CONTROL

PREPARED BY	REVIEWED & APPROVED BY
JC	LT
04/06/2024	05/06/2024

*The signed original is kept by **ACCIONA**.*

MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE (MNES) MANAGEMENT PLAN - MACINTYRE WIND FARM (EPBC 2020/8756) AND OVERHEAD TRANSMISSION LINE (EPBC 2020/8759)

RECORD OF CHANGES

REV.	DATE	DESCRIPTION
2	05/06/2024	Final

CONTENTS

Declaration of accuracy

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

Signed: 

Full name (please print): Jeromy Claridge

Organisation (please print): Attexo Group Pty Ltd

Date: 04/06/2024

1. INTRODUCTION

1.1. BACKGROUND

This document has been prepared on behalf of ACCIONA Energy Australia Global Pty Ltd (ACCIONA) by Attexo Group Pty Ltd (Attexo). ACCIONA proposes to develop and operate the MacIntyre Wind Farm Project (EPBC 2020/8756) and associated Overhead Transmission Line (OHTL) (EPBC 2020/8759) (the Project). The Project includes up to 169 wind turbines that are anticipated to generate approximately 963 MW of renewable energy to contribute to the national electrical grid (see **Figure 1.1**).

The Project incorporates over 41 freehold lots, as well as road reserves and easements, traversing the Goondiwindi Regional Council local government area, approximately 40 km south west of the township of Warwick. The region is predominantly rural land use and used for stock grazing with large tracts of land cleared of vegetation.

The projects were referred separately under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for potential impacts to Matters of National Environmental Significance (MNES) and approved on 22 February 2022, with conditions.

1.2. PURPOSE AND SCOPE

This MNES Management Plan (MMP) has been developed in accordance with the *Environmental Management Plan Guidelines* (Commonwealth of Australia 2014) (EMP Guidelines) to address EPBC Act approval conditions 13 and 14 (as presented in Section 2) to avoid and minimise potential impacts to the following MNES[1]:

- *Macrozamia conferta* (Vulnerable);
- Regent honeyeater (*Anthochaera phrygia*) (Critically Endangered);
- Koala (*Phascolarctos cinereus*) (Endangered);
- Central greater glider (*Petauroides volans*) (Endangered);
- Grey-headed flying-fox (*Pteropus poliocephalus*) (Vulnerable); and
- Squatter pigeon (southern) (*Geophaps scripta scripta*) (Vulnerable).

This MMP is to be approved by the Minister prior to commissioning and implemented for the duration of the approval.

[1] Hereafter in this report when the term MNES is used, it refers to these species.

Attexo

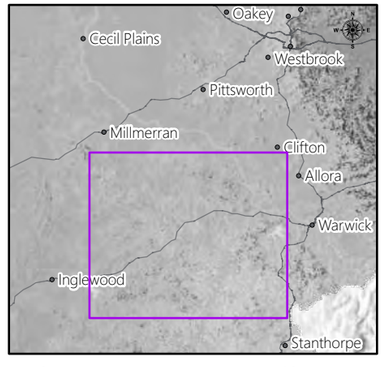
MacIntyre Wind Farm

Project Location

Figure 1.1

- Overhead Transmission Line
- MacIntyre Wind Farm
- Clearing Corridor - MIWF
- Clearing Corridor - OHTL
- Road

Date: 5/06/2024
Author: TOD
Reviewed: JC
Project: ACC-005



0 5 10 Km

Scale: 1:250,000@A3

Data Source(s):
Digital Cadastral Database - Department of Resources (2022)
Department of Resources, Dept.of Environment and Science, Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS, © State of Queensland (Department of Resources) 2023, Esri, Geoscience Australia, NASA, NGA, USGS, Esri, USGS

Path: C:\Users\TimODonnell\Attexo Group\Attexo - Projects\ACCIONA Energy\ACC-005 MIWF Offsets Delivery\5. GIS\4.7 Working\18_MNES_Plan\18_MNES_Plan_Updates.aprx

2. APPROVAL AND CONDITIONS REFERENCE TABLE

As outlined in Section 1.2, this MMP has been developed to address EPBC Act approval conditions 13 and 14. The relevant EPBC Act approval conditions and where they have been addressed in this MMP are presented in Table 2.1.

Table 2.1 EPBC Act approval conditions reference table

CONDITION NUMBER	CONDITION REQUIREMENT	DEMONSTRATION OF HOW THE MMP ADDRESSES CONDITION REQUIREMENTS	RELEVANT PROJECT
13	For the protection of the EPBC Act listed threatened species the approval holder must submit to the department a MNES Management Plan for the written approval of the Minister prior to commissioning. The MNES Management Plan must be prepared in accordance with the department's Environmental Management Plan Guidelines. The approval holder must not commence commissioning until the MNES Management Plan has been approved in writing by the Minister. The approval holder must implement the approved MNES Management Plan for the duration of the approval.	This MMP has been prepared for approval by the Minister. The EMP Guidelines have been addressed in this MMP as follows: ▪ The general principles for the preparation of an MMP; ▪ The required content (outlined in Section 3 of the EMP Guidelines) including outlining impacts and risks (Section 11.0) management measures (Section 6.0); ▪ The evaluation of the risks using the 'qualitative risk assessment methodology' (Section 11); ▪ Roles and responsibilities (Section 8.2); and ▪ Auditing and review (Section 8).	MIWF & OHTL
14	The MNES Management Plan must ensure that impacts to EPBC Act listed threatened species do not exceed the clearance limits specified in condition 1 and that indirect impacts to EPBC Act listed threatened species are avoided and mitigated to the greatest possible extent, and include:	Clearance management is outlined in Table 6.1 with MNES outcomes outlined in (Section 5).	MIWF & OHTL
14.a	characterisation and estimation of the extent of all indirect impacts of the action,	Indirect impacts are described in (Section 3).	MIWF & OHTL
14.b	details of the measures (including habitat rehabilitation) that will be undertaken in the project area to avoid and mitigate impacts, including indirect impacts, on EPBC Act listed threatened species and their habitat during clearing, construction, operation and decommissioning, including but not limited to:	Details on the avoid, mitigate and manage hierarchy to manage potential impacts the MNES is presented in (Section 4.1).	MIWF & OHTL
ATTACHMENT H1: MITIGATION AND MANAGEMENT MEASURES TO BE IMPLEMENTED DURING CONSTRUCTION			
14.b 1.1	Use existing tracks and locate proposed infrastructure within previously disturbed areas.	Clearance management is outlined in Table 6.1.	MIWF & OHTL
14.b 1.2	Micro-siting of infrastructure must be implemented upon commencement of the action to reduce the extent of clearing	Micro-siting is outlined in Table 6.1.	MIWF & OHTL

CONDITION NUMBER	CONDITION REQUIREMENT	DEMONSTRATION OF HOW THE MMP ADDRESSES CONDITION REQUIREMENTS	RELEVANT PROJECT
	required to less than the areas specified in condition 1.		
14.b 1.3	Areas identified for clearance must be clearly defined and detailed in site inductions.	Clearance management is outlined in **Table 6.1.**	MIWF & OHTL
14.b 1.4	Where infrastructure must cross waterways, areas of existing disturbance, if available, must be used. Where areas of existing disturbance for crossing waterways do not exist, the project footprint must be minimised, and large habitat trees and their surrounding native vegetation must be retained.	Details on the avoidance and management of waterway crossings is outlined in **Table 6.1.**	MIWF & OHTL
14.b 1.5	Pre-clearance surveys must be undertaken to identify any threatened flora or fauna within the vicinity of the clearing footprint.	Clearance management is outlined in **Table 6.1.**	MIWF & OHTL
14.b 1.6	A fauna spotter-catcher must be present during all habitat clearance activities, with the authority to cease habitat clearance for an appropriate timeframe where one or more protected matters could be impacted	The responsibility of the fauna spotter-catcher is outlined in Section 8.2. & Clearance management in relation to fauna is outlined in **Table 6.1**	MIWF & OHTL
14.b 1.7	Sequential clearing to ensure that wildlife can safely move away from machinery to access adjacent or nearby habitat.	Clearance management is outlined in **Table 7.2**.	MIWF & OHTL
14.b 1.8	Relocation of fauna captured during clearing works to an appropriate nearby habitat area to be undertaken by a fauna spotter-catcher.	Clearance management is outlined in **Table 6.1.**	MIWF & OHTL
14.b 1.9	Cleared vegetation and scraped soil is not to be pushed up against trees, stored against fence lines or within 50 metres (m) of waterways.	Clearance management is outlined in **Table 11.2**.	MIWF & OHTL
14.b 1.10	Limit construction laydown areas and stockpiles to areas cleared or disturbed prior to the action.	The utilisation of pre-cleared areas is identified in **Table 6.1.**	MIWF & OHTL
14.b 1.11	Rehabilitation of temporary infrastructure areas must be undertaken as soon as practicable after clearing and after these areas are no longer required for the action.	Framework to rehabilitate areas temporary infrastructure areas is presented in **Table 6.1.**	MIWF & OHTL
14.b 1.12	Temporary exclusion fencing must be established around cleared areas in locations of high ecological sensitivity.	The use of fencing is outlined in **Table 6.1.**	MIWF & OHTL
14.b 1.13	Construction must cease during adverse weather conditions that have the potential to significantly increase dust, runoff or sedimentation.	The risk assessment in **Table 11.2** outlines controls for adverse weather.	MIWF & OHTL

CONDITION NUMBER	CONDITION REQUIREMENT	DEMONSTRATION OF HOW THE MMP ADDRESSES CONDITION REQUIREMENTS	RELEVANT PROJECT
14.b 1.14	Declared weeds within the construction footprint will be treated or removed prior to the commencement of construction.	Weed management and monitoring is outlined in **Table 7.2**.	MIWF & OHTL
14.b 1.15	No clearance in riparian zones other than that specified in this approval.	Clearance management is outlined in **Table 6.1.**	MIWF & OHTL
14.b 1.16	Relevant State and Commonwealth authorities will be contacted immediately if approved clearing limits are exceeded.	Clearance management is outlined in **Table 6.1** and incident reporting outlined in Section 8.4.	MIWF & OHTL
14.b 1.17	Clearing and topsoil scraping will be staged and undertaken directly prior to the construction works for which they are required.	Minimising topsoil disturbance during clearing is outlined in **Table 11.2**.	MIWF & OHTL
14.b 1.18	Exposed soil will be stabilised with appropriate cover material.	Methods for stabilising soil are outlined in **Table 6.1** and associated risks in **Table 11.2**.	MIWF & OHTL
14.b 1.19	On-site stockpiles will be located above potential flood extents, within close proximity to the project and covered, if the stockpiled material could be dispersed by rain or wind.	Stockpile management is outlined in **Table 6.1**.	MIWF & OHTL
14.b 1.20	Clearing will only occur during daylight hours.	Clearing timing risks and management detailed in **Table 11.2**.	MIWF & OHTL
14.b 1.21	All temporary fencing will be removed promptly after works are completed.	Clearance management in relation to temporary fencing is outlined in **Table 11.2**.	MIWF & OHTL
KOALA			
14.b 1.22	To avoid potentially blocking the movement of Koalas, temporary infrastructure must be located outside areas used by Koalas for linear connectivity.	Clearance management in relation to Koalas is outlined in **Table 6.1**.	MIWF & OHTL
14.b 1.23	Clearing of Koala habitat trees must be carried out in the following way to ensure not more than the following is cleared in any one stage: – For a clearing site with an area of 6 ha or less – 50 percent of the site's area. – For a clearing site with an area of more than 6 ha – 3 ha or three percent of the site's area, whichever is the greater. – Ensuring that between each stage and the next there is at least one period of 12 hours starting at 6 p.m. on a day and ending at 6 a.m. on the following day during which no trees are cleared on the site.	Clearance management in relation to Koalas is outlined in **Table 6.1**.	MIWF & OHTL
14.b 1.24	No Koala habitat tree in which a Koala is present, and no Koala habitat tree with a	Clearance management in relation to Koalas is outlined in **Table 6.1**.	MIWF & OHTL

CONDITION NUMBER	CONDITION REQUIREMENT	DEMONSTRATION OF HOW THE MMP ADDRESSES CONDITION REQUIREMENTS	RELEVANT PROJECT
	crown overlapping a tree in which a Koala is present, is to be cleared.		
GREATER GLIDER			
14.b 1.25	All potential denning trees that are to be impacted must be clearly marked.	Requirement to mark all potential denning trees outlined in **Table 11.2**.	MIWF & OHTL
14.b 1.26	All potential den trees must be inspected for EPBC Act listed threatened species prior to clearing.	Management of hollow habitat is outlined in **Table 11.2**.	MIWF & OHTL
14.b 1.27	Techniques to encourage Greater Gliders to leave hollows must be used prior to removal of the tree, including tapping trees and using spotlights. If Greater Gliders are potentially present, trees must be dismantled in sections.	Techniques and guidance for encouraging fauna to vacate hollows is outlined in **Table 11.2**.	MIWF & OHTL
SQUATTER PIGEON			
14.b 1.28	Warning signs must be erected on all tracks that intersect locations in which Squatter Pigeon has been confirmed present.	Details on signage around Squatter pigeon sightings are outlined in **Table 6.1**.	MIWF & OHTL
14.b 1.29	A portion of the pad adjacent to each turbine will be revegetated with locally occurring grasses and will therefore retain habitat values for the Squatter Pigeon.	Rehabilitation of Squatter pigeon habitat is outlined in **Table 6.1** shown in **Figure 6.2**.	MIWF
14.b 1.30	Areas of habitat for the Squatter Pigeon must be flushed for Squatter Pigeon individuals immediately prior to clearing.	Clearance management in relation to Squatter pigeons is outlined in **Table 11.2**.	MIWF & OHTL
ATTACHMENT H2: MITIGATION AND MANAGEMENT MEASURES TO BE IMPLEMENTED FOR THE DURATION OF THE APPROVAL			
14.b 2.1	A maximum speed limit of 60 km/hr must apply to all vehicles using access roads and tracks.	Details on speed limits are in **Table 6.1**.	MIWF & OHTL
14.b 2.2	Vehicle access must be restricted to within the project footprint and existing access routes.	Details on vehicle access are in **Table 6.1**.	MIWF & OHTL
14.b 2.3	Artificial site lighting must be kept to the minimum required for safety. Lighting beams must be directed downwards or use shields and baffles to limit light spill beyond the area that requires lighting.	Controls for artificial lighting are incorporated into the Mitigation / Management Measures outlined in **Table 11.2**.	MIWF & OHTL
14.b 2.4	Refuelling must not be undertaken within 50 metres of any waterway or retained habitat.	Outlined in **Table 6.1** and incorporated into the Mitigation / Management Measures outlined in **Table 11.2**.	MIWF & OHTL
14.b 2.5	Storage of fuels, chemicals, wastes and other potentially environmentally hazardous substances must be bunded or otherwise contained in areas away from waterways and retained habitat.	Incorporated into the Mitigation / Management Measures outlined in **Table 11.2**.	MIWF & OHTL

