than 25 m in width for at least 10 m in length, at every 100 m length of linear infrastructure. • Install one or more Glider Pole/s, or other ecologically appropriate crossing measure, across any area cleared for linear infrastructure that is wider than 25 m for more than 50 m. • Endeavour to maintain all vegetation (including canopy trees) where the transmission line crosses a major riparian zone (e.g., Douglas Creek and Michael Creek). • Undertake a monitoring and control program for feral predators (cat) across disturbance areas and particularly within known glider locations.
Short-beaked echidna	Measures include all relevant general avoidance, mitigation and measures presented in **Section 5.3** and the identification of breeding habitat during pre-clearance surveys (e.g. large logs and burrows).
Flying-foxes	• No flying-fox roosting camps are known to be present, however congregations or roosts will be confirmed in accordance with the 'Interim policy for determining when a flying-fox congregation is regarded as a flying-fox roost under section 88C of the Nature Conservation Act 1992'[17]. • If a camp is confirmed, stop work, reassess impact, and develop site-specific management plan, or ensure development footprint/disturbing activities do not encroach camp or surrounds (within 200 m of camp). • The use of barbed wire will be prohibited unless otherwise required by legislation or specific industry standards (e.g. relating to substation security).
Bare-rumped sheathtail bat	• Minimise impacts to potential roost habitat including creek banks and rock piles.

[17] NCS/2021/5677, Version 2.00, 29 July 2021 located at < https://www.qld.gov.au/__data/assets/pdf_file/0011/221024/op-wl-ff-roost-definition.pdf>.

MNES Species	Mitigation Measure[13]
	• The use of barbed wire will be prohibited unless otherwise required by legislation or specific industry standards (e.g. relating to sub-station security, cattle exclusion) • No clearing of Bare-rumped Sheathtail Bat Habitat (refer to **Appendix A** in any period commencing on 1 December and ending on 31 January in the same financial year.
Greater large-eared horseshoe bat	• Minimise removal of large trees with basal hollows in Greater Large-eared Horseshoe Bat Habitat (refer to **Appendix A**). • Undertake a monitoring and control program for feral predators (cat) across disturbance areas, especially riparian zones.
Red goshawk	• Pre-clearance surveys targeting potential nest trees must be undertaken within Red Goshawk Breeding Habitat (refer to **Appendix A)** within 400 m of any proposed clearing prior to clearing. • Any nest trees detected must be avoided and a 400 m permanent exclusion zone applied to turbine placement. • Clearing within 4 km of confirmed nest trees must not remove more than 25% of habitat within the area[18].
Masked owl (northern)	• Minimise removal of large hollow-bearing trees in Masked Owl (northern) Habitat (refer to **Appendix A**).
Glossy black cockatoo	Minimise removal of large hollow-bearing trees.

[18] Fledgling success significantly drops (33% success rate compared to 77% success rate) when greater than 25% of species home range habitat is cleared (Baker-Gabb 2009).

5.5 Restoration and Rehabilitation

Rehabilitation of Project areas no longer used for construction activities will reduce potential impacts to threatened species and vegetation. Successful rehabilitation of these areas includes the implementation of rehabilitation objectives and rehabilitation acceptance criteria. Rehabilitation objectives provide a clear explanation of proposed rehabilitation outcomes, whereas acceptance criteria are the indicators used to measure rehabilitation success, to demonstrate that the rehabilitation objective has been achieved.

Up to 331.7 ha or 55% of the total Development Footprint is proposed to be rehabilitated or restored. Proposed areas of rehabilitation and restoration are presented in **Table 5.3.**

Table 5.3 Proposed Areas for Clearing and Rehabilitation

Broad Habitat Type	Total Cleared Area (ha)	Proposed rehabilitation / restoration (ha)[19]
Floodplain	1.3	0
Open forest to woodlands on uplands	17.9	11.0
Open forest with *Allocasuarina* spp. Dominant or co-dominant in the canopy	0.4	0
Open woodlands on basalt plains	53.5	27.3
Open woodlands on open forest on granite or Tertiary surfaces	466.3	255.1
Riparian forest	5.0	1.4
Rock pavement	0.4	0.3
Very open woodland on metamorphics and low hills	47.1	31.1
Woodland on lateritised surface	5.7	4.2
Non-remnant	2.7	1.3
% of Development Footprint	**100%**	**55%**

Further information is provided in the Preliminary Rehabilitation Plan (Umwelt, 2025).

