Theodore Wind Farm

Preliminary Vegetation and Fauna Management Plan

PREPARED FOR

RWE Renewables Australia Pty Ltd

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Theodore Wind Farm

Preliminary Vegetation and Fauna Management Plan

0661076

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ACRONYMS AND ABBREVIATIONS

Name	Description
DCCEEW	Department of Climate Change, the Environment and Water
DoR	Department of Resources
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ERM	Environmental Resources Management Australia Pty Ltd
VFMP	Vegetation and Fauna Management Plan
ha	Hectares
km	kilometres
LC	Least Concern
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NC Act	*Nature Conservation Act 1992*
OC	Of Concern
PMST	Protected Matters Search Tool
PR	*Planning Regulation 2017*
RE	Regional Ecosystem
TEC	Threatened Ecological Communities
VM Act	*Vegetation Management Act 1999*
WN	WildNet
WONS	Weeds of National Significance
WTG	Wind Turbine Generator

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by Theodore Energy Development Pty Ltd (TED) / (the Proponent) to prepare a Preliminary Vegetation and Fauna Management Plan (VFMP) for the proposed Theodore Wind Farm located approximately 22 km east of the township of Theodore, Queensland (herein referred to as the Proposed Action).

The VFMP has been prepared for the area considered for the Proposed Action (herein referred to as the 'Study Area').

The Proposed Action consists of up to 170 WTG and ancillary infrastructure including, but not limited to, access tracks, substations, overhead and underground electrical cabling, hardstands, and an operation and maintenance compound. In order to facilitate connection to the electricity grid, TED is working with Powerlink to determine the optimal connection point to the existing network. The Proposed Action is being developed across 9 land parcels, 8 freehold lots and 1 lands lease lot (currently being converted to freehold), on alluvial plains with non-remnant grasslands predominantly used for agricultural grazing.

The objective of this VFMP is to minimise any potential residual impacts to vegetation, fauna and associated habitats with the Proposed Action. This includes describing how impacts on species will be minimised and managed during construction and operation of the Proposed Action. The purpose of this Preliminary VFMP is to support the Development Application, with a detailed VFMP to be prepared prior to construction.

1.1 STUDY AREA AND CONTEXT

The Study Area is approximately 46,830 ha in size and is located 22 km to the east of the township of Theodore, and approximately 50 km south of Biloela in the Banana Shire Council Local Government Area, Central Queensland. The Study Area lies adjacent to and within the locality (10 km) of several state forests including Belmont State Forest to the east, Montour State Forest to the north and Trevethan State Forest to the south of the Study Area.

The Study Area is comprised of 9 lots on 3 properties. The lot on plans are outlined below in Table 1-1.

TABLE 1-1 RELEVANT STUDY AREA LAND PARCELS

Property	Lot on Plan
Landowner 1	Lot 4 on SP131475 Lot 2 on RP617749 Lot 1 on RP617748 Lot 8 on DW2
Landowner 2	Lot 17 on DW49 Lot 18 on DW550
Landowner 3	Lot 11 on DW446 Lot 19 on DW551 Lot 20 on SP100500
Road Reserves	Part of Defence Road Part of Crowsdale Camboon Road Unnamed Road Reserves
Total Study Area	46,830 ha

The Study Area occurs within the Banana Shire Council Local Government Area and is zoned as Rural under the Banana Shire Council Planning Scheme 2017. Cattle grazing is the dominant land use in the Study Area, with largely cleared areas associated with lower slopes dominating the landscape.

The Study Area is located within the Southern Brigalow Belt bioregion as defined by the Interim Biogeographic Regionalisation for Australia (IBRA) framework. Ecological and topographical features observed within the Study Area are typical of the region and include eucalypt dominated open forest and woodlands on alluvial plains and igneous rock. Open forests and woodlands consistent with this bioregion are generally observed in the south of the Study Area. In the north, the landscape is characterised by non-remnant grasslands with historic land clearing and severe dieback.

Access to the Study Area is primarily from Defence Road, with crossings and smaller access from Crowsdale-Camboon Road in the centre of Study Area. Throughout the duration of the construction and operational phases of the Proposed Action, host properties are able to continue to use land for agricultural activities throughout the life of the Proposed Action and it is anticipated that tracks established during construction of the Proposed Action will aid in continued agricultural activities.