CONDITION NUMBER	CONDITION REQUIREMENT	DEMONSTRATION OF HOW THE MMP ADDRESSES CONDITION REQUIREMENTS	RELEVANT PROJECT
14.b 2.6	The prevalence of weeds and feral animals identified as threats to the EPBC Act listed threatened species must be kept at less than the prevalence of weeds and feral animals prior to commencement of the action.	Weed and feral animal management and monitoring is outlined in **Table 7.2.**	MIWF & OHTL
14.b 2.7	Grazing must be limited to prevent grazing degradation of vegetation within all riparian zones.	Grazing management is outlined in **Table 6.1**.	MIWF & OHTL
14.b 2.8	Fire management to prevent high intensity and frequent fires must be implemented.	Fire management and prevention is outlined in **Table 6.1** in addition to the risk assessment **Table 11.2**.	MIWF & OHTL
14.b 2.9	A register of Squatter Pigeon sightings must be maintained and used to identify and inform all persons on site of areas that have a higher risk of vehicle collision and the need to be alert to risk of vehicle collision with Squatter Pigeon and drive slowly to prevent vehicle collision with Squatter Pigeon.	Maintaining a register of Squatter pigeon sightings in incorporated into the Mitigation / Management Measures outlined in **Table 11.2**.	MIWF & OHTL
14.c	Details of the specific timing of implementation, frequency and duration of the measures to be implemented, including the measures specified in Attachments H1 and H2;	Timing, frequency and duration of measures specific to MNES species are in **Table 6.1** & **Table 7.2**.	MIWF & OHTL
14.d	Specification of interim milestones and completion criteria for habitat rehabilitation;	Information on monitoring and interim milestones can be found in Section 7.2 and **Table 7.2**.	MIWF & OHTL
14.e	Details of the nature, timing and frequency of monitoring to ensure that impacts to protected matters do not exceed the clearance limits and that interim milestones and completion criteria for habitat rehabilitation are likely to be achieved and subsequently are achieved;	Information on monitoring and interim milestones can be found in **Table 7.2**.	MIWF & OHTL
14.f	Timing for the submission to the department of reports of monitoring outcomes;	Reporting and monitoring schedules are outlined in **Section 7.3** and **Table 7.2**.	MIWF & OHT
14.g	triggers and timing for the implementation of corrective actions if interim milestones and completion criteria are unlikely to be achieved;	Timing for the implementation of corrective actions are outlined in **Table 7.2**.	MIWF & OHT
14.h	Risk analysis and a risk management and mitigation strategy for all risks to the successful implementation of the MNES Management Plan, including a rating of all initial and post-mitigation residual risks in accordance with the risk assessment matrix; and	Details on risk analysis, risk management and mitigation strategy are provided in **Section 11**. The risk assessment includes pre and post mitigation risk rankings.	MIWF & OHTL

CONDITION NUMBER	CONDITION REQUIREMENT	DEMONSTRATION OF HOW THE MMP ADDRESSES CONDITION REQUIREMENTS	RELEVANT PROJECT
14.i	Evidence of how the measures and corrective actions take into account relevant approved conservation advices and are consistent with relevant recovery plans and threat abatement plans.	Reference to conservation advices, applicable recovery plans and literature are provided in Table 3.1.	MIWF & OHTL

3. POTENTIAL ENVIRONMENTAL IMPACTS AND RISKS TO MNES

This section of the MMP describes the potential impacts that may occur to the prescribed MNES (listed in Section 1.2) as a result of Project activities as described in both the MIWF & OHTL MNES Assessment Report (GHD 2021). This report identified the direct and indirect impacts that have the potential to occur throughout the life of the Project and include:

- Injury and mortality of MNES species by direct interaction (i.e. injuries during clearing, vehicle strike, or collision with turbines or barotrauma);
- Loss or fragmentation of MNES habitat and reduced connectivity;
- Introduction and spread of invasive fauna and flora species;
- Habitat degradation by increased weeds, dust, run-off and sedimentation;
- Disturbance of surface waterways and waterbodies or groundwater systems; and
- Disturbance to wildlife through increased light, noise and vibration.

These potential impacts to MNES are not universal, with some species more susceptible to the potential impacts than others. In recognition of this, the potential impacts to MNES as identified by the relevant conservation advice, recovery plans and threat abatement plans is outlined within the table below.

Table 3.1 Summary of potential impacts to MNES

POTENTIAL IMPACT	POTENTIAL IMPACTS TO MNES	IMPACTED MNES	APPLICABLE PROJECT PHASE
Injury and mortality of MNES species by direct interaction.	▪ Death of Injury to MNES species.	All	All phases
Loss or fragmentation of MNES habitat and reduced connectivity.	▪ Removal of vegetation that provides foraging and/or breeding habitat for a threatened species and ecological communities. Injury or death during clearing. ▪ Reduction in ability for threatened MNES species to disperse to adjacent habitat and move safely through the area.	All	Clearing and construction phases

POTENTIAL IMPACT	POTENTIAL IMPACTS TO MNES	IMPACTED MNES	APPLICABLE PROJECT PHASE
Introduction and spread of invasive flora species.	▪ Habitat degradation and competition for resources.	*Macrozamia conferta* & Squatter pigeon	All phases
Introduction and spread of invasive fauna species.	▪ Injury or mortality to predation by European Foxes, Feral Dogs and Feral Cats.	Koala, Squatter pigeon & Regent honeyeater	All phases
Habitat degradation by increased dust run-off and sedimentation.	▪ Smothering of plants and habitat degradation	All	All phases
Disturbance to wildlife through increased light, noise and vibration.	▪ Disruption to behaviours and the balance of inter-species interactions.	Koala, Greater glider and Grey-headed flying-fox	All phases

4. PRINCIPLES FOR DEVELOPING MANAGEMENT MEASURES

A range of measures will be implemented to avoid, mitigate, and manage direct and indirect impacts to MNES. These measures may be specific to a particular Project phase, or occur across multiple Project phases. Management measures have been developed with consideration for; the avoid, mitigate and manage hierarchy, SMART principles, and adaptive management. Information on each of these principles is presented in the following sections.

4.1. MITIGATION HIERARCHY

This MMP has been developed considering the following management principles (in order of preference):

- Avoidance: Avoiding direct and indirect adverse impacts where possible;
- Mitigate: Mitigating direct and indirect adverse impacts where impacts cannot be avoided;
- Restore: Progressive restoration of areas that are impacted temporarily where practicable; and
- Offsets: ACCIONA are delivering environmental offsets for significant, residual impacts to MNES which are addressed separately in accordance with the EPBC Act approval conditions.

Proposed avoidance, mitigation and management measures will be carried out continuously for the life of the project and will be adapted during different Project phase. These measures will be based upon the best available information and will include the following:

- Performance criteria;
- Action to be undertaken;
- How it will be done;
- Where it will be implemented in relation to the MNES and/or habitat and impact/action;
- When it will be implemented in relation to the impact/action, the Project stage and where relevant time of year and at what frequency/duration; and
- Who is responsible for taking that action.

4.2. SMART PRINCIPLES

All MNES management measures have been developed to be consistent with S.M.A.R.T principles which are:

- Specific – prescriptive, with no uncertainty or ambiguity around their purpose or implementation;
- Measurable – the status (i.e. success or failure) and outcomes/results can be measured;
- Achievable – through the chosen method of implementation, by the responsible personnel and within the specified timeframe;
- Relevant – to the action/impact being controlled and to the protected matter; and
- Time bound – have a timeframe for implementation.

4.3. ADAPTIVE MANAGEMENT

The implementation of this MMP will use an adaptive management framework. Adaptive management includes two key phases:

- Establishment of the key components of a management framework including engaging stakeholders, developing clear and measurable objectives and performance criteria, identification and selection of potential management actions and the development of monitoring protocols which enable the evaluation of progress towards achieving objectives, and which will effectively contribute to the adaptive management decision making process; and
- An iterative learning phase which involves utilisation of the management framework to learn about the natural resource system and iteratively adapt management strategies and approaches based on what is learned (Williams & Brown 2016) (see **Section 8.1**) that describes the review and update process for this MMP).

If a performance criteria or interim milestones has not been achieved, corrective actions will be implemented (see **Table 7.2**). Where there is uncertainty as to the cause of the management trigger (e.g. failure to achieve the interim milestones), the event or circumstance triggering corrective action will be reviewed, and management actions in this MMP may be revised accordingly.

5. MNES OUTCOMES

This section presents information on environmental outcomes to be achieved through implementation of this MMP, and management to achieve these outcomes. This information supports the avoidance, mitigation and management measures outlined in **Section 6**. Proposed outcomes have been developed for each relevant MNES (see **Table 5.1**).

Table 5.1 MNES environmental outcomes

MNES	OUTCOMES
Macrozamia conferta	▪ Identify the location of all M. conferta within the Project disturbance footprint during pre-clearance surveys; ▪ Avoid disturbance to M. conferta external to the approved project footprint through the use of best management practices; ▪ Prevent the introduction and spread of weeds that might compete for habitat outside the Project disturbance footprint; and

MNES	OUTCOMES
	▪ Translocate all *M. conferta* within the Project footprint in accordance with the *Macrozamia conferta* Translocation and Propagation Plan.
Regent honeyeater (*Anthochaera phrygia*)	▪ Avoid and minimise injury and mortality to Regent honeyeaters through the use of best management practices; ▪ Minimise the introduction and spread of weeds that might degrade areas of potential habitat outside the Project disturbance footprint; and ▪ Offset cleared habitat as identified in the EPBC Act approval.
Koala (*Phascolarctos cinereus*)	▪ Avoid and minimise injury and mortality to Koala through the use of best management practices; ▪ Minimise the introduction and spread of weeds that might restrict Koala movement through the Project disturbance footprint; ▪ Minimise the introduction of invasive fauna that may injure or kill Koala; and ▪ Offset cleared habitat as identified in the EPBC Act approval.
Central greater glider (*Petauroides volans*)	▪ Avoid and minimise injury and mortality to Central greater gliders through the use of best management practices; ▪ Offsetting cleared habitat as identified in the EPBC Act approval.
Grey-headed flying-fox (*Pteropus poliocephalus*)	▪ Avoid and minimise injury and mortality to Grey-headed flying-fox through the use of best management practices; ▪ Offset cleared habitat as identified in the EPBC Act approval.
Squatter pigeon (southern) (*Geophaps scripta scripta*)	▪ Avoid and minimise injury and mortality to Squatter pigeon through the use of best management practices ▪ Minimise the introduction and spread of weeds that might reduce habitat quality for Squatter pigeon; ▪ Offset cleared habitat as identified in the EPBC Act approval.

6. AVOIDANCE, MITIGATION AND MANAGEMENT MEASURES

Table 6.1 presents proposed MNES avoidance, mitigation and management measures.

Table 6.1 Avoidance, mitigation and management measures for high value MNES habitat and mapped waterways

PERFORMANCE CRITERIA	APPLICABLE MNES	MEASURES	TIMING	RESPONSIBLE PARTY
AVOIDANCE				
Clearing and/or disturbance to MNES habitats does not occur outside of the project area.	All	Clear delineation of the extent of vegetation clearing and exclusion zones prior to commencement of clearing. Communication of the clearing extend to construction supervisors. Clearing boundaries to be identified in maps and spatial data provided to Contractors. Laydown and stockpile areas to be located in already cleared areas as much as practicable.	Prior to commencing vegetation clearing for relevant stage/phase.	Project Manager
Whenever possible use existing tracks and disturbed areas when crossing waterways.	All	Clearing will be restricted to the minimum amount necessary for construction and utilise previously disturbed areas wherever practicable.	All Project phases.	HSE Manager
Where practical, retain areas of MNES habitats and/or mature, large trees, hollow-bearing trees or large stags as potential nesting and roosting habitat.	All	Clearing will be restricted to the minimum amount necessary for construction and utilise previously disturbed areas wherever practicable.	All Project phases.	HSE Manager
No fuel spills at environmentally sensitive locations	All	Refuelling and maintenance activities are undertaken away from environmentally sensitive locations.	All Project phases.	HSE Manager
MITIGATION				
Minimise the introduction, establishment and spread of declared weeds and pests during construction.	All	Weed washdowns and hygiene declarations undertaken for each vehicle entering site. Undertake pre-clearance surveys to confirm declared weed species (restricted and prohibited pest plants under the *Biosecurity Act 2014* (Biosecurity Act) and Weeds of National Significance (WoNS)) and pests, and identify appropriate treatment measures.	Prior to the commencement of construction.	HSE Manager

PERFORMANCE CRITERIA	APPLICABLE MNES	MEASURES	TIMING	RESPONSIBLE PARTY
Minimise potential impacts to Koala during clearing.	Koala	▪ All clearing will be supervised by suitably qualified and experienced fauna spotter-catchers with a current rehabilitation permit[2]. ▪ Employment of sequential clearing practices and use of suitably qualified koala spotters in accordance with the EPBC referral guidelines for the endangered koala (DotE 2014b) for reducing impact on koalas including: – For a clearing site[3] with an area of 6 ha or less – 50 percent of the site's area – For a clearing site with an area of more than 6 ha – 3 ha or three percent of the site's area[4], whichever is the greater – Ensuring that between each stage[5] and the next there is at least one period of 12 hours starting at 6 p.m. on a day and ending at 6 a.m. on the following day during which no trees are cleared on the site – Sequential clearing to ensure that wildlife can safely move away from machinery to access adjacent or nearby habitat. – No koala habitat tree in which a koala is present, and no koala habitat tree with a crown overlapping a tree in which a koala is present, is cleared.	During vegetation clearing.	Fauna spotter-catcher
Ensure site personnel are aware of MNES.	All	Site inductions will include information on MNES species that have the potential to occur within the Project area. Additionally, information will be included toolbox talks, pre-starts and targeted training as required. Topics will include, but not be limited to, the two stage habitat removal process, clearing limits, no go zones and fauna descriptions. Additional details on inductions and training are outlined in **Section 9**.	Inductions will be undertaken prior to commencement on site.	Project Manager and HSE Manager
Ensure safe handling of MNES during clearing works	All	Relocation of MNES Species	Fauna spotter-catcher will be present just prior to and during clearing.	Fauna spotter-catcher