[19] Data taken from Ecological Impact Report (2rog Consulting, 2025)

6.0 Compliance Management

6.1 Roles and Responsibilities

The roles and responsibilities for Project staff are outlined in **Table 6.1** below.

Table 6.1 Roles and Responsibilities

Role	Responsibility	Duties
Windlab Project Manager	Hold overall responsibility for environmental management.	• Reviews, understands, approves, and supports implementation of the VFMP. • Ensures adequate resources are provided for the implementation of the VFMP.
Windlab Environmental Manager	• Ensures adequate planning and resources are provided for the implementation of the VFMP, including relevant inductions and training. • Identifies changes during construction and updates the VFMP accordingly. • Ensures that vegetation and fauna management obligations are embedded into Project design, systems and processes. • Ensures reporting requirements are completed, non-conformances are actioned and corrective actions are implemented where needed.	• Shall be suitably qualified and experienced environmental scientist/engineer. • Responsible for site management, VFMP compliance, including subcontractors. • Issues stop work orders, if required. • Monitors works to ensure all environmental obligations are met, e.g. undertakes minimum of weekly environmental inspections (or if environmental conditions change, e.g. rain). • Undertakes internal audits. • Reports demonstration of compliance with applicable environmental legislation, conditions of approval and contractual obligations. • Records any community complaints and notifies Project Manager. • Facilitates inductions and toolbox talks for site personnel. • Reviews corrective actions. • Reports VFMP non-conformances to the Project Manager. • Notifies the CBOP Contract Project Manager if the VFMP needs revising.

Role	Responsibility	Duties
CBOP Contractor Project Manager	• Ensures all construction personnel are aware of their obligations under the VFMP. • Reports on and responds to identified hazards, non-compliances and incidents. • Ensures adequate planning and resources are provided for the implementation of the VFMP, including relevant inductions and training.	• Overall responsibility for ensuring all mitigation measures are implemented during works, including development of any sub-plans. • Ensures any design changes during construction are approved by Windlab, including obtaining any necessary additional or modified planning approvals. • Ensures the environmental performance of the construction phase, including a responsibility for the effective implementation of health, safety and environment management measures. • Oversees development and ensures effective delivery of all environmental inductions. • Manages community complaints with respect to environmental matters. • Respond to environmental incidents as required. • Ensures incident reporting protocols are followed and that the construction personnel report events/hazards and near misses. • Ensures all necessary environmental approvals relevant to the Project and area of responsibility are obtained. • Ensures that Project specific obligations/commitments are effectively implemented. • Ensures that any ongoing obligations/commitments upon the completion of construction are identified, documented, and handed over via the Project handover process to operations staff. • Prepare a Construction Lighting Plan for the Project. • Ensure all construction personnel are aware of their obligations.