1.2 AVOIDANCE MEASURES AND POTENTIAL RESIDUAL IMPACT MANAGMENT

The Proposed Action has the potential to directly and indirectly impact flora and fauna values within the Study Area. Generally, the greatest potential impact to biodiversity values is associated with clearing and grading activities during which vegetation and fauna habitat is removed. Where possible, vegetation disturbance associated with the Proposed Action has been avoided, and where avoidance is not possible, it is being minimised through the ongoing detailed design process. However, possible residual impacts to biodiversity values may include:

- Vegetation clearing;
- Fauna habitat loss;
- Mortality or injury of fauna;
- Dust impacts;
- Noise and light impacts;
- Exacerbation of exotic flora and fauna (animal pests and weeds).

An ecological impact assessment was prepared by ERM in 2024, and this management plan aims to minimise the potential residual impacts associated with the Proposed Action.

The key component of the vegetation and fauna management strategy is avoidance through layout design. The avoidance strategy will occur in two phases. The first design phase is based on avoidance of vegetation and potential habitat mapped as a result of the field investigations conducted, and subsequent constraints identified. The second design phase will involve pre-clearance surveys which includes on the ground micro siting at each location proposed for infrastructure (such as WTGs). The pre-clearance surveys will assess the localised environmental values, including threatened species breeding habitat and protected plants to determine if micro-siting can be used to avoid key values.

Several more avoidance measures have been implemented, including, but not limited to, the following:

- Identification of areas with high ecological value and avoidance of these;
- Clearly delineate approved vegetation clearance areas/ work zones to prevent over-clearing;
- WTGs will be sited where possible to minimise impacts to mature trees;
- Implementation of the VFMP; and
- Where required, a qualified fauna spotter-catcher will conduct a search immediately prior to clearing of vegetation for the presence of fauna species and important habitat values. Where fauna or important habitat values are detected, the spotter catcher will assess and implement the most appropriate method to avoid or minimise impacts as a result of clearing.

2. EXISTING ENVIRONMENT

2.1 LANDSCAPE ATTRIBUTES

The Study Area occurs within Brigalow Belt bioregion as defined by the Interim Biographic Regionalisation of Australia (IBRA) framework and includes a range of landscape features, vegetation communities and habitats typical of the region. The Study Area contains stream orders 1-7 watercourses mapped under the *Vegetation Management Act 1999* (VM Act). Impacts within these watercourses will be limited to linear infrastructure such as access tracks and underground/overhead electrical reticulation. Generally, the ecological condition of most of the Area is influenced by historical land clearing and cattle grazing, which is currently the dominant land use throughout the Study Area. The areas that are most heavily impacted by grazing are associated with alluvial plains as well as notable disturbance around permanent water sources (farm dams and watercourses) and cattle yards. The Study Area includes a number of existing made and unmade road reserve areas.

No protected areas occur within the Study Area. However, the north-east section of the Study Area neighbours:

- The Belmont State Forest;
- The south-east section of the Study Area is adjacent to Montour State Forest; and
- The southern section of the Study Area abuts Trevethan State Forest.

The topography of the Study Area is characterised by steep ridgelines and flat alluvial plains. Across the Study Area the landscape features minor variation in geology, from torsdale volcanics mixed with camboon volcanics, to rocky outcrops of large boulders, open flat areas on tops of ridges, and sedimentary stratigraphy on the western extent of the site. The Study Area is intersected by serval major waterways, those being Castle Creek in the northern section of the Study Area, and Boam Creek in the southern end of the Study Area.

The ecological condition of the Study Area is majorly influenced by historical land clearing and cattle grazing, with large patches of cleared land featuring no remnant vegetation occurring throughout. This is most prominent in the centre and north of the Study Area, though some large swathes of cleared land also occur in the southeast of the Study Area.

The Study Area has been classified into six vegetation and broad habitat types:

- Grasslands and cultivated agricultural land;
- Waterbodies and drainage features;
- Riparian woodland and open forest dominated by Eucalyptus populnea, E. tereticornis often associated with stream channels;
- Vine Forest/Thickets and Dry Rainforest;
- Eucalypt woodland and open forest dominated by E. crebra with a grassy understorey; and
- Brigalow woodlands.