PERFORMANCE CRITERIA	APPLICABLE MNES	MEASURES	TIMING	RESPONSIBLE PARTY
		▪ All MNES fauna will be given the opportunity to move out of the Project footprint on their own accord. ▪ Where the MNES fauna are unable to move out of the Project footprint on its own accord, the qualified spotter-catcher will move the individual using the appropriate handling technique for the species to a suitable recipient site.	Area will be checked prior to any vegetation being cleared. They will then continue to monitor and check for any wildlife during the clearing process.	
Minimise MNES impacted by vehicle strike.	All MNES fauna	▪ All vehicles to maintain designated speed limit of 60 km/hr or lower within the Project footprint. ▪ All vehicle access will be restricted to within the project footprint and existing access routes. ▪ Install Squatter Pigeon awareness signage in locations along access tracks where Squatter pigeons have been confirmed present. ▪ Site inductions will include information on MNES species that have the potential to occur within the Project area.	At all times.	Project Manager and HSE Manager
Exclusion of grazing from riparian zones of mapped waterways during rehabilitation.	All MNES fauna	▪ Fencing will be installed around areas where rehabilitation is being undertaken. ▪ The fences will be regularly checked and maintained to ensure they haven't been damaged and livestock aren't getting through. ▪ Fencing will be removed once relevant completion criteria have been met.	Fencing to be installed once reinstatement activities have been completed and removed once relevant rehabilitation objectives have been achieved.	HSE Manager
Minimise the introduction and/or spread of weeds, pests and/or disease within the Project area.	All	▪ Disease and weed hygiene measures will be utilised during all Project phases. ▪ Construction vehicles / equipment travelling from outside the Project will be required possess a current weed hygiene inspection certificate before entering the Project area.	For the duration of the project.	HSE Manager

PERFORMANCE CRITERIA	APPLICABLE MNES	MEASURES	TIMING	RESPONSIBLE PARTY
		▪ Restricted weeds occurring within the construction footprint will be treated or removed prior to the commencement of construction. ▪ Any new restricted weeds and pests identified in monitoring of high value MNES habitat areas will be treated.		
Minimise sediment runoff into mapped waterways.	All	▪ Put in place effective sediment and erosion control methods during vegetation clearing to ensure that if a rainfall event occurs sediment does not run off the site into adjacent mapped waterways. ▪ Construction must cease during adverse weather conditions that have the potential to significantly increase dust, runoff or sedimentation. ▪ On-site stockpiles will be located above potential flood extents, within close proximity to the project and covered, if the stockpiled material could be dispersed by rain or wind.	Install sediment and erosion control measures prior to, and during the construction phase.	HSE Manager
Minimise vehicle strikes with Squatter pigeons	Squatter pigeon	▪ Install Squatter pigeon awareness signs on access tracks.	During all Project phases.	HSE Manager
Minimise dust impacts to MNES	All	▪ Dust inspections will be undertaken regularly to ensure construction activities are not generating excessive dust near sensitive. ▪ Dust suppression (e.g., watering or polymer application) is to be carried out on internal unsealed access roads and other disturbed areas to limit generation of dust where required. ▪ All temporary soil stockpiles will be covered, stabilised and/or moistened as required to minimise generation of dust.	For the duration of the project.	HSE Manager
RESTORATION				
Rehabilitate temporary infrastructure areas in high-value MNES or mapped waterways where	All	▪ Rehabilitation will be managed until areas meet remnant vegetation completion criteria for the relevant pre-disturbance regional ecosystem as outlined in the Methodology for surveying	As soon as areas are available for reinstatement.	HSE Manager

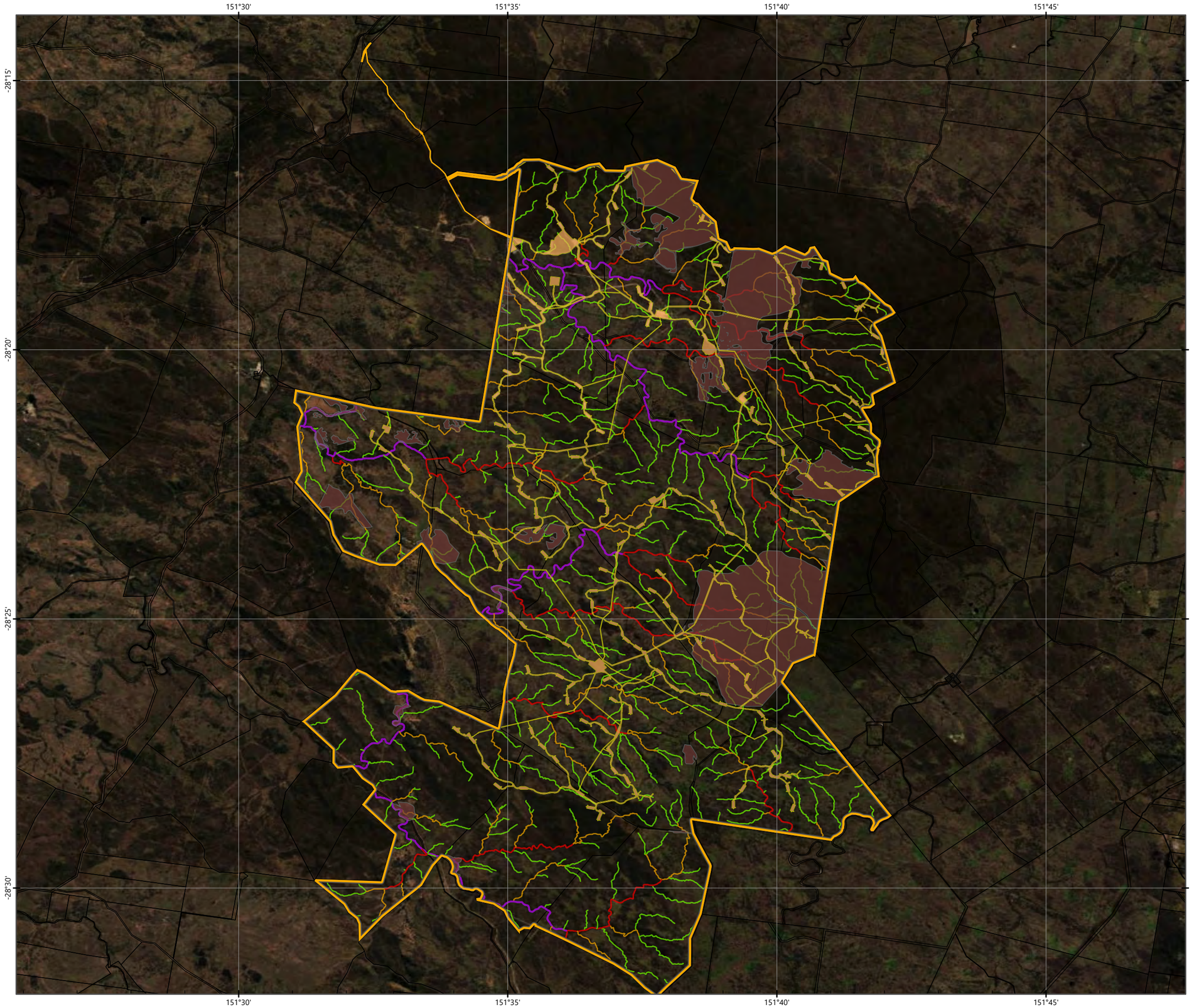
PERFORMANCE CRITERIA	APPLICABLE MNES	MEASURES	TIMING	RESPONSIBLE PARTY
possible subject to landholder agreement and environmental constraints.		and mapping regional ecosystems and vegetation communities in Queensland Version 5.1 (Neldner et al. 2020) (i.e. >70% canopy height and >50% cover compared with benchmark data). ▪ During rehabilitation livestock will be excluded until rehabilitation is suitably established to be able withstand moderate grazing pressure. To inform the rehabilitation progress a monitoring program will be implemented (see Section 7.4 for additional information on monitoring and reporting frequencies) to evaluate the overall success of the rehabilitation.		
Rehabilitate areas adjacent turbine pads (i.e., batters) where possible with grasses suitable for Squatter pigeon foraging (subject to environmental constraints).	Squatter pigeon	▪ Where possible, topsoil will be stockpiled during pad construction, so that topsoil can be respread on batters adjacent to the turbine pad. ▪ Locally seedbank will be allowed to re-establish naturally on respread topsoil.	Upon completion of construction.	HSE Manager
Prevent uncontrolled fire events.	All	▪ A Bushfire Management Plan (BMP) will be developed for the Project which addresses fire prevention and response. ▪ Hot works will be managed under a permit to work system. ▪ Firefighting equipment and water supply will be maintained onsite. ▪ Fire extinguishers will be available in all work areas. ▪ Fire safety will be addressed in site inductions.	BMP requirements to be followed for the duration of the Project.	HSE Manager

[2] *Holding a valid rehabilitation permit will ensure that clearing is undertaken in a manner that is consistent with the Nature Conservation (Koala) Conservation Plan 2017 and clearing of the koala habitat trees is carried out in a way that ensures koalas on the area being cleared (the clearing site) have enough time to move out of the clearing site without human intervention*

[3] *A site is defined as any individual clearing front*

[4] *The clearing site's area is equal to the mapped Koala habitat of the Project, which is 734.16 ha (MIWF and OHTL combined), and 3% of this area is 22 ha*

[5] *A stage is defined as a day*



Attexo

MacIntyre Wind Farm

High Value MNES Habitat

Figure 6.1

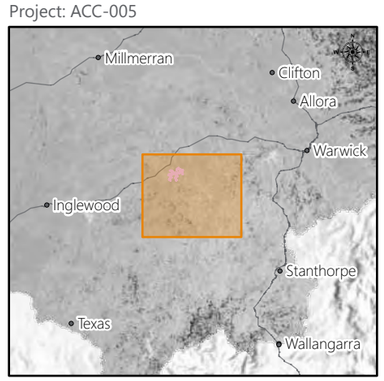
- MacIntyre Wind Farm Boundary
- Disturbance Footprint
- Access Road
- High Value Habitat

Waterways

- Major
- High
- Moderate
- Low

- Road
- Property Boundary

Date: 5/06/2024
Author: MKH
Reviewed: JC
Project: ACC-005

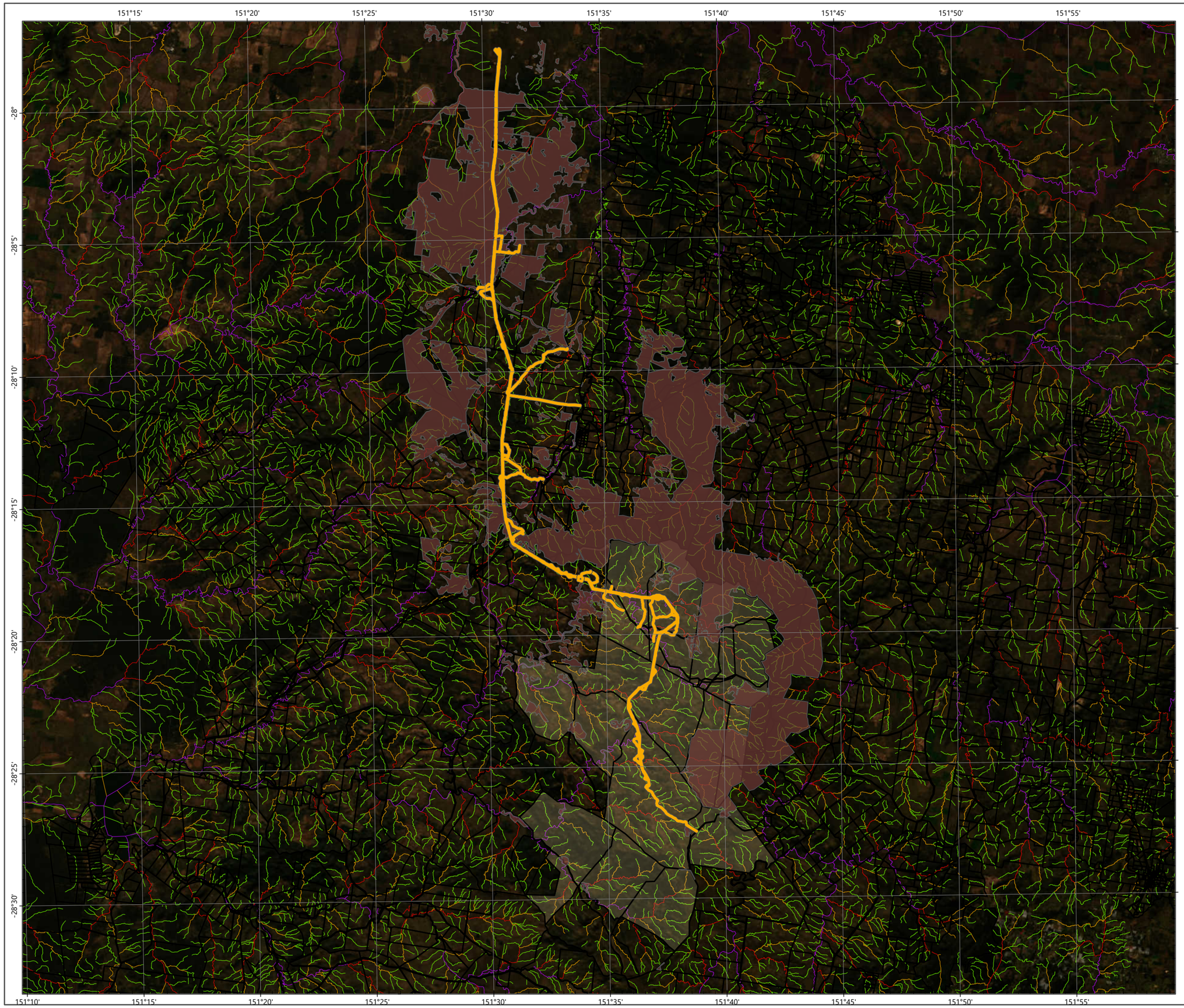


0 1 2 3 4 5 Km

Scale: 1:125,000@A3

Data Source(s):
Digital Cadastral Database - Department of Natural Resources, Mines and Energy (2021)
Earthstar Geographics, © State of Queensland (Department of Resources) 2023, Esri, USGS

Path: C:\Users\TimODonnell\Attexo Group\Attexo - Projects\ACCIONA Energy\ACC-005 MIWF Offsets Delivery\5. GIS\4.7 Working\18_MNES_Plan\18_MNES_Plan_Updates.aprx



Attexo

MacIntyre Wind Farm

High Value MNES Habitat

Figure 6.1

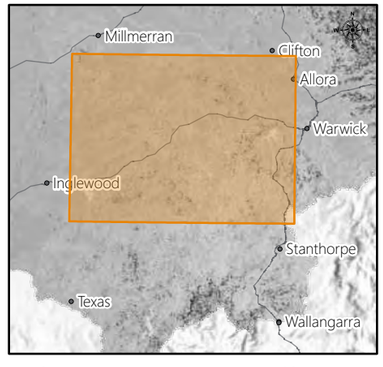
- Clearing Corridor - OHTL
- MacIntyre Wind Farm Boundary
- High Value Habitat