Role	Responsibility	Duties
CBOP Contractor Health, Safety Environment Advisor	• Facilitates inductions and training for all staff. • Conducts regular inspections against compliance with the VFMP. • Undertakes supervision, monitoring and reporting requirements.	• Provides assistance and/or advice regarding implementation of the VFMP. • Ensures that workplace equipment and tools meet industry standards. • Investigates hazards, non-compliances and incidents, establishing cause, potential impact, corrective actions and preventive measures to avoid future occurrences. • Initiates corrective actions. • Initiates preventative measures with 48 hours of significant forecast rain events (25 mm within a 24-hour period).
Suitably qualified ecologist	Provides independent ecological expertise. Reports to the Environment Manager.	• Undertakes pre-clearing surveys to identify the presence of threatened flora in the Development Footprint, and within high-risk areas as identified on the Protected Plants Flora Survey Trigger Map. • Assesses impacts to threatened species as per the Unexpected Finds Procedure.
Suitably qualified spotter-catcher or ecologist	Oversees the clearing activities, inspects habitat features prior to clearing, and undertakes fauna relocation. Reports to the Environment Manager.	• Must hold a current damage mitigation permit, licensed under the NC Act. • Undertakes pre-clearing and post-clearing fauna surveys. • Pre-clearing site demarcation. • Creates mapping identifying habitat features (including hollow bearing trees, hollow-bearing libs, mistletoe bearing trees, complex rock fissures, boulder piles and ground timber) for removal, protection and relocation. • Reviews, approves, and audits the Construction Lighting Plan. • Maintains an Incident Register and provides the register to the Environment Manager. • Oversees habitat feature relocation. • Supervises vegetation clearing and captures and relocates fauna, as required.

Role	Responsibility	Duties
		• Provides pre and post clearing survey reports.
All Project personnel	• Complete relevant inductions and training. • Understand and implements the management measures described within the VFMP, as appropriate. • Report all observed hazards, non-compliances and incidents to a supervisor. • Continually seeks to identify areas for improvement of cleared vegetation management and reports these to a supervisor.	• Attends daily toolbox talks. • Complies with all legal requirements and the requirements of this VFMP. • Constructs and implements environmental controls and procedures. • Rectifies temporary situations that may result in or are resulting in, environmental harm.

6.2 Training and Awareness

All employees, contractors and sub-contractors working on site will undergo site induction training, including matters relating to fauna and flora management. The induction training will address elements related to fauna and flora management including:

- Existence and requirements of this VFMP.
- Relevant legislation.
- Specific species and communities (including threatened and migratory species) likely to be affected by the construction works and how these species can be recognised.
- No-go areas.
- Weed and pest species likely to be located within the Study Area.
- Informing all personnel of the sensitive areas and procedures for minimising ecological impacts.
- Familiarity with site environmental controls.
- General fauna management measures.

- Specific responsibilities for the protection of fauna.

The Construction Manager will maintain a register signed by those inducted. The register will contain the name of inductees, dates inducted and the name of the facilitator.

6.3 Monitoring and Reporting Requirements

The mitigation and management measures identified in **Section 5.0** will be monitored throughout the life of the Project to ensure their ongoing effectiveness. Regularly monitoring of the effectiveness of the mitigation measures over time allows the VFMP to be adapted if performance criteria are not met.

The following sections detail the monitoring activities and reporting requirements for the Project's preconstruction and construction phase.

6.3.1 Pre-clearing Survey Report

The suitably qualified fauna spotter-catcher will prepare a Pre-clearing Survey Report after undertaking the pre-clearing survey.

The report will include:

- Description of the pre-clearing survey methodology.
- The location and extent of threatened flora and fauna individuals and/or habitat.
- The location/area of trees identified for lopping / pruning.
- The location and type of habitat features to be removed.
- A summary of any habitat features to be relocated prior to the commencement of clearing, including the preferred location for the habitat features.
- A summary of any habitat features to be relocated after clearing, including the preferred location for the habitat features.
- The location of designated stockpile areas for soil and vegetation management.
- Identification of areas of high weed infestation and measures to be employed to manage.
- Identification of any pest animal species and measures to be employed to manage.
- Identification of active breeding places present (if any).
- The proposed locations for glider poles and nest boxes.

6.3.2 Post-clearing Survey Report

Following the completion of site clearing works, the fauna spotter-catcher will provide the Proponent with a report specifying (as a minimum):

- The location and number of threatened flora species retained and removed (if any are found during the pre-clearing survey or during construction).
- The location and density count of hollow bearing limbs and trees removed.