2.2 REGIONAL ECOSYSTEMS AND REGULATED VEGETATION

There are 11 Regional Ecosystems (RE) mapped by the Queensland Government DoR data as present in the Study Area, as detailed in Table 2-1. The majority of the Study Area is cleared agricultural land with grasslands, and occasional regrowth dominant throughout the middle and the northern portion of the Study Area. The Study Area, particularly the southern section and a pocket in the north section, contains eucalypt woodlands and dominated by narrow leaved ironbark (*E. crebra*) and silver-leaved ironbark (*E. melanophloia*) (REs 11.12.1 and 11.12.2), with the south section also supporting open forest dominated by lemon-scented gum (*Corymbia citriodora*) (RE 11.12.6). Eucalypt woodlands (*E. populnea)* and blue gum (*E. tereticornis, E. camaldulensis*) woodlands (REs 11.12.3 and 11.3.2) are present and occur largely in the southern sections of the Study Area along alluvium associated with ephemeral watercourses. Brigalow open forest (*Acacia harpophylla)* are present mostly in the centre of the Study Area (RE 11.12.21). Small, isolated patches of semi evergreen vine thicket are also present, largely in the south and south-east corner (RE 11.12.4). Some woodland is mapped on Cainozoic lateritic duricrust, with presence of lemon-scented gum (*C. citriodora),* gum-top ironbark *(E. decorticans)* and *Acacia* spp. (REs 11.7.6 and 11.7.4c). The majority of remnant vegetation within the Study Area is classed as:

- Category B Regulated Vegetation, which totals 1,657.5 ha;
- Category C high value regrowth, which totals 1.9ha;
- Category R GBR riverine regrowth, which totals 191.1 ha.

Clearing of regulated vegetation is required to facilitate the development of the Proposed Action. Clearing of regulated vegetation will be avoided and minimised where possible. Where clearing of regulated vegetation cannot avoided, all clearing will comply with the DoR Accepted Development Vegetation Clearing Code.

TABLE 2-1 REGIONAL ECOSYSTEMS WITHIN THE STUDY AREA

RE	Regional Ecosystem Description	Structure Category	VM Act Status	Biodiversity Status	Study Area (ha)	% of Study Area
11.12.1	*Eucalyptus crebra* woodland on igneous rocks	Sparse	LC	NoC	13,448	28.72
11.12.2	*Eucalyptus melanophloia* woodland on igneous rocks	Sparse	LC	NoC	931.8	1.99
11.12.21	*Acacia harpophylla* open forest on igneous rocks. Colluvial lower slopes	Mid-dense	E	E	146.1	0.31
11.12.3	*Eucalyptus crebra, E. tereticornis, Angophora leiocarpa* woodland on igneous rocks especially granite	Sparse	LC	OC	372.3	0.8
11.12.4	Semi-evergreen vine thicket and microphyll vine forest on igneous rocks	Dense	LC	NoC	196.1	0.42
11.12.6	*Corymbia citriodora* open forest on igneous rocks (granite)	Mid-dense	LC	NoC	2885.8	6.16
11.3.2	*Eucalyptus populnea* woodland on alluvial plains	Sparse	OC	OC	523.9	1.12
11.3.25	*Eucalyptus tereticornis* or *E. camaldulensis* woodland fringing drainage lines	Sparse	LC	OC	47.6	0.1
11.3.4	*Eucalyptus tereticornis* and/or *Eucalyptus spp.* woodland on alluvial plains	Sparse	OC	OC	166.6	0.36
11.7.4c	*Eucalyptus decorticans +/- Eucalyptus spp. +/- Acacia spp.* Occurs on low hills and ranges with shallow soils. On Cainozoic lateritic duricrust	Sparse	LC	NoC	13.5	0.03
11.7.6	*Corymbia citriodora* or *Eucalyptus crebra* woodland on Cainozoic lateritic duricrust.	Sparse	LC	NoC	0.2	0.0004
Non-remnant/ cleared agricultural areas or grasslands (with occasional regrowth and individual paddock trees)					28,098.10	60.00
Total					**46,830**	**100**

RE listing status:
E = Endangered;
LC = Least Concern;
OC = Of Concern; and
NoC = No concern of present.

2.3 THREATENED ECOLOGICAL COMMUNITIES

Two TECs were identified as known or likely to occur within the Study Area:

- Brigalow (Acacia harpophylla dominant and co-dominant); and
- Poplar Box Grassy Woodland on Alluvial Plains.