Waterways

- Major
- High
- Moderate
- Low

- Property Boundary

Date: 5/06/2024
Author: MKH
Reviewed: JC
Project: ACC-005

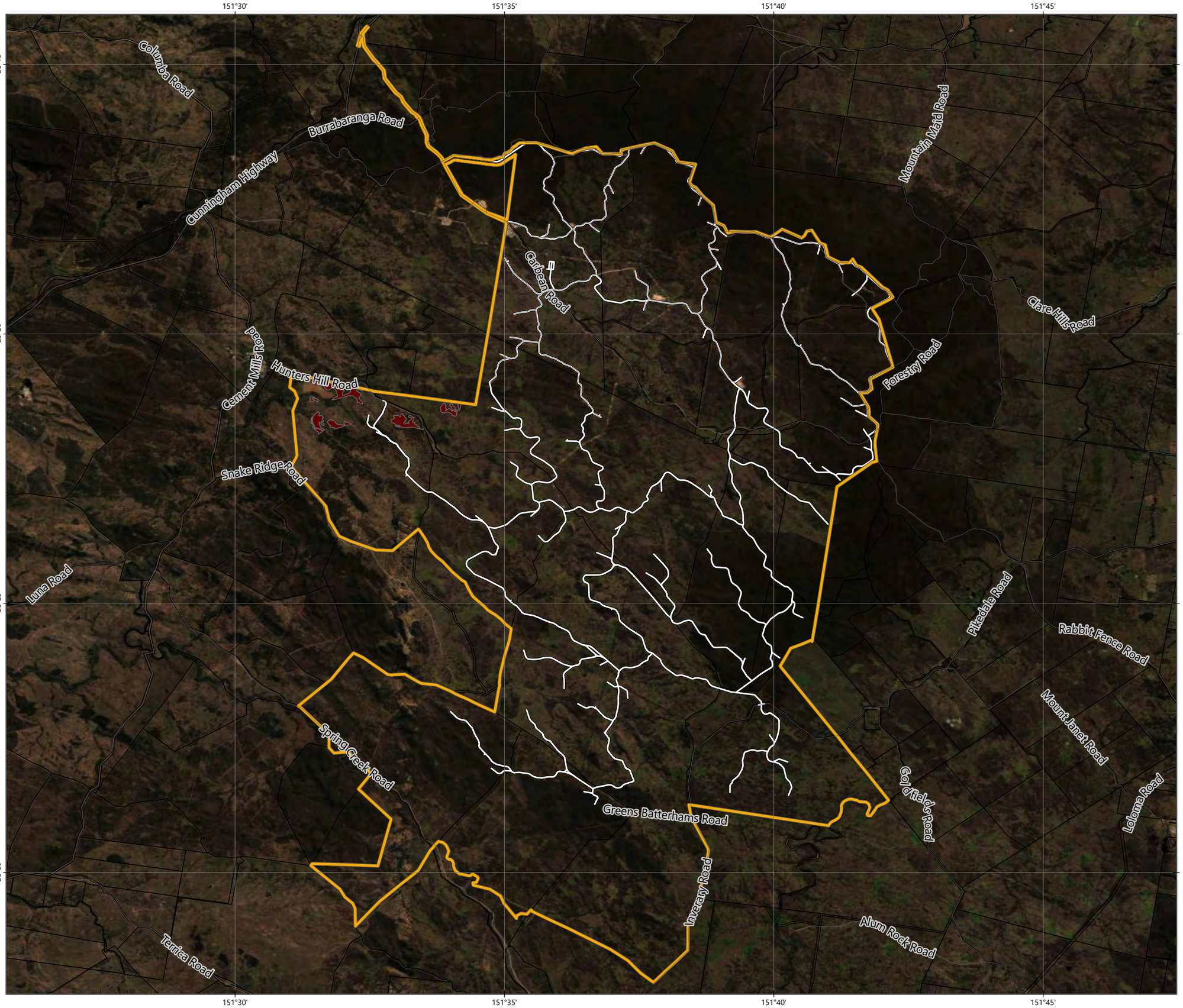


0 5 10 Km

Scale: 1:250,000@A3

Data Source(s):
Digital Cadastral Database - Department of Natural Resources, Mines and Energy (2021)
Earthstar Geographics, © State of Queensland (Department of Resources) 2023, Esri, USGS

Path: C:\Users\TimODonnell\Attexo Group\Attexo - Projects\ACCIONA Energy\ACC-005 MIWF Offsets Delivery\5 GIS\4.7 Working\18_MNES_Plan\18_MNES_Plan_Updates.aprx



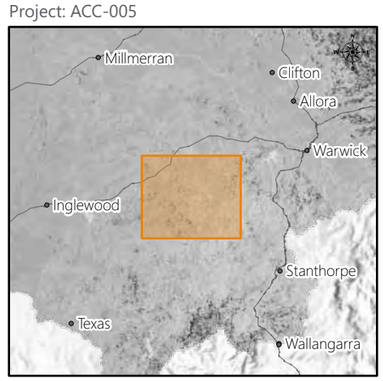
MacIntyre Wind Farm

Squatter Pigeon Breeding Habitat Map

Figure 6.2

- MacIntyre Wind Farm Boundary
- Breeding habitat
- Access Road
- Property Boundary

Date: 5/06/2024
Author: MKH
Reviewed: JC
Project: ACC-005



0 1 2 3 4 5 Km

Scale: 1:125,000@A3

Data Source(s):
Digital Cadastral Database - Department of Natural Resources, Mines and Energy (2021)
Earthstar Geographics, © State of Queensland (Department of Resources) 2023, Esri, USGS

Path: C:\Users\TimODonnell\Attexo Group\Attexo - Projects\ACCIONA Energy\ACC-005 MIWF Offsets Delivery\5. GIS\4.7 Working\18_MNES_Plan\18_MNES_Plan_Updates.aprx

Attexo

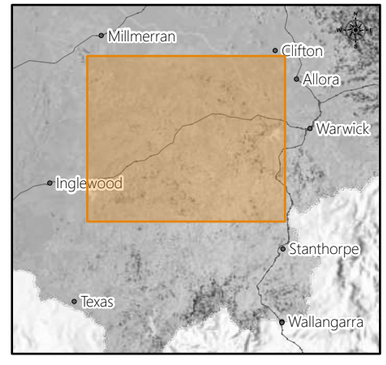
MacIntyre Wind Farm

Squatter Pigeon Breeding Habitat Map

Figure 6.2

- Clearing Corridor - OHTL
- MacIntyre Wind Farm Boundary
- Breeding habitat
- Existing Transmission Line
- Property Boundary

Date: 5/06/2024
Author: MKH
Reviewed: JC
Project: ACC-005



0 5 10 Km

Scale: 1:250,000@A3

Data Source(s):
Digital Cadastral Database - Department of Natural Resources, Mines and Energy (2021)
Earthstar Geographics, © State of Queensland (Department of Resources) 2023, Esri, USGS, Maxar

Path: C:\Users\TimODonnell\Attexo Group\Attexo - Projects\ACCIONA Energy\ACC-005 MIWF Offsets Delivery\5. GIS\4.7 Working\18_MNES_Plan\18_MNES_Plan_Updates.aprx

7. MONITORING AND INTERIM MILESTONES

7.1. MONITORING

A monitoring program has been developed to ensure management measures are implemented and progressing as planned. This section provides information on proposed monitoring methods, locations and timing, with monitoring information summarised in Table 7.2.

The results of the monitoring program will be used to inform adaptive management of this MMP, and ultimately assess progress against interim milestones and progress towards completion criteria. Results of monitoring will also be used to assess when corrective actions are required to be implemented.

Monitoring will be undertaken to assess:

- Compliance with restrictions for vegetation clearing, and construction and operations are occurring within high value MNES habitat and mapped waterways;
- Erosion and sediment control is being implemented effectively with a focus on areas adjacent to mapped waterways;
- Fencing, gates, vehicle speed signs are being maintained in working order, and being adhered to;
- Weed hygiene protocols are being implemented;
- Restricted weeds and pests in high value MNES habitat areas within the Project disturbance footprint are being controlled effectively; and
- Exclusion of livestock in riparian zones of mapped waterways, where practicable.

7.1.1. REHABILITATION AREA MONITORING

Where possible, temporary construction areas will be progressively stabilised with appropriate landscaping as soon as practicable after the completion of construction works (subject to landholder agreement and environmental constraints).

Monitoring will be undertaken in the following frequency:

- Annually for Year 1-5; and
- Every five years until relevant completion criteria have been met.

Reporting will be undertaken for each monitoring event, with an overarching report prepared for each five-year monitoring period that assesses progress. Reporting will include recommendations for corrective actions or updates to the MMP where relevant.

7.1.2. WEED AND PEST MONITORING

A pre-clearance weed survey of high value MNES habitat areas will be undertaken prior to the commencement of clearing in these locations. The pre-clearance survey will include the identification of declared weeds within mapped areas of high value MNES habitat. The survey will identify weed species present to allow for comparison with post-disturbance monitoring. Appropriate weed control will be implemented for the relevant weed species as identified during monitoring events.

Feral animal management will aim to minimise the increase in the number of feral animals within the Project area and the habitat degradation they cause to MNES habitats. Feral animals are a recognised threat to MNES species by species such as feral pigs, foxes and cats and wild dogs. Methods aimed at reducing the introduction of additional feral animals include:

- A weed and pest fauna register is to be maintained which records sightings or evidence of pest animals observed during construction; and
- All personnel will be instructed on their responsibilities related to avoiding and minimising the introduction/attraction to the construction site of feral animals.

Develop a Pest (Feral Animal) Management Plan for the Project which identifies an annual control program in consultation with the adjacent landholders and relevant government authorities. Pest animal control will consider the methods identified within DAF feral animal management fact sheets summarised in Table 7.1:

Table 7.1 Species-specific control methods for feral animals

SPECIES	CONTROL METHOD
Pig (*Sus scrofa*)	Trapping – funnel entrance/tripped-gate entrance/pig-specific trigger; Shooting – ground shooting or shooting from helicopter; and Poisoning – 1080 poison baits selectively positioned (DAF 2020a).
Foxes (*Vulpes vulpes*)	Ground baiting – 1080 and PAPP poison baits selectively positioned; and Shooting – highly selective and carried out at night (DAF 2020b).
Cats (*Felis catus*)	Shooting - highly selective and carried out at night; Poisoning – fresh meat baits containing 1080 poison baits; and Trapping – rubber-jawed, leg-hold traps in ideal locations (DAF 2020c).
Dogs (*Canis lupus farmilaris*)	Ground baiting – 1080 and PAPP poison baits selectively positioned; Foot hold traps – must be padded or offset laminated jawed traps; and Shooting - opportunistic method (DAF 2020d).

7.2. INTERIM MILESTONES AND COMPLETION CRITERIA FOR REHABILITATION

Rehabilitation completion criteria are separated into two different targets based on pre-disturbance conditions as follows:

- Non-remnant areas
  - 70% of the native vegetation cover relative to adjacent undisturbed sites; and
  - 70% of the native species diversity relative to adjacent undisturbed sites
- Remnant areas
  - >70% canopy height and compared to equivalent regional ecosystem benchmark; and
  - >50% canopy cover compared to equivalent regional ecosystem benchmark.

Interim milestones have been developed for each separate rehabilitation type to allow for progress reviews towards completion criteria and have different timeframes for assessment as follows:

- Non-remnant areas
  - Achieve 50% cover within three months
  - Achieve completion criteria within 12 months

- Remnant areas
  - Year 5 – achieve 50% of native species richness compared to equivalent regional ecosystem benchmark
  - Year 10 – achieve 35% of canopy height and 25% of canopy cover compared to equivalent regional ecosystem benchmark
  - Year 15 – achieve 50% of canopy height and 40% of canopy cover compared to equivalent regional ecosystem benchmark
  - Achieve completion criteria within 20 years.

These reviews are to assess progress of the MMP actions, evaluate their effectiveness and apply adaptive management founded on the SMART principles.

If interim milestones are not being achieved, a root cause assessment will be undertaken and corrective actions implemented where appropriate. Where there is uncertainty as to the cause of the management trigger, the event or circumstance triggering corrective action will be reviewed, and management actions in this MMP may be revised accordingly. Table 7.2 provides a summary of the monitoring and associated interim milestones to be undertaken for the duration of the approval.

7.3. REPORTING

Following approval of this MMP, Monitoring reports will be prepared annually and provided to inform Annual Compliance Reporting required under the EPBC Act approval. The MMP Monitoring Report will present information on:

- Management actions that have been completed during the preceding period;
- Monitoring that has been completed and monitoring results;
- Assessment of monitoring results against performance criteria to assess progress; and
- Identification of any issues that arose which required intervention or corrective actions to be implemented.

Monitoring and associated reporting will continue until all completion criteria have been met.

7.4. SUMMARY OF MNES MONITORING AND REPORTING PROGRAM

Monitoring that will be undertaken to assess progress towards completion criteria as presented in Table 7.2.

Table 7.2 MNES management and monitoring schedule

PERFORMANCE CRITERIA	AVOID, MINIMISE AND MITIGATE ACTIONS	MONITORING	TRIGGER FOR CORRECTIVE ACTION	SUGGESTED CORRECTIVE ACTION	TIMING OF CORRECTIVE ACTION
Avoid and minimise injuries and mortality of MNES species during all Project phases.	▪ Undertake pre-clearance surveys. ▪ Fauna spotter-catcher present during clearing activities. ▪ Any injured wildlife will be delivered to appropriate wildlife carer in the region. ▪ Implement sequential clearing protocols. ▪ Environmental awareness training pertaining to MNES identification and site utilisation to be provided to all site personnel. ▪ Vehicle speed limits to be set at a maximum of 60 km/hr for all internal roads.	▪ Review of pre-clearance survey results to occur for identification of all measures required prior to clearing activities commencing. ▪ Site personnel to report any vehicle strikes on confirmed or potential MNES species within the Project area. ▪ Incidental observation of MNES species to be reported in relevant registers.	▪ MNES species mortality or injury occurs during any phase of the project.	▪ If injury or mortality occurs during clearing stop clearing until approval to recommence is provided by ACCIONA. ▪ If vegetation clearing procedures are not effective, identify improvements that are required. ▪ Investigate and review incidence of an injury to, or the mortality of an MNES species and create contingency plans to reduce reoccurrence. ▪ Slow speed down further in defined habitat areas if mortality related to vehicle strike. ▪ Install additional fauna warning signs adjacent to access roads if vehicle strikes are occurring.	▪ Review of incident to be undertaken within 5 business days of event. ▪ If relates to vegetation clearing, implement corrective action prior to clearing commencing again. ▪ If additional signage is required this will be installed within one month of injury or fatality occurring.
The Project does not result in loss of MNES species habitats outside of approved disturbance limits.	▪ Clearly delineating exclusion zones prior to clearing commencing. ▪ Internal training for all personnel involved in the	▪ ACCIONA Site Manager to check delineation of boundaries and sign off prior to clearing commencing.	▪ Clearing of MNES species habitat exceeds the approved disturbance limits.	▪ Clearing works are to cease immediately and DCCEEW notified of the incident within two business days. The	▪ Suitable corrective action to be agreed with DCCEEW post notification.