- The location and area of all rock piles/boulders removed.
- A register of the hollows and habitat features relocated as part of the clearing works, including the location, condition, and presence / absence of fauna within the hollow or feature.
- A register of all fauna species observed, injured and/or relocated by the spotter-catcher during site preparation works.
- Any dead animals located.
- A register of all active breeding places that were observed, removed and/or retained.
- The location and total number of nest boxes and glider poles to be installed.

6.3.3 Construction Audits

Construction audit inspections will be conducted on a quarterly basis (every three months) during the construction of the Project by the Project's Environment Manager (or appropriate delegate). The audit will incorporate the key performance indicators identified within this VFMP.

Site inspections must be completed to monitor the environmental controls mentioned in this VFMP, and to ensure any corrective actions are being appropriately implemented if there are any unintended environmental impacts from the construction works.

The records of inspections are to be maintained on Project files and copies provided to the Proponent's Project Representative.

6.3.4 Amendment Triggers and Corrective Actions

This VFMP is a dynamic document that requires review and amendment throughout the life of the Project to ensure the measures within this document remain effective. It is recommended that this document be updated:

- Where there is a significant change to the Project schedule, site layout, or a change in the construction methods that require amendment to vegetation and fauna protection measures.
- Where a corrective action is recorded, or performance criteria are not being met and additional measures are identified for inclusion to prevent reoccurrence.
- Where a change in legislation or best practice methodology has been identified.

To ensure compliance with this VFMP a schedule of obligations will be developed to outline all obligations and track how these obligations are being met.

All incidents and non-conformances with this VFMP will be reviewed by the Project's Environment Manager. Where appropriate, management and control actions will be identified and implemented to prevent future occurrence of the incident/non-conformance.

7.0 References

2rog Consulting. (2023a). *Gawara Baya Wind Farm Environment Management Plan v7*.

2rog Consulting. (2023b). Gawara Baya Wind Farm Public Environment Report.

2rog Consulting. (2025). Upper Burdekin Wind Farm—Ecological Impact Report.

Committee EV-018. (2010). AS 4970-2009 Australian Standard Protection of trees on development sites. Council of Standards Australia.

Department of Environment and Heritage Protection. (2016). *Interim hygiene protocol for handling amphibians*.

Department of Environment and Science. (2020). Flora Survey Guidelines—Protected Plants Nature Conservation Act 1992.

Department of the Environment, Tourism, Science and Innovation. (2023). Flora Survey Trigger Map for Clearing Protected Plants in Queensland—Version 10.0.

Eco Logical Australia. (2020). Upper Burdekin Wind Farm – Ecological Assessment.

Eco Logical Australia. (2022). Upper Burdekin Wind Farm – 2022 Ecology Survey Report.

Hayes, C. (2019). Conservation ecology of Sharman's rock-wallaby (Petrogale sharmani) [PhD Thesis]. The University of Queensland.

Murcia, C. (1995). Edge effects in fragmented forests: Implications for conservation. *Trends in Ecology & Evolution*, *10*(2), 58–62. https://doi.org/10.1016/S0169-5347(00)88977-6

Murray, K., Skerratt, L., Marantelli, G., Berger, L., Hunter, D., Mahony, M., & Hines, H. (2011). *Hygiene protocols for the control of diseases in Australian frogs*.