Areas of Poplar Box Grassy Woodland on Alluvial Plains retained canopy cover and, with the exception of one patch to the east of the TEC associated with a linear patch of RE 11.3.25 which lacked canopy species of *Eucalyptus populnea*, other patches were ground-truthed to qualify as Category B Good Quality.

Some vegetation patches within the Study Area were considered to not meet the key diagnostic criteria and condition thresholds listed in the Approved Conservation Advice Brigalow TEC and Poplar Box Grassy Woodland on Alluvial Plains TEC. Predominantly patches of potential associated Brigalow REs in the centre of the Study Area which lacked canopy species of *Acacia harpophylla*.

2.4 FLORA SPECIES

2.4.1 THREATENED FLORA SPECIES

Six listed threatened flora species were determined to have the potential to occur within the Study Area. No threatened flora species were detected across eight field survey events between 2022 and 2024. However, the distribution of these species overlaps with the Study Area and suitable habitat was observed. On this basis, their potential presence cannot be rules out. The threatened flora species with potential to occur within the Study Area are listed in Table 2-2.

TABLE 2-2 EPBC ACT AND NC ACT LISTED FLORA SPECIES WITH POTENTIAL TO OCCUR WITHIN THE STUDY AREA

Species Name	Common Name	NC Act Status	EPBC Act Status	Potential Habitat Mapped within the Study Area
Cadellia pentastylis	Ooline	VU	V	• There is potential habitat of vine forest/thickets and dry rainforest present within the Study Area for this species. • The total potential habitat is 232.3 ha
Cossinia australiana	Cossinia	EN	E	• There is potential habitat of vine forest/thickets and dry rainforest present within the Study Area for this species. • The total potential habitat is 232.2 ha
Rhaponticum australe	Austral cornflower	VU	V	• There is potential habitat of eucalypt woodlands and open forests present within the Study Area. • The total potential habitat is 21,719.7 ha
Solanum dissectum	-	EN	E	• There is potential habitat of eucalypt woodlands and open forests present within the Study Area. • The total potential habitat is 328.8 ha
Solanum johnsonianum	-	EN	E	• There is potential habitat of brigalow woodlands present within the Study Area for this species. • The total potential habitat is 328.8 ha,

Species Name	Common Name	NC Act Status	EPBC Act Status	Potential Habitat Mapped within the Study Area
Xerothamnella herbacea	-	EN	E	• There is potential habitat of brigalow woodlands present within the Study Area. • The total potential habitat is 328.8 ha

Status listing per NC Act: CR = Critically Endangered; EN = Endangered; VU= Vulnerable.

Status listing per EPBC Act: CE = Critically Endangered; E = Endangered; V= Vulnerable; Mi =Migratory.

Upon completing the field survey program, six flora species under the EPBC Act and NC Act were determined as potential to occur.

Cadellia pentastylis and Cossinia australiana, were determined as potential to occur, with potential habitat of vine forest/thickets and dry rainforest present within the Study Area for these species. The total potential habitat is 232.3 ha.

Additionally, *Rhaponticum austral,* was determined as potential to occur, with potential habitat of eucalypt woodlands and open forests present within the Study Area. The total potential habitat is 21,719.7 ha.

Further, *Solanum dissectum, Solanum johnsonianum and Xerothamnella herbacea,* were determined as potential to occur, with potential habitat of brigalow woodlands present within the Study Area. The total potential habitat is 328.8 ha.

2.4.2 INTRODUCED FLORA SPECIES

Weeds of National Significance (WONS) or as Category 3 restricted invasive species under the *Queensland Biosecurity Act 2014* (*Biosecurity Act 2014*) were observed occurring within the Study Area.

WONS and Category 3 restricted invasive plants include:

- lantana – (*Lantana camara*)
- velvet tree pear (*Opuntia tomentosa*);
- parthenium (*Parthenium hysterophorus*); and
- cats claw creeper (*Dolichandra unguis-cati*).

The Australian Weeds Strategy (2017-2027) provides information on the best practices for management of WONS, including prevention and early detection of weeds and the minimisation of the impact of established weeds (Invasive Plants and Animals Committee, 2016). Such principles from the Australian Weed Strategy should be considered as part the Proposed Action Biosecurity Management Plan.