PERFORMANCE CRITERIA	AVOID, MINIMISE AND MITIGATE ACTIONS	MONITORING	TRIGGER FOR CORRECTIVE ACTION	SUGGESTED CORRECTIVE ACTION	TIMING OF CORRECTIVE ACTION
	vegetation clearing phase to ensure they are aware of the approved works areas. ▪ Clearing boundaries to be identified in maps and GIS that are provided to contractors. ▪ Vehicles and machinery stay on designated tracks where possible.	▪ Annual assessment of clearing and construction extent.	▪ Evidence of disturbance to areas outside of approved limits (such as temporary work area or laydown placed outside of permitted area etc).	incident will be recorded in the Project's environmental and incident reporting system. ▪ Rehabilitation of the additional area that was cleared or disturbed. ▪ Provide an offset for the cleared area if determined to be a significant impact to MNES.	▪ If rehabilitation is required, this will commence within two months of DCCEEW agreed action/s. ▪ If an additional offset is required timing will be agreed with DCCEEW.
Rehabilitate temporary infrastructure areas in high value MNES habitat and mapped waterways as soon as practical.	▪ Clearly delineating exclusion zones prior to clearing commencing. ▪ Rehabilitate temporary infrastructure areas in high value MNES habitat. ▪ Livestock to be excluded from rehabilitation areas in riparian zones of mapped waterways via temporary fencing.	▪ ACCIONA Site Manager to check delineation of boundaries and sign off prior to clearing commencing. ▪ Annual assessment of clearing and construction extent. ▪ Annual inspections for year 1-5 and 5 yearly thereafter to monitor rehabilitation progress.	▪ Clearing of MNES species habitat exceeds the approved disturbance limits. ▪ Evidence of disturbance to areas outside of approved limits (such as temporary work area or laydown placed outside of permitted area etc). ▪ Rehabilitation monitoring identifies that interim milestones have not been met	▪ Where environmental harm is identified to be occurring due to failing rehabilitation, one additional round of targeted rehabilitation works will be undertaken. ▪ An increase in frequency of weed management; ▪ Changing weed control methods; ▪ Decrease or exclusion of grazing; ▪ Increase in feral animal control;	▪ Identified corrective actions will be implemented within one month of corrective actions being agreed.

PERFORMANCE CRITERIA	AVOID, MINIMISE AND MITIGATE ACTIONS	MONITORING	TRIGGER FOR CORRECTIVE ACTION	SUGGESTED CORRECTIVE ACTION	TIMING OF CORRECTIVE ACTION
				▪ Increasing the frequency of dust suppression techniques; and ▪ Repair fences if damaged, or installation of new fencing.	
Minimise the introduction and/or spread of declared weeds within rehabilitation areas.	▪ Weed hygiene protocols to be implemented prior to entering site. ▪ Weeds will be managed in accordance with the Project's Vegetation and Fauna Management Plan (GHD 2021). ▪ Any new restricted weeds and pests identified within high value MNES habitat following rehabilitation will be treated.	▪ A Weed and Pest Management Plan will be developed and implemented for the Project's operational phase and will address (as a minimum) protocols for periodic monitoring and management of weeds to identify and appropriately respond to changes in weed distribution and density within the high value MNES habitat rehabilitation area.	▪ New areas of declared weeds within the high value MNES habitat rehabilitation area have been noted from the baseline surveys.	▪ Should an increase in declared weed cover or presence of new weed species be observed within the project area, an investigation will be undertaken to determine the cause. This will involve reviewing adherence to the Weed and Pest Management Plan and an assessment of the distribution of weeds within the Project area in relation to baseline to determine the cause of the incursions.	▪ From the completion of the investigation, corrective actions will be developed by a suitably qualified person within 15 business days of the trigger being detected. ▪ Identified corrective actions will be implemented within one month of corrective actions being agreed, or as seasonally appropriate.
Minimise the introduction or the facilitation of additional pest fauna	▪ Pest animals will be managed in accordance with the Project's Vegetation and Fauna Management Plan (GHD 2021).	▪ A Weed and Pest Management Plan will be developed and implemented for the Project's operational phase and will address (as a minimum) protocols for periodic visual	▪ Observed increase in incidental sightings of feral animals. ▪ Observation of any MNES species mortality from pest animals such as dog attack on Koala.	▪ Should an increase in pest animal presence, or evidence of significant damage to MNES habitats be occurring, an investigation will be undertaken to determine the cause. This will	▪ From the completion of the investigation, corrective actions will be developed by a suitably qualified person within 15 business days of the trigger being detected.

PERFORMANCE CRITERIA	AVOID, MINIMISE AND MITIGATE ACTIONS	MONITORING	TRIGGER FOR CORRECTIVE ACTION	SUGGESTED CORRECTIVE ACTION	TIMING OF CORRECTIVE ACTION
	▪ ACCIONA is committed to maintain a weed and pest fauna register which records sightings or evidence of pest animals.	monitoring and management of weeds to identify and appropriately respond to changes in weed distribution and density.	▪ Evidence of pest animal degradation on MNES species habitats such as pigs wallowing	involve reviewing adherence to the Weed and Pest Management Plan. ▪ Consultation with DAF and adjacent landholders will occur on appropriate pest animal control measures.	▪ Identified corrective actions will be implemented within one month of corrective actions being agreed, or as seasonally appropriate.
Minimise impacts of dust deposition on MNES habitat.	▪ Undertake dust monitoring inspections. ▪ Implement dust suppression actions.	▪ Monitoring of dust will be undertaken during routine inspections.	▪ Excessive dust resulting in external complaints received.	▪ Implement additional dust abatement measures such as watering down of dirt access roads.	▪ *As soon as possible after complaint is received.
Prevent uncontrolled fire events in MNES habitat areas.	▪ Implement bushfire management plan for fire prevention and response. ▪ Hot works will be managed under a permit to work system. ▪ Firefighting equipment and water supply will be maintained onsite. ▪ Fire extinguishers will be available in all work areas. ▪ Fire safety will be addressed in site inductions.	▪ Review daily fire danger ratings. ▪ Monitoring and maintenance of fire breaks and fuel loads. ▪ Implementation of cultural burns as necessary.	▪ An uncontrolled fire occurs within the Project area that is due to operational activities. ▪ An unplanned bushfire occurs.	▪ Should an uncontrolled fire occur within the Project area, the Project's Emergency Response Plan will be enacted. Should any corrective actions and changes to fire management be required, they will be done in accordance with the BMP and consultation with local emergency services.	▪ From the investigation, corrective actions will be developed by a suitably qualified person within 15 business days of the trigger being detected. ▪ Any corrective actions identified will be implemented within 10 business days of the trigger being detected.

PERFORMANCE CRITERIA	AVOID, MINIMISE AND MITIGATE ACTIONS	MONITORING	TRIGGER FOR CORRECTIVE ACTION	SUGGESTED CORRECTIVE ACTION	TIMING OF CORRECTIVE ACTION
	▪ Access tracks will be maintained to provide access for emergency services. ▪ Project activities will abide by local fire restrictions.				

8. ADMINISTRATION

This section sets out the approach to audit and update of the MMP, responsibilities for implementation of the MMP including data management and incident reporting. The following sections present information on these administrative actions.

8.1. AUDIT AND REVIEW OF MMP

Internal audits to assess the effectiveness for managing impacts on MNES at the frequency outlined in Table 8.1. Where relevant, updates to the MMP will be made to implement findings of internal audits or updating of corrective actions.

In addition to internal audits, at the completion of each Project phase a review of the MMP will be undertaken to assess any changes required. The review will consider the effectiveness of mitigation and management actions along with assessment of updates to environmental best practice. The reviews will be conducted by a suitably qualified person, with the updated version (if required).

- The HSE Manager or Environmental Site Representative can approve minor changes to the MMP. Minor changes would typically include those that:
- Are editorial in nature e.g., staff and agency/authority name changes;
- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively; and
- Do not compromise the ability of the project to meet approval or legislative requirements.

Table 8.1 Timing and triggers for review of the MMP

TIMING / TRIGGER	REQUIREMENTS	RESPONSIBILITY
Following an incident involving an MNES Species or habitat.	Revision of MMP to ensure: ▪ Changes to project scope are updated. ▪ Corrective actions are appropriate.	HSE Manager or Environmental Site **Representative**.
Annual monitoring during clearing and construction phases.	Revision of MMP to ensure: ▪ Measures outlined in the MMP are being implemented. ▪ Corrective actions are appropriate.	HSE Manager or Environmental Site **Representative**.
At the completion of each project phase.	Review to assess current environmental best practice, and performance against interim milestones and completion criteria.	HSE Manager or Environmental Site **Representative**.

8.2. ROLES AND RESPONSIBILITIES

All personnel undertaking Project activities are responsible for adhering to the management strategies outlined within this MMP, however, the following are accountable for its implementation:

- **Project Manager** for ensuring this MMP is implemented during Project clearing, construction, operation and decommissioning phases;

- **HSE Manager/Site Environmental Representative** for ensuring implementation of prescribed avoidance, mitigation and management strategies for each phase within this plan, and results of the review and ensure corrective actions are implemented in a timely and effective manner; and
- **Fauna spotter-catcher** to be present during the clearing phase and to ensure appropriate measures are implemented in accordance with Rehabilitation Permit requirements, and methodologies outlined in relevant approved Species Management Programs.

8.3. DATA MANAGEMENT

ACCIONA's HSE Manager or Environmental Site Representative will be responsible for overseeing and managing all monitoring activities and programs required as part of this MMP. This will include maintaining data records informing how mitigation and monitoring efforts are tracking towards interim milestones. Data will include field survey data forms, reports, spatial data, camera footage and photos. If required, this data will be made available to DCCEEW upon request.

8.4. INCIDENT REPORTING

Environmental incidents relating to MNES species or habitat are to be logged within the ACCIONA and contractor incident reporting systems. ACCIONA is to be notified of all environmental incidents as soon as possible following the event. For all events, a written report must be provided to the HSE Manager or the Environmental Site Representative Relevant authorities will be notified in the event of an incident relating to MNES within the agreed timeframes.

9. ENVIRONMENTAL TRAINING

All project staff, contractors and sub-contractors will be provided with environmental training to be aware of their responsibilities regarding MNES species and habitat to enable effective implementation of their duties before they commence work on site. Training will include site inductions and toolbox workshops, as required and cover topics including, but not limited to, no-go zones, fauna descriptions and emergency contacts. Records of environmental training will be kept and will include information on names of people who have completed training, dates, details of the trainer and the type of training received. Short-term visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

- The MNES component of induction will include, but not limited to, an overview of:
- Relevant details of the MMP including purpose and objectives;
- MNES species potentially present on site;
- Conditions of environmental licences, permits and approvals;
- Incident response and reporting requirements; and
- Information relating to the location of high value MNES habitat.

10. EMERGENCY CONTACTS AND PROCEDURES

10.1. KEY EMERGENCY CONTACTS

Key emergency contacts responsible for managing environmental emergencies associated with the project include:

- Project Manager;
- Contractor Project Manager;
- HSE Manager; and
- Fauna spotter catcher.

Each of the contacts listed above have the authority to direct and stop work in response to environmental emergencies. Emergency contact details for the Project are kept up to date and available on the Project website. Contact details are:

- Phone – 1800 283 550
- Email – macintyre@acciona.com

10.2. PROCEDURES FOR MANAGING ENVIRONMENTAL INCIDENTS

All project employees and contractor personnel must act in accordance with this MMP, and:

- Notify their supervisor immediately of any MNES incidents or emergencies; and
- Assist in MNES incident investigations as required.

10.3. INCIDENT INVESTIGATION, NON-CONFORMANCE AND CORRECTIVE ACTIONS

An MNES incident is defined as a set of circumstances during or as a consequence of which there is or is likely to be significant harm to MNES. This includes a failure to:

- Comply with environment obligations defined in this MMP and/or associated environmental management documents; or
- Comply with environmental legislation / permitting or other requirements that relate to MNES.

Any member of the Project team can identify an MNES incident and is obligated to report it. Corrective/preventative actions and improvement opportunities will be entered into the Project Incident Reporting database and include detail of the issue, action required and timing and responsibilities. The record will be updated with date of close out and any necessary notes. The register will be reviewed regularly to ensure actions are closed out as required.

An MNES non-conformance is defined as a failure to:

- Meet the environment obligations defined in this MMP and/or associated environmental management documents; and
- Comply with environmental legislation or other requirements that relate to MNES.

A potential or actual MNES non-conformance is detected through inspections, incidents, audits and any complaints. Any member of the project team can raise an MNES non-conformance or corrective action. For each non-conformance identified a corrective/preventative action (or actions) must be implemented. Additionally, any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities can also result in the implementation of corrective/preventative actions.

Non-conforming activities will be stopped by the project team or any site personnel and reported to regulatory bodies (where relevant) and Project stakeholders as required. In such circumstances a non-

conformance report must be prepared. MNES incidents and non-conformances relating to MNES will be issued to the DCCEEW within an agreed timeframe.

11. RISK ASSESSMENT, PERFORMANCE CRITERIA AND CORRECTIVE ACTIONS

This MMP has considered the risks that may inhibit achieving the completion criteria for the rehabilitation sites, including risks outside the approval holder's control. The risks have been assessed using the template supplied by DCCEEW. This MMP and risk analysis includes management triggers and corrective actions to be implemented to manage non-achievement of the performance indicators for MNES species only.

The Environmental Risk for each potentially affected environmental MNES has been evaluated as per criteria shown in **Table 11.1**. This risk assessment covers the construction and operation of the Macintyre wind farm with decommissioning excluded from this document however, dedicated decommissioning plans in accordance with the standards of the day.