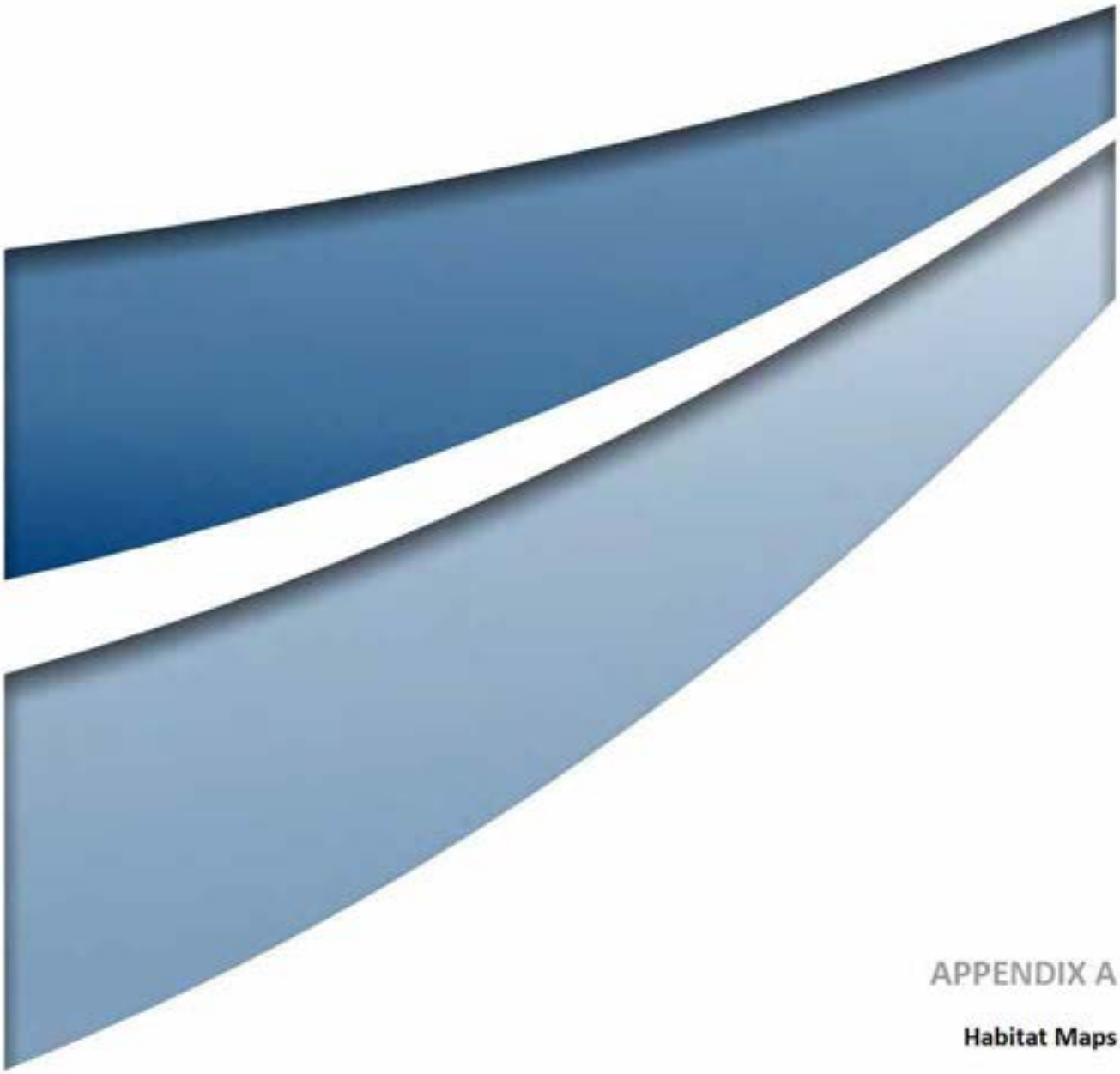
Queensland Parks and Wildlife Service. (2021). Interim policy for determining when a flying-fox congregation is regarded as a flying-fox roost under section 88C of the Nature Conservation Act 1992. Department of Environment and Science.

Sattler, P., & Williams, R. (1999). The conservation status of Queensland's bioregional ecosystems. In *Environmental Protection Agency, Brisbane*. Environmental Protection Agency.

Umwelt. (2025). Gawara Baya Wind Farm Preliminary Rehabilitation Plan.

Windlab. (2024a). Bushfire Management Plan.

Windlab. (2024b). Erosion and Sediment Control Plan -Construction.



APPENDIX A

Habitat Maps

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