The Proponent must take reasonable and practical measures to minimise the biosecurity risks associated with dealing with Category 3 restricted matters. Local government biosecurity plans may also need to be consulted to determine any local measures that should be adopted for management and included into the Proposed Action Biosecurity Management Plan. Other introduced species recorded in the Study Area during field surveys, but not listed as WONS or under the *Biosecurity Act 2014* include:

- blue billygoat weed (*Ageratum houstonianum*);
- balloon cotton bush (*Gomphocarpus physocarpus*);
- noogoora burr (*Xanthium occidentale*)
- cobblers' pegs (*Bidens pilosa*);
- rhodes grass (*Chloris gayana*);
- red natal grass (*Melinis repens*); and
- Brazilian nightshade (*Solanum seaforthianum*).

2.5 FAUNA SPECIES

Eight ecological field surveys were undertaken from October 2022 to June 2024 by ERM. Based on these field surveys and a likelihood of occurrence assessment, four EPBC Act and NC Act listed threatened fauna species, were considered known to occur within the Study Area. Additionally, one EPBC Act and NC Act listed threatened fauna species was considered likely to occur within the Study Area. These EPBC Act and NC Act listed threatened fauna species that are considered known or likely to occur within the Study Area are listed in Table 2-3.

Additionally, one NC Act only fauna species is considered known to occur within the Study Area and one NC Act only species is considered likely to occur within the Study Area.

TABLE 2-3 EPBC ACT AND NC ACT LISTED FAUNA CONSIDERED KNOWN OR LIKELY TO OCCUR WITHIN THE STUDY AREA

Species Name	Common Name	NC Act Status	EPBC Act Status	Habitat Mapped within the Study Area
Phascolarctos cinereus	Koala	EN	E	There was found to be 1,618.2 ha of preferred foraging and breeding habitat, 21,067.5 ha of general foraging and breeding habitat and 6,808.0 ha of dispersal habitat.
Petauroides volans	Greater Glider (southern and central)	EN	E	There was found to be 1,425.3 ha denning habitat and 20,859.0 ha of foraging habitat for this species.
Geophaps scripta scripta	Squatter Pigeon (southern)	VU	V	There was found to be 16,267.8 1 ha of breeding habitat and 8,023.0 ha of foraging and dispersal habitat.
Chalinolobus dwyeri	Large-eared Pied-bat	VU	V	There was found to be 21,719.7 of ha foraging habitat.
Myiagra cyanoleuca	Satin flycatcher	SLC	Mi	There was found to be 1,964.6 ha of foraging and dispersal habitat.
Tachyglossus aculeatus	Short-beaked Echidna	SLC	-	The entire Study Area, 46,830 ha, is considered suitable habitat.
Strophurus taenicauda albiocularis	Golden tailed gecko	NT	-	There was found to be 14,720 ha of suitable habitat.

Status listing per NC Act: CR = Critically Endangered; EN = Endangered; VU = Vulnerable; NT = Near Threatened; SLC = Special Least Concern.

Status listing per EPBC Act: CE = Critically Endangered; E = Endangered; V= Vulnerable; Mi =Migratory.

Four EPBC Act and NC Act listed threatened fauna species have been assessed as having the potential to occur within the Study Area, outlined in Table 2-4.

TABLE 2-4 EPBC ACT AND NC ACT LISTED SPECIES WITH POTENTIAL TO OCCUR WITHIN THE STUDY AREA

Species Name	Common Name	NC Act Status	EPBC Act Status	Potential Habitat Mapped within the Study Area
Hirundapus caudacutus	white-throated needletail	VU	V, Mi	Species likely to fly aerially over the Study Area, which also contains potential foraging and roosting habitat in the form of tall eucalypt forests likely in elevated areas. No elevated areas for roosting. Habitat not mapped for this species as likely only an aerial flyover visitor as the species does not utilise terrestrial habitats for foraging.
Turnix melanogaster	black-breasted buttonquail	VU	V	Potential foraging habitat present within the Study Area associated with isolated patches of dense vegetation associated with SEVT. Potential foraging and roosting habitat is 232.3 ha.
Rostratula australis	Australian painted snipe	EN	E	Potential foraging habitat present within the Study Area associated with waterbodies and drainage features (predominantly farm dams). Potential foraging habitat is 56.0 ha.
Petaurus australis australis	Yellow-bellied glider (south-eastern)	VU	V	A total of 3,171.8 ha of potential foraging habitat and 921.1 ha of potential denning habitat has been mapped within the Study Area associated with old growth eucalypt forests.