Table 11.1 Risk analysis matrix (DAWE 2021)

RISK MATRIXI	
Likelihood (L): A qualitative measure of likelihood how likely is it that this event/circumstances will occur both before and after management activities are implemented	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Consequence (C): Qualitative measure of what will be the consequence/result if the issue does occur	
Minor	Minor incident of environmental damage that can be reversed (*e.g. short-term delays to achieving strategy objectives, implementing low-cost, well-characterised corrective actions*)
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts (*e.g. short-term delays to achieving strategy objectives, implementing well-characterised, high cost/effort corrective actions*)
High	Substantial instances of environmental damage that could be reversed with intensive efforts (*e.g. medium-long term delays to achieving objectives, implementing uncertain, high-cost/effort corrective actions*)
Major	Major loss of environmental amenity and real danger of continuing (*e.g. strategy objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies*)
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage (*e.g. strategy objectives are unable to be achieved, with no evidenced mitigation strategies*)
Final Risk Rating (R): A function of multiplying Likelihood (L) and Consequence (C)	

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

	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Table 11.2 Risk analysis table to MNES

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
All.	All phases	Use of temporary construction fencing.	Barrier effects and restriction of movement, injury due to interaction with fences.	Possible	Moderate	Medium	▪ All fencing used on the Project, within Grey-headed flying-fox habitat, will be installed without barbed wire on the top strand to minimise incidence of Grey-headed flying-fox entanglement - excepting substations which may require such fencing for security reasons. ▪ All temporary fencing will be removed after works (when no longer required).	Unlikely	Minor	Low
Vehicle activity (Driving, etc.).	All phases	Vehicle strike with MNES.	Death or injury to MNES species.	Highly likely	Moderate	High	▪ All vehicles / plant will be restricted to approved clearing areas and designated access tracks. ▪ Vehicles to be restricted to 60 km/hr along access tracks within areas identified as habitat for Squatter pigeon. ▪ Speed Limits signposted and enforced within critical habitat for MNES species. ▪ Warning signs alerting drivers of Squatter pigeons will be erected on tracks that intersect locations where Squatter pigeon has been confirmed present. ▪ Squatter pigeon and Koala awareness to be included in all worker inductions. ▪ A register of Squatter pigeon sightings will be maintained to identify areas that have a high risk of collision and inform signage. ▪ In the event that a conservation significant species is injured due to vehicle strike, the fauna spotter catcher will be notified and the individual/s are to be transported to	Possible	Moderate	Medium

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
							one of the pre-arranged veterinary resources as soon as possible.			
		Generation of dust and particulate pollution.	Nuisance to MNES species.	Highly likely	Moderate	High	▪ All vehicles / plant will be restricted to approved clearing areas and designated access tracks. ▪ Dust monitoring will be undertaken. ▪ Dust suppression (e.g., watering or polymer application) will be carried out on internal unsealed access roads and other disturbed areas to limit generation of dust.	Unlikely	Moderate	Low
Operation of vehicles and plant equipment.	All phases	Generation of Noise	Nuisance to MNES species.	Highly likely	Minor	Medium	▪ Plant and equipment will be maintained in good working order and serviced regularly in accordance with manufacturer requirements. ▪ Equipment fitted with manufacture installed noise control devices will not be altered. ▪ When not in use, vehicles and machinery will be turned off.	Likely	Minor	Low
		Mechanical failure resulting in chemical release e.g., burst hydraulic hose.	Harm to MNES species.	Possible	Moderate	Medium	▪ Plant and equipment will be maintained in good working order and serviced regularly in accordance with manufacturer requirements. ▪ Spill kits will be located on site and positioned proximity to locations containing dangerous goods. Spill kits will contain cleaning materials and absorbents. ▪ Emergency response protocols and procedures will be developed for implementation in the event of a chemical spill.	Rare	Minor	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
		Introduction of weeds, pests and / or disease.	Displacement of MNES species, alterations to available habitat and food sources, increased predation due to the introduction of feral animals & introduction of pathogens.	Highly likely	Major	Severe	▪ All vehicles and machinery will be cleaned prior to entering site to prevent the introduction and/or spread of weed material. ▪ A weed and pest fauna register will be maintained which records sightings or evidence of pest animals or an increase in weeds during construction. ▪ Any new restricted weeds and pests identified within high value MNES habitat areas will be treated.	Unlikely	Moderate	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
Chemical storage and handling.	All phases	Point source pollutants release to the environment (Spills etc.).	Localised contamination causing harm to MNES.	Possible	High	Medium	▪ Dangerous goods will be stored in a designated, secure, bunded area away from waterways to minimise the potential for spill. ▪ Chemicals and fuels will be stored and handled as per the requirements of the MSDS (Material Safety Data Sheet). ▪ Storage of fuels, chemicals, wastes and other potentially environmentally hazardous substances will be bunded or otherwise contained areas away from waterways. ▪ Refuelling and transfer operations will be undertaken at least 50m from waterways and retained high value MNES habitat as outlined in **Figure 6.1** and**,** in addition, will require contingency spill kits on hand. ▪ Safe handling techniques will be employed during refuelling, such as using pumps, funnels or syphons to prevent spillage. ▪ Spill kits will be located on site and positioned proximity to locations containing dangerous goods. Spill kits will contain cleaning materials and absorbents. ▪ Emergency response protocols and procedures will be developed for implementation in the event of a chemical spill. ▪ Spills will be isolated, stopped and contained and will be cleaned up utilising onsite spill kits. ▪ Waste from spills will be stored in an appropriate location and to be consigned to a contractor licensed to receive such wastes for disposal.	Rare	Moderate	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
							▪ Relevant Project personnel will be trained in chemical handling, storage and spill response. ▪ Chemical spills will be reported.			
Provision of ablutions.	All phases	Release of sewerage waste.	Localised contamination causing harm to MNES.	Possible	High	Medium	▪ Sewerage will be managed by a septic system and be removed off-site by a certified contractor, or at in-ground septic system with treated liquid influent through ground bio-irrigation (or equivalent) will be installed.	Rare	Moderate	Low

Vegetation clearing.	Construction phase	Physical disturbance to MNES.	Death or injury to identified MNES.	Highly likely	High	High	▪ Pre-clearance surveys of the area to be cleared will be undertaken by a suitably qualified ecologist / fauna spotter-catcher prior to commencement of vegetation works within MNES habitat. ▪ The locations of all potential denning trees will be marked. ▪ All clearing within MNES habitat will be supervised by suitably qualified and experienced fauna spotter-catchers. ▪ Employment of sequential clearing practices and use of suitably qualified koala spotters in accordance with the EPBC referral guidelines for the endangered koala (DotE 2014b) for reducing impact on koalas. ▪ Sequential clearing will be undertaken towards areas of refugial habitat and maintaining trees to allow movement of animals to refuge areas outside the clearing footprint. ▪ Hollow habitat (both within trees and logs) will be searched by a qualified fauna spotter catcher prior to clearing and resident fauna relocated to the nearest suitable, safe habitat outside the clearing footprint. ▪ Fauna (i.e., greater gliders and other) will be encouraged to leave hollows of their own accord through tree tapping, use of spotlights and other measures implemented by experienced fauna spotter-catchers. ▪ Trees will be dismantled in sections if fauna are / or are potentially present, under the direction of trained and experienced fauna spotter-catchers and experienced clearing crews. ▪ Trees will be felled immediately after removing wildlife to prevent animals from returning to hollows. ▪ Injured MNES fauna will be taken to a nominated suitably qualified wildlife carer. ▪ Fauna found during clearing that are in good health, or with minor injury but otherwise alert (assessed by fauna	Possible	Moderate	Medium

spotter catcher), will be relocated to an appropriate nearby habitat area, outside of the construction footprint.

- The relocation of fauna will be undertaken by the fauna spotter catcher using appropriate handling and storage protocols.
- The assessment of suitable receiving habitat will only be undertaken by the fauna spotter catcher and will consider the extent of the vegetation patch, presence of critical habitat requirements and habitat connectivity.
- All nocturnal wildlife removed from trees during clearing will be housed in appropriate temporary holding facilities by experienced spotter-catchers and released at dusk into an area of nearby habitat located outside the Project footprint.
- Areas of known habitat (both foraging and breeding habitat) for the squatter pigeon are to be flushed immediately prior to clearing (i.e., spotter catcher to walk in front of clearing machinery).

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
		Accidental removal of *Macrozamia conferta*.	Loss of individual plants.	Likely	High	High	▪ Pre-clearance surveys will be conducted across the Project disturbance footprint. ▪ *M. conferta* will not be cleared without appropriate permits in place for their removal. ▪ Pre-clearing inspection report to be prepared prior to clearing works. ▪ Translocation plans will be implemented for individuals of *M. conferta* that require removal.	Unlikely	High	Medium
		Soil disturbance.	Sedimentation of waterways and associated ecological impacts.	Likely	Moderate	Moderate	▪ Clearing and topsoil scraping will be staged. ▪ Delays between clearing and topsoil scraping and construction will be reduced where practicable. ▪ The clearing phase will minimise encroachment on sensitive areas, such as riparian vegetation, waterways and any mapped regional ecosystems. ▪ Any cleared vegetation will be mulched and/or retained for use, to provide erosion control on cleared slope batters or used as topsoil bunds for clean water diversion. ▪ Any mulch that is generated from the clearing activities will be used as ground cover. ▪ Cleared vegetation and scraped soil is not to be pushed up against trees, stored against fence lines or within 50 metres (m) of waterways.	Unlikely	Moderate	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
Civil / Earthworks – pads, tracks, foundations (excavation and pouring).	Construction Phase	Physical disturbance.	Death or harm to MNES individuals.	Likely	Moderate	Medium	▪ Pre-clearance surveys are to assess the exclusion fencing requirements within high value MNES habitat. ▪ Where identified by pre-clearance surveys, exclusion fencing is to be established around cleared areas to prevent MNES fauna entering active work areas at these locations. ▪ Injured MNES fauna will be taken to a nominated suitably qualified wildlife carer. ▪ MNES fauna that enter work areas will be relocated by a fauna spotter catcher.	Possible	Minor	Low
		Introduction and / or spread of weeds and pest species.	Weed establishment causing MNES displacement / competition / harm.	Possible	High	Medium	▪ Pre-clearance surveys will confirm the presence of declared weed species (i.e., restricted and prohibited pest plants under the *Biosecurity Act 2014*) and Weeds of National Significance within the construction footprint and identify appropriate treatment methods. ▪ The Construction contractor will prepare a Weed Management Plan which addresses hygiene protocols and protocols for monitoring and management of weeds, to identify and respond to significant changes in weed distribution and density. ▪ Restricted matter occurring within the construction footprint will be treated or removed prior to the commencement of construction.	Unlikely	Moderate	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
		Dust.	Nuisance to MNES species.	Likely	Moderate	Medium	▪ Dust monitoring will be undertaken. ▪ Dust suppression (e.g., watering or polymer application) is to be carried out on disturbed areas to limit generation of dust. ▪ Temporary soil stockpiles will be covered, stabilised and/or moistened as required to prevent generation of dust particles.	Unlikely	Moderate	Low
		Soil erosion.	Sedimentation of waterways causing indirect MNES habitat impacts.	Highly likely	High	High	▪ ESCPs will be developed for the Project to International Erosion Control Association (IECA) 2008 standards. ▪ Weather conditions will be monitored. ▪ Construction must cease during adverse weather conditions that have the potential to significantly increase sedimentation. ▪ Exposed soil in high risk areas (i.e. waterways) will be stabilised with appropriate cover material. ▪ Onsite stockpiles will be located above potential flood extents, within close proximity to the Project, and covered, if the stockpiled material could be dispersed by rain or wind. ▪ Wherever possible use existing tracks and disturbed areas when crossing waterways. ▪ ESC training will be provided to relevant Project personnel.	Possible	High	Medium

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
Installation and use of construction infrastructure – fences, compounds, buildings etc.	Construction Phase	Generation of additional Light sources.	Disruption of normal behaviour of nocturnal and crepuscular species.	Likely	Moderate	Medium	▪ Site lighting will be kept to the minimum needed for safety. ▪ Lighting will be directed to face the construction area (away from sensitive fauna habitat) where possible and lighting shields or baffles will be used where required to limit light spill beyond the construction area / site boundary. ▪ Wherever practicable, construction activities will be limited to daylight hours to reduce the need for lighting and resultant light spill into adjacent habitat and to reduce noise and vibration impacts on nocturnal fauna species.	Unlikely	Moderate	Low
Instream works – track crossings.	Construction Phase	Sedimentation, reduction of water quality and removal of riparian vegetation.	Ecological impacts associated with reduction in light availability, altered water chemistry including (PH, Dissolved oxygen, and electrical conductivity) and associated riparian habitat loss.	Likely	High	High	▪ ESCPs for instream works will be developed in line with IECA 2008 standards. ▪ Wherever practicable, watercourse crossings will be located at established crossing points on existing access tracks. ▪ Exposed channel surfaces (i.e., watercourse banks and beds) in areas of High Value MNES will be rehabilitated as soon as practicable to minimise the potential environmental risk and in accordance with Table 4.4.7 of the IECA Manual. ▪ Any proposed waterway crossings will be built, where possible, during the dry season to minimise impacts to water quality and water movement.	Possible	Moderate	Medium

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
Hot works (all).	All phases	Provision of ignition source.	Bushfire causing harm to MNES and loss of MNES habitat.	Likely	Major	High	▪ A bushfire management plan has been developed for the Project which addresses fire prevention and response. ▪ Hot works will be managed under a permit to work system. ▪ Firefighting equipment and water supply will be maintained onsite. ▪ Fire extinguishers will be available in all work areas. ▪ Fire safety will be addressed in site inductions. ▪ Access tracks will be maintained to provide access for emergency services. ▪ Project activities will abide by local fire restrictions.	Rare	Major	Medium
Installation of windfarm infrastructure – turbines, powerlines etc.	Construction phase	No additional aspects identified.								
Existence of Static project infrastructure.	Operational phase	Use of temporary construction fencing.	Barrier effects and restriction of movement, injury due to interaction with fences.	Possible	Moderate	Medium	▪ All fencing used within high value MNES habitat on the Project will be installed without barbed wire on the top strand to minimise incidence of flying-fox entanglement - excepting substations which may require such fencing for security reasons. ▪ All temporary fencing will be removed after works (when no longer required).	Unlikely	Minor	Low
		Bird of Bat Strike by rotor	Injury or death due to	Possible	Moderate	Medium	▪ Post construction monitoring to identify additional measures that may be needed to mitigate collision risks	Unlikely	Minor	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
		or guideline (turbine infrastructure).	interaction with turbine infrastructure.				during site operations as per Bird and Bat Adaptive Management Plan. ▪ High visibility devices (i.e., visibility balls) are proposed to be used to increase the daytime visibility of guy wires on the 120 m masts.			
		Flight path obstructions and entanglement (33kw power line).	Barrier effects and restriction of movement, injury or death due to interaction with power lines.	Possible	Moderate	Medium	▪ Post construction monitoring to identify additional measures that may be needed to mitigate collision risks during site operations as per Bird and Bat Adaptive Management Plan.	Unlikely	Minor	Low
		Generation of additional Light sources.	Disruption of normal behaviour of nocturnal and crepuscular species.	Likely	Moderate	Medium	▪ Site lighting will be kept to the minimum needed for safety. ▪ Lighting will be directed to face the operational area (away from sensitive fauna habitat) where possible and lighting shields or baffles will be used where required to limit light spill beyond the operational area / site boundary. ▪ Wherever practicable, operational (i.e., maintenance) activities will be limited to daylight hours to reduce the need for lighting and resultant light spill into adjacent habitat and to reduce noise and vibration impacts on nocturnal fauna species. ▪ No lighting is proposed at the wind farm (during operations) context - mitigation for collision by birds and bats and impacts to denning habitat.	Unlikely	Moderate	Low

ACTIVITY	PHASE	ASPECT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK SCORE	MITIGATION / MANAGEMENT MEASURES	LIKELIHOOD	CONSEQUENCE	RISK SCORE
							▪ Minimising external lighting, there should only be low levels of lighting on the Project site during operation, where allowed. ▪ Avoid or minimise permanent lighting on the turbine entrance, buildings and sub-stations to avoid light spillage and visibility from above.			