Status listing per NC Act: CR = Critically Endangered; EN = Endangered; VU= Vulnerable.

Status listing per EPBC Act: CE = Critically Endangered; E = Endangered; V= Vulnerable; Mi =Migratory.

3. ASPECTS AND RISKS

3.1 CONSTRUCTION ACTIVITIES

During the construction phase, vegetation will need to be cleared to establish a construction footprint. Clearing works may impact on flora species and breeding places, shelter and food sources for fauna species. Key aspects of the Proposed Action that could result in impacts to flora and fauna include:

- Habitat clearance for permanent and temporary construction facilities (e.g. WTGs and associated infrastructure, transmission lines, compound sites, stockpile sites, access tracks). The consequences of this impact may include:
  - Direct loss of native flora and fauna habitat;
  - Injury and mortality to fauna during clearing of fauna habitat;
  - Fragmentation of connectivity areas;
  - Introduction and spread of priority weeds and pathogens that impact fauna;
- Disturbance to fallen timber, dead wood and bush rock; and
  - Indirect impacts identified include risks for soil and water contamination, creation of barriers to fauna movement, or the generation of excessive dust, light or noise.

3.2 OPERATIONAL ACTIVITIES

Vegetation impacts are largely associated with the construction phase of the Proposed Action. Potential impacts during the operational phase can arise from:

- Routine maintenance and servicing of WTGs, access tracks, weed management (around WTGs and infrastructure) and infrastructure as required;
- Disturbance effects that exclude fauna from habitat; and
- Barrier effects that limit fauna movement between essential resources, such as foraging and roosting areas.

4. MANAGEMENT MEASURES

Aspect	Implementation
Purpose	The purpose of the Vegetation and Fauna Management Plan (VFMP) is to describe how impacts on vegetation and fauna will be minimised and managed during construction of the Proposed Action.
Objectives	The key objective of the VFMP is to ensure that impacts to vegetation and fauna are managed and are within the scope permitted by the Development Permit. To achieve this objective, the following will be undertaken: • Ensure appropriate controls and procedures are implemented during construction activities to avoid (where necessary) or minimise potential adverse impacts to biodiversity values in the Proposed Action footprint; • Ensure appropriate measures are implemented to address the mitigation measures detailed in the Development Permit; and • Ensure appropriate measures are implemented to comply with relevant legislation and other requirements.
Targets	The following targets have been established for the management of vegetation and fauna impacts during construction of the Proposed Action: • Ensure full compliance with the relevant legislative requirements; • Ensure full compliance with relevant requirements of the Development Permit; • No disturbance to vegetation outside the construction footprint; • Minimise disturbance to vegetation within the Study Area; • Minimise disturbance to fauna within the Study Area; • No increase in distribution of noxious weeds currently existing within the Study Area; • No new noxious weeds introduced to the Study Area; • No threatened fauna mortality during clearing and construction; and • No pollution or siltation of aquatic ecosystems, wetlands, endangered ecological communities or threatened species habitat.
Key References	• *Planning Act 2016;* • *Nature Conservation Act 1992 (NC Act);* • *Environmental Protection Act 1994 (and Regulation) (EP Act);* • *Vegetation Management Act 1999 (VM Act);* • *Biosecurity Act 2014 (and Regulation); and* • *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act).*

Stage	Management Actions	Responsibility	Timing
Pre-Development	Undertake a 'constructability assessment' to ensure vegetation clearing is minimised through design process.	Proponent	Design
	The two-stage design process where impact and disturbance mitigation surveys and procedures will be put in place. Areas of remnant and regrowth vegetation will be avoided through development design following the constraints identified during the first-stage field surveys and subsequent micro-siting (pre-clearance) survey stages.	Proponent	Design
	Design of a turbine with a blade sweep area >40 m above ground level to provide a collision-free foraging zone within the canopy and 20 m above the canopy	Proponent	Design
	Locating turbines away from key habitats where feasible (including remnant vegetation and waterways and drainage lines)	Proponent	Design