Table 11.3 Performance criteria and corrective actions

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
All.	Use of temporary construction fencing.	Barrier effects and restriction of movement, injury due to interaction with fences.	▪ All fencing used on the Project will be installed without barbed wire on the top strand to minimise incidence of flying-fox entanglement - excepting substations which may require such fencing for security reasons. ▪ All temporary fencing will be removed after works (when no longer required).	▪ Fences intact and access tracks serviceable each monitoring event.	▪ Fences damaged or access tracks compromised.	▪ Repair damaged fences and access tracks.	▪ Fence checks & Incident reporting.
Vehicle activity (Driving, etc.)	Vehicle strike with fauna or flora.	Death or injury to identified MNES species.	▪ All vehicles / plant will be restricted to approved clearing areas and designated access tracks. ▪ Vehicles to be restricted to 60 km/hr along access tracks within areas identified as habitat for Squatter pigeon. ▪ Speed Limits signposted and enforced within critical habitat for MNES species. ▪ Warning signs alerting drivers of Squatter pigeons and Koalas will be erected on tracks that intersect locations where the squatter pigeon and/ or Koala has been confirmed present and in other areas that may support the	▪ No incidents or near misses involving MNES species and vehicles.	▪ Vehicle strike with MNES species.	▪ Review of vehicle management plan on site and update signage and or behaviour as required.	▪ Road / track checks and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			species where risk of collision is high. ▪ Squatter pigeon and Koala awareness to be included in all worker inductions. ▪ A register of Squatter pigeon and Koala sightings will be maintained to identify areas that have a high risk of collision. ▪ In the event that a conservation significant species is injured due to vehicle strike, the fauna spotter catcher will be notified and the individual/s are to be transported to one of the pre-arranged veterinary resources as soon as possible.				
	Generation of dust and particulate pollution.	Nuisance to MNES species.	▪ All vehicles / plant will be restricted to approved clearing areas and designated access tracks. ▪ Site traffic will be suitably controlled to minimise dust generation. ▪ Dust monitoring will be undertaken. ▪ Dust suppression (e.g., watering or polymer application) will be carried out on internal unsealed	▪ Dust kept at acceptable levels.	▪ Incident identified as being the result of dust particulate pollution.	▪ If possible suppress and stabilise dust generating sources.	▪ Daily Dust monitoring and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			access roads and other disturbed areas to limit generation of dust. ▪ All vehicles carrying loads with the potential to create dust will cover their loads. ▪ Where exposed soils cannot be stabilised, water tankers will be deployed to suppress dust.				
Operation of vehicles and plant equipment.	Emissions to air (excludes dust).	Nuisance to MNES species.	▪ Vehicles, plant and equipment will be regularly serviced and comply with Australian Design Standards. ▪ Where possible, electric generators will be utilised instead of diesel generators. ▪ All machinery and equipment will have proprietary emission control equipment fitted and in working order. ▪ When not in use, vehicles and machinery will be turned off (also to mitigate noise impacts on fauna).	▪ Emissions kept at acceptable levels.	▪ Incident identified as being the result of emissions.	▪ If possible identify sources of emissions and apply appropriate mitigation as required.	▪ Daily Emissions monitoring and incident reporting.
	Generation of Noise.	Nuisance to MNES species.	▪ Plant and equipment will be maintained in good working order and serviced regularly in accordance with manufacturer requirements.	▪ Noise kept at acceptable levels.	▪ Excessive noise.	▪ Identify source and remedy as required (e.g., service vehicle).	▪ Excessive noise identified on site and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			▪ Equipment fitted with manufacture installed noise control devices will not be altered. ▪ When not in use, vehicles and machinery will be turned off (also to mitigate noise impacts on fauna).				
	Mechanical failure resulting in chemical release e.g., burst hydraulic hose.	Harm to MNES species.	▪ Plant and equipment will be maintained in good working order and serviced regularly in accordance with manufacturer requirements. ▪ Spill kits will be located on site and positioned proximity to locations containing dangerous goods. Spill kits will contain cleaning materials and absorbents. ▪ Emergency response protocols and procedures will be developed for implementation in the event of a chemical spill. ▪ Spills will be isolated, stopped and contained and will be cleaned up utilising onsite spill kits. ▪ Waste from spills will be placed in a sealed container, suitable to hold such materials and waste to be consigned to a contractor licensed to receive such wastes for disposal.	▪ No release of chemicals into the environment.	▪ Mechanical failure resulting in chemical release reported or identified.	▪ Identify point of release and remedy as outlined in chemical MSDS, if leak cannot be repaired remove offending equipment from operation until repaired.	▪ Site inspections and incident reporting daily plant checks.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
	Introduction of weeds, pests and / or disease.	Displacement of MNES species, alterations to available habitat and food sources, increased predation due to the introduction of feral animals & introduction of pathogens.	▪ All vehicles and machinery will be cleaned prior to entering site to prevent the introduction and/or spread of weed material. ▪ A weed and pest fauna register will be maintained which records sightings or evidence of pest animals or an increase in weeds during construction. ▪ Any new weed infestation will be treated at the earliest stage while small and manageable.	▪ No new restricted weeds or WoNS weeds introduced to the project site; or ▪ No evidence of pest animals within high value MNES habitat areas.	▪ New restricted weeds, or ▪ Evidence of pest animals or fence damage in high value MNES habitat areas.	▪ An investigation will be undertaken to determine the cause of increased weed cover. This will involve reviewing adherence to the Weed and Pest Management Plan and an assessment of the distribution of weeds within the Project area in relation to baseline to determine the cause of the incursions. ▪ Increase frequency and/or duration of weed control efforts.	▪ Ongoing weed and pest monitoring and assessment within high value MNES habitat areas.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
						▪ Investigate and/or implement alternate weed management control actions. ▪ Amend weed hygiene practices.	
Chemical storage and handling.	Point source pollutants release to the environment (Spills etc.).	Localised contamination causing harm to MNES.	▪ Dangerous goods will be stored in a designated, secure, bunded area away from waterways to minimise the potential for spill. ▪ Chemicals and fuels will be stored and handled as per the requirements of the MSDS. ▪ Storage of fuels, chemicals, wastes and other potentially environmentally hazardous substances will be bunded or otherwise contained areas away from waterways. ▪ Refuelling and transfer operations will be undertaken at least 50 m from waterways with contingency spill kits on hand. ▪ Safe handling techniques will be employed during refuelling, such as using pumps, funnels or syphons to prevent spillage.	▪ No point source pollutants released into the natural environment.	▪ Point source pollutant reported or identified within the project area.	▪ Identify point of release and remedy as outlined in chemical MSDS.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			▪ Spill kits will be located on site and positioned proximity to locations containing dangerous goods. Spill kits will contain cleaning materials and absorbents. ▪ Emergency response protocols and procedures will be developed for implementation in the event of a chemical spill. ▪ Spills will be isolated, stopped and contained and will be cleaned up utilising onsite spill kits. ▪ Waste from spills will be placed in a sealed container, suitable to hold such materials and waste to be consigned to a contractor licensed to receive such wastes for disposal. ▪ Relevant Project personnel will be trained in chemical handling, storage and spill response. ▪ All spills will be reported.				

Vegetation clearing.	Physical disturbance to MNES.	Death or injury to identified MNES.	▪ Pre-clearance surveys of the area to be cleared will be undertaken by a suitably qualified ecologist / fauna spotter catcher prior to commencement of vegetation works within MNES habitat. ▪ The locations of all potential denning trees will be marked. ▪ All clearing within MNES habitat will be supervised by suitably qualified and experienced fauna spotter-catchers. ▪ Employment of sequential clearing practices and use of suitably qualified koala spotters in accordance with the EPBC referral guidelines for the endangered koala (DotE 2014b) for reducing impact on koalas including. ▪ Sequential clearing will be undertaken towards areas of refugial habitat and maintaining trees to allow movement of animals to refuge areas outside the clearing footprint. ▪ Hollow habitat (both within trees and logs) will be searched by a qualified fauna spotter catcher prior to clearing and resident fauna relocated to the nearest suitable, safe habitat outside the clearing footprint.	▪ No incidents involving Death or injury to identified MNES species during clearing works.	▪ Death or injury to identified MNES fauna species during clearing.	▪ Stop clearing work and identify cause, conduct additional pre-clearance surveys as needed.	▪ Site inspections incident reporting.

			▪ Fauna (i.e., greater gliders and other) will be encouraged to leave hollows of their own accord through tree tapping, use of spotlights and other measures implemented by experienced fauna spotter-catchers. ▪ Trees will be dismantled in sections if fauna are / or are potentially present, under the direction of trained and experienced fauna spotter-catchers and experienced clearing crews. ▪ Trees will be felled immediately after removing wildlife to prevent animals from returning to hollows. ▪ Hollows that occur within the Project footprint that do not contain fauna will be removed at the early stages of clearing to avoid fauna relocating to other hollows in the clearing footprint. ▪ Injured MNES fauna will be taken to a nominated suitably qualified wildlife carer. ▪ Fauna found during clearing that are in good health, or with minor injury but otherwise alert (assessed by fauna spotter catcher), will be relocated to an appropriate nearby habitat area, outside of the construction footprint.				

			▪ The relocation of fauna will be undertaken by the fauna spotter catcher using appropriate handling and storage protocols. ▪ The assessment of suitable receiving habitat will only be undertaken by the fauna spotter catcher and will consider the extent of the vegetation patch, presence of critical habitat requirements and habitat connectivity. ▪ All nocturnal wildlife removed from trees during clearing will be housed in appropriate temporary holding facilities by experienced fauna spotter-catchers and released at dusk into an area of nearby habitat located outside the Project footprint.				

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
	Accidental removal of *Macrozamia conferta.*	Loss of individual plants.	▪ Pre-clearance surveys will be conducted within all high-risk flora survey trigger areas or where M*acrozamia conferta* individuals are known to occur within the Project footprint. ▪ M. conferta will not be cleared without appropriate permits in place for their removal. ▪ *A Protected Plant Impact Management Plan and protected plants permit will be obtained for any clearing within 100 m of confirmed *M. conferta* locations. ▪ Pre-clearing inspection report to be prepared prior to clearing works. ▪ Translocation plans will be implemented for individuals of *M. conferta* that require removal.	▪ No accidental removal of *M. conferta.*	▪ Individuals of *M. conferta* removed during operational works.	▪ Review of vegetation management plan and undertake preclearance surveys within clearance area as needed.	▪ Site inspections incident reporting.
	Soil disturbance.	Sedimentation of waterways and associated ecological impacts.	▪ Vegetation and topsoil clearing will be staged and undertaken, as soon as practicable prior to construction works, to minimise exposure. ▪ If vegetation clearing is required to be carried out well in advance of earthworks, the clearing contractor will aim to remove only	▪ Minimal erosion on site.	▪ Significant areas of erosion identified on site as a result of construction activities.	▪ Stabilise are when possible.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			woody vegetation, leaving the understory growth. ▪ The clearing phase will minimise encroachment on sensitive areas, such as riparian vegetation, waterways and any mapped regional ecosystems. ▪ Any cleared vegetation will be mulched and/or retained for use, to provide erosion control on cleared slope batters or used as topsoil bunds for clean water diversion. ▪ Any mulch that is generated from the clearing activities will be used as temporary ground cover. ▪ Vegetation clearing adjacent to waterways will be minimised, where possible, and delayed until absolutely necessary. ▪ Grubbing and removal of ground cover and understory will be delayed until immediately prior to construction works occurring within that particular stage of development.				
Civil / Earthworks – pads, tracks, foundations	Physical disturbance.	Death or harm to MNES individuals	▪ Exclusion zone fencing and other barriers will be erected prior to construction around identified sensitive areas and patches of	▪ No incidents involving Death or injury to identified MNES fauna	▪ Death or injury to identified MNES fauna species during works.	▪ Stop work and identify cause, conduct additional pre-	▪ Site inspections incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
(excavation and pouring).		(e.g., squatter pigeon).	vegetation that will be retained. Exclusion fencing will remain throughout the duration of construction to minimise potential impacts on MNES species. ▪ Any displaced young of MNES species found during the Project will be delivered to a pre-determined and suitably qualified wildlife carer. The Contract Administrator (ACCIONA) and DES are to be notified. ▪ Injured MNES fauna will be taken to a nominated suitably qualified wildlife carer. ▪ Fauna spotter catchers will be available onsite to relocate MNES fauna that enter work areas.	species during works.		clearance surveys as needed.	
	Introduction and / or spread of weeds and pest species.	Weed establishment causing MNES displacement / competition / harm.	▪ Pre-construction weed mapping will be undertaken. ▪ Resources sought from outside of the project areas other than those obtained from a quarry, (e.g., fill for access tracks) will be required to hold weed free declarations. ▪ Construction contractor (ACCIONA) will prepare a Weed Management Plan which addresses hygiene protocols restricting the movement of	▪ No new restricted or WoNS weeds introduced to high value MNES habitat areas.	▪ New restricted or WoNS introduced to high value MNES habitat areas.	▪ Review weed hygiene protocols if required. Identify and implement appropriate weed control methods as necessary.	▪ Ongoing weed monitoring and assessment.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			vegetation and soil between impacted areas and areas of significantly lower weed infestation and protocols for monitoring and management of weeds to identify and appropriately respond to significant changes in weed distribution and density. ▪ Any new weed infestation will be treated at the earliest stage while small and manageable. ▪ Restricted matter occurring within the construction footprint will be treated or removed prior to the commencement of construction. ▪ If chemical treatment is required, chemicals may be used only in accordance with manufacturer's specifications. ▪ Weed control measures will be followed to minimise impacts on native fauna (e.g., use of aquatic and fauna friendly chemicals). ▪ Weed outbreaks will be controlled and managed, however, herbicide will not to be sprayed near creeks or dams or within two days of rain.				