Stage	Management Actions	Responsibility	Timing
Pre-Construction	Pre-clearance surveys and on ground micro-siting will ensure infrastructure is located in areas which avoid, and subsequently minimise edge effects and the isolation, fragmentation, or dissection of tracts of native vegetation and identified habitat for listed protected species.	Principal Contractor	Prior to Construction
	A biosecurity plan will be developed and implemented for the Proposed Action. This will include measures such as vehicle wash downs, weed certification and obligations to remain on access tracks throughout the Study Area.	Principal Contractor	Pre-Start Works
Construction	All clearing shall be within clearly marked boundaries and in accordance with the Development Permit.	Principal Contractor	At All Times
	Staff and contractors will be made aware through general site induction and training of the potential to generate dust emissions and mitigation and management measures that should be implemented to avoid clearing prior to pre-clearing checks.	Principal Contractor	At All Times
	Implementation of the Queensland Fauna Stock Management Plan	Principal Contractor	At All times
	Where trenching and excavations are created which may entrap fauna, suitable escape measures are put in place, and excavation are checked for fauna before backfilling.	Principal Contractor	At all times
	Provide site specific information on relevant threatened species.	Principal Contractor	At all times
	Include toolbox talks for site specific flora and fauna information to all field staff and contractors.	Principal Contractor	Daily
	Construction activities must not interfere or block natural drainage e.g. disturbing channel contours.	Principal Contractor	At All Times
	Where required, watercourse crossing points will be adequately stabilised to prevent erosion.	Principal Contractor	At All Times
	Activities will be planned so that movement of vehicles, plant, machinery and equipment avoids moving between properties as required.	Principal Contractor	At All Times
	Ensure appropriate waste management (lidded bins), including food scraps, to reduce potential for feral species to become established on-site	Principal Contractor	At All times
	Imported materials with the potential to transport weed seeds will be assessed to ensure they are free of contamination, disease and invasive weeds.	Principal Contractor	At All Times

Stage	Management Actions	Responsibility	Timing
	Access roads, easements and yards will be kept weed free where practicable.	Principal Contractor	At All Times
	Only registered herbicides will be used by licenced weed sprayer.	Principal Contractor	At All Times
Monitoring	Inspections by spotter / catcher during clearing, specifically hollow trees or food tree species.	Principal Contractor	As Required
	Weekly site inspections to review flora and fauna control measures during construction.	Principal Contractor	Weekly
	Auditing of CEMP during construction.	Principal Contractor	Quarterly
Reporting	Sightings and incidents reported in daily pre-starts during construction.	Principal Contractor	Daily
	Fauna spotter-catcher will keep an inventory of any fauna species encountered with details of species, capture and release condition and capture and release GPS co-ordinates during construction, in accordance with NC Act.	Spotter Catcher	Daily
	Injured native fauna to be reported to HSEQ Manager.	Principal Contractor	Within 24 hours
	GPS co-ordinates of all MNES and MSES flora locations to be reported when clearing activities are planned.	Principal Contractor	As Required
	Any cleared vegetation not designated to be cleared to be reported to Health. Safety Environment and Quality Manager.	Principal Contractor	Within 24 hours
	Monthly report during construction to report on clearing activities aligned with approval requirements.	Principal Contractor	Monthly
	Annual report on weed management measures and maintenance of vegetation activities, aligned with approval requirements	Principal Contractor	Annually
Corrective Action	All near misses and incidents will be investigated to establish root cause. Where necessary corrective actions will be developed to improve existing processes.	All Personnel	As Required

5. CONCLUSION

The eight field investigations undertaken between October 2022 and June 2024 have determined the ecological values with associated vegetation communities and habitats that occur within the Study Area. As a result of these field investigations, the layout design has been informed such that areas with high ecological value vegetation within the Study Area have been avoided.

The second phase of layout design will result in further avoidance of remnant and regrowth vegetation as a result of pre-clearance surveys. These pre-clearance surveys will assess the proposed locations for infrastructure and adjust these accordingly if any vegetation communities or habitats for threatened species are located within the proposed locations.

Construction and operational activities that will potentially impact vegetation have been identified and subsequent mitigation measures have been outlined in this Preliminary VFMP, in order to adequately manage these potential impacts. A detailed VFMP will be prepared prior to construction.

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