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
	Dust.	Nuisance to MNES species.	▪ Dust monitoring will be undertaken. ▪ Dust suppression (e.g., watering or polymer application) is to be carried out on disturbed areas to limit generation of dust. ▪ All temporary soil stockpiles will be covered, stabilised and/or moistened as required to prevent generation of dust particles. ▪ Stockpiles that are anticipated to be present in the medium and long term are to be covered to minimise dust emissions. ▪ All vehicles carrying loads with the potential to create dust will cover their loads when on public roads. ▪ Where exposed soils cannot be stabilised, water tankers will be deployed to suppress dust.	▪ Dust kept at acceptable levels	▪ Incident identified as being the result of dust particulate pollution	▪ If possible suppress and stabilise dust generating sources	▪ Daily Dust monitoring and incident reporting.
	Soil erosion.	Sedimentation of waterways causing ecological impacts.	▪ ESCPs will be developed for the Project to International Erosion Control Association (IECA) 2008 standards. ▪ Weather conditions will be monitored and temporary controls will be established during extreme weather events.	▪ Minimal erosion on site.	▪ Significant areas of erosion identified on site as a result of construction activities.	▪ Stabilise are when possible.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			▪ The works schedule will consider the expected and predicted rainfall forecast for the region. ▪ The project site will be appropriately prepared for both likely and unlikely wet weather conditions. ▪ The Contractor will consider developing a wet weather preparedness plan to establish appropriate erosion and sediment control measures and actions that may be implemented prior to a predicted wet weather event. ▪ Areas subject to ground disturbance will be stabilised as soon as practicable following disturbance. ▪ Progressive/sequential stabilisation and rehabilitation of disturbed areas (including temporary laydown and storage areas) will be undertaken commensurate to erosion risk in line with IECA BPM 2008 T4.4.7. ▪ ESC training will be provided to relevant Project personnel. ▪ ESC monitoring will be undertaken by a suitable qualified person at the intervals described within IECA 2008.				

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
Installation and use of construction infrastructure – fences, compounds, buildings etc.	Generation of additional Light sources.	Disruption of normal behaviour of nocturnal and crepuscular species.	▪ Site lighting will be kept to the minimum needed for safety. ▪ Lighting will be directed to face the construction area (away from sensitive fauna habitat) where possible and lighting shields or baffles will be used where required to limit light spill beyond the construction area / site boundary.	▪ Light levels maintained within reasonable levels as to not interfere with nocturnal and crepuscular species.	▪ Excessive light generated on site.	▪ Review of lighting requirements and / or night work commitments and adjust as needed.	▪ Site inspections and incident reporting.
Instream works – track crossings.	Sedimentation, reduction of water quality and removal of riparian vegetation.	Ecological impacts associated with reduction in light availability, altered water chemistry including (PH, Dissolved oxygen, and electrical conductivity) and associated riparian habitat loss.	▪ ESCPs for instream works will be developed in line with IECA 2008 standards. ▪ Wherever practicable, watercourse crossings will be located at established crossing points on existing access tracks. ▪ Duration of in-stream works will be minimised wherever practicable. ▪ Exposed channel surfaces (i.e., watercourse banks and beds) will be rehabilitated as soon as practicable to minimise the potential environmental risk and in accordance with Table 4.4.7 of the IECA Manual. ▪ Any proposed waterway crossings will be built, where possible, during the dry season to minimise	▪ No sedimentation of waterways on site.	▪ Release of sediment into waterways on site.	▪ Identify cause of release and review ESCP and implement appropriate management actions.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			impacts to water quality and water movement.				
Hot works (all).	Provision of ignition source.	Bushfire causing harm to MNES and loss of MNES habitat.	▪ Bushfire management plan to be implemented during construction. ▪ Hot works will be managed under a hot works permit system (BMP). ▪ Hot works, will be monitored for ignitions and only performed if fire management controls are available and are in place. ▪ Hot works will be undertaken away from flammable material. ▪ Appropriate firefighting equipment will be kept on hand. ▪ Flashback arrestors will be fitted to oxygen/acetylene equipment. ▪ Fire extinguishers will be made available in all work areas and water carts/water tanks will be located adjacent construction work areas during the fire danger season, i.e., from late winter until summer when significant rainfall occurs. ▪ Roads and access tracks will be regularly maintained to allow	▪ No incidents or near misses relating to fire on site.	▪ Reported or identified incident or near misses relating to fire on site.	▪ Stop work and identity cause. Review of BMP and implement appropriate management actions.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			timely response by fire fighting vehicles. ▪ Works will comply with local council fire prevention measures.				
Installation of windfarm infrastructure – turbines, powerlines etc.	▪ No Additional Risks Identified.						
Existence of static project infrastructure.	Use of temporary construction fencing.	Barrier effects and restriction of movement, injury due to interaction with fences.	▪ All fencing used on the Project will be installed without barbed wire on the top strand to minimise incidence of flying-fox entanglement - excepting substations which may require such fencing for security reasons. ▪ All temporary fencing will be removed after works (when no longer required).	▪ Fences intact and access tracks serviceable each monitoring event.	▪ Fences damaged or access tracks compromised.	▪ Repair damaged fences and access tracks.	▪ Fence checks & Incident reporting.
	Bird strike.		▪ Post construction monitoring to identify additional measures that may be needed to mitigate collision risks during site operations as per Bird and Bat Adaptive Management Plan.	▪ No reported incidents involving MNES species.	▪ MNES species identified as being killed or injured from interacting with static project infrastructure (bird strike).	▪ Review Bird and Bat monitoring plan and implement appropriate management actions.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
	Flight path obstructions (33kw power line).		▪ High visibility devices (i.e., visibility balls) are proposed to be used to increase the daytime visibility of guy wires on the 120 m masts.	▪ No reported incidents involving MNES species.	▪ MNES species identified as being killed or injured from interacting with static project infrastructure (bird strike).	▪ Review Bird and Bat monitoring plan and implement appropriate management actions.	▪ Site inspections and incident reporting.
	Generation of additional Light sources.	Disruption of normal behaviour of nocturnal and crepuscular species.	▪ Site lighting will be kept to the minimum needed for safety. ▪ Lighting will be directed to face the operational area (away from sensitive fauna habitat) where possible and lighting shields or baffles will be used where required to limit light spill beyond the operational area / site boundary. ▪ No lighting is proposed at the wind farm (during operations) context - mitigation for collision by birds and bats and impacts to denning habitat. ▪ Minimising external lighting, there should only be low levels of lighting on the Project site during operation, where allowed. ▪ Avoid or minimise permanent lighting on the turbine entrance, buildings and sub-stations to avoid	▪ Light levels maintained within reasonable levels as to not interfere with nocturnal and crepuscular species.	▪ Excessive light generated on site.	▪ Review of lighting requirements and / or night work commitments and adjust as needed.	▪ Site inspections and incident reporting.

ACTIVITY	ASPECT	IMPACT	MITIGATION / MANAGEMENT MEASURES	PERFORMANCE CRITERIA	MANAGEMENT TRIGGERS	CORRECTIVE ACTIONS	MONITORING MECHANISM
			light spillage and visibility from above.				

12. REFERENCES

DAF (Department of Agriculture and Fisheries) (2020a). Feral pig Sus scrofa, Department of Agriculture and Fisheries, viewed 20 January 2022from https://www.daf.qld.gov.au/__data/assets/pdf_file/0005/70925/feral-pig.pdf

DAF (Department of Agriculture and Fisheries) (2020b). European red fox Vulpes vulpes, Department of Agriculture and Fisheries, viewed 20 January 2022from https://www.daf.qld.gov.au/__data/assets/pdf_file/0019/73810/european-red-fox.pdf

DAF (Department of Agriculture and Fisheries) (2020c). Feral cat Felis catus, Department of Agriculture and Fisheries, viewed 20 January 2022 from https://www.daf.qld.gov.au/__data/assets/pdf_file/0004/61987/feral-cat.pdf

DAF (Department of Agriculture and Fisheries) (2020d). Wild dog Canis familaris, Department of Agriculture and Fisheries, viewed 20 January 2022from https://www.daf.qld.gov.au/__data/assets/pdf_file/0003/74487/wild-dog.pdf

DAWE (Department of Agriculture, Water and the Environment) (2021c), Species Profile and Threats Database Geophaps scripta scripta — Squatter Pigeon (southern), Department of Agriculture, Water and the Environment, Canberra. CC BY 4.0.

DEHP (Department of Environment and Heritage Protection) (2017). Guide to Determining Terrestrial Habitat Quality, Department of Environment and Heritage Protection, State of Queensland.

DAWE (Department of Agriculture, Water and the Environment) (2021e) Species Profile and Threats Database Petauroides volans — Greater Glider, Department of Agriculture, Water and the Environment, Canberra. CC BY 4.0.

DoE (Department of the Environment) (2014b) Background: Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomi, Commonwealth of Australia, 2014'.

DoE (Department of the Environment) (2016). National Recovery Plan for the regent honeyeater (Anthochaera phrygia). Commonwealth of Australia.

DoE (Department of the Environment) (2014a) EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). Commonwealth of Australia.

GHD. (2021). MacIntyre Wind Farm MNES (Preliminary Documentation) Assessment Report(EPBC 2020/8756) on behalf of ACCIONA Energy Australia Global Pty Ltd.

GHD. (2021). Overhead Transmission Line MNES (Preliminary Documentation) Assessment Report(EPBC 2020/8759) on behalf of ACCIONA Energy Australia Global Pty Ltd.

GHDb. (2021). MacIntyre Wind Farm and associated Overhead Transmission Line Vegetation and Fauna Management Plan on behalf of ACCIONA Energy Australia Global Pty Ltd.Hero, Jean-Marc & Hodgkison, Simon & Hazell, Donna (2004). Winners and Losers: The impacts of modifying natural landscapes on amphibian & reptile assemblages in eastern Australia.

Land and environmental consultants (2021) Bushfire Management Plan Macintrye Wind Farm on behalf of ACCIONA Energy Australia Global Pty Ltd.

Longcore, T. and Rich, C. (2004). Ecological light pollution. Frontiers in Ecology and the Environment, Vol 2(4), pp. 191-198.

Popper, A. and Hawkins, A. (2016). The effects of noise on aquatic life (Vol. 730). Springer Science and Business Media: New York, USA.

Queensland Terrestrial Vertebrate Fauna Survey Guidelines (EYRE et al. 2018)

Slabbekoorn, H., Bouton, N., van Opzeeland, I., Coers, A., ten Cate, C. and Popper, A.N. (2010). A noisy spring: the impact of globally rising underwater sound levels on fish. Trends in ecology and evolution, Vol 25(7), pp. 419-427.

Williams, BK & Brown, ED (2016). Technical challenges in the application of adaptive management, Biological Conservation, 195, 255–263.

Department of Agriculture, Water and Environment (DAWE). (2021). National Recovery Plan for the Grey-headed Flying-fox Pteropus poliocephalus.

Department of Environment (DAWE). (2016). National Recovery Plan for the Regent Honeyeater Anthochaera Phrygia

Department of the Environment and Energy (DAWE) (2019). Geophaps scripta scripta - Squatter Pigeon (southern). Species Profile and Threats Database. Australian Government, Canberra.

Department of the Environment and Energy (DAWE) (2014). EPBC Act referral guidelines for the vulnerable koala. Australian Government, Canberra.

Department of the Environment and Energy (DAWE). (2012). Approved Conservation Advice for Petauroides volans greater glider. Australian Government, Canberra

Department of Environment and Science (DES) (2017). Nature Conservation (Koala) Plan 2017. Queensland.

Department of the Environment (2016). Petauroides volans in Species Profile and Threats Database, Department of the Environment, Canberra.

Department of the Environment, Water, Heritage and the Arts (2008). Approved Conservation Advice for Macrozamia conferta. Canberra: Department of the Environment, Water, Heritage and the Arts.

Threatened Species Scientific Committee (2001). Commonwealth Listing Advice on Pteropus poliocephalus (Grey-headed Flying-fox).

Department of the Environment (2015). Conservation Advice Anthochaera phrygia regent honeyeater.

Threatened Species Scientific Committee (2015). Conservation Advice Geophaps scripta scripta squatter pigeon (southern). Canberra: Department of the Environment.

LEC. (2021). Bushfire Management Plan on behalf of ACCIONA Energy Australia Global Pty Ltd.

13. GLOSSARY

TERM	DEFINITION
ACCIONA	ACCIONA Energy Australia Global Pty Ltd
Attexo	Attexo Group Pty Ltd
Biosecurity Act	*Queensland Biosecurity Act 2014*
BMP	Bushfire management plan
DAWE	Department of Agriculture, Water and the Environment, now Department of Climate Change, Energy, the Environment and Water
DCCEEW	Department of Climate Change, Energy, the Environment and Water
Declared weeds	Weeds listed as restricted matters under the *Queensland Biosecurity Act 2014*
Environmental Incident	A set of circumstances during or as a consequence of which there is or is likely to be environmental harm
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESCP	Erosion and Sediment Control Plan
High value MNES habitat	Areas mapped in the MIWF MNES Assessment Report as; 'moderate and high value remnant woodland' habitat for Koala, 'breeding habitat' for Squatter pigeon, 'denning habitat' for Central greater glider, and 'high quality habitat' for Regent honeyeater. The locations of high value MNES habitat areas are shown on **Figure 6.1**.
Hot works	Hot work is a process that can be a source of ignition when flammable material is present or can be a fire hazard regardless of the presence of flammable material
HRSMP	High Risk Species Management Program
IECA	International Erosion Control Association
MMP	Matters of National Environmental Significance Management Plan
MNES	Matters of National Environmental Significance
RE	Regional Ecosystem
Rehabilitation Areas	High value MNES habitat and mapped waterways impacted by temporary infrastructure.
Rehabilitation	Rehabilitation will aim to create a stabilised landform to minimise erosion and sedimentation. Methods to achieve a stabilised landform may include reinstatement of available topsoil, mulching or seeding with pasture grasses.
Temporary Infrastructure	Batch plant, site office and camp and laydown areas not required for ongoing maintenance of turbines.
TPP	Translocation and Propagation Plan
Mapped waterways	High and Major risk waterways for waterway barrier works.
WoNS	Weeds of National Significance