acciona

Mortlake South Wind Farm

Environmental Management Plan

January, 2019

PLANNING AND ENVIRONMENT ACT 1987
PLANNING SCHEME MOYNE
PERMIT NO. 2008/0538/A
ENDORSED PLAN
SHEET 1 OF 154
SIGNED ..... FOR
MINISTER FOR PLANNING
DATE: 30/ 1 /2019

ENDORSED TO COMPLY
WITH CONDITION
16
OF PLANNING PERMIT
2008/0538/A

PROJECT:	Mortlake South Wind Farm
TITLE:	Environmental Management Plan
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Glossary

Term	Meaning
ACCIONA	ACCIONA Energy Australia Global Pty Ltd
CCMA	Corangamite Catchment Management Authority
CEMP	Construction Environmental Management Plan
CFA	Country Fire Authority
CHMP	Cultural Heritage Management Plan
Commission Date	For the purposes of this EMP, commissioning of the wind farm refers to the date one week after all turbines have been commissioned and the wind farm has commenced commercial operations.
Construction Phase	The construction phase includes all wind farm related activity after the commencement of construction, including commissioning activities, but before the commission date.
EMM	Environmental Mitigation Measure
EMP	Environmental Management Plan
GHCMA	Glenelg Hopkins Catchment Management Authority
HSE	Health Safety and Environment
JSA	Job Safety Analysis
MSC	Moyne Shire Council
MSDS	Material Safety Data Sheet
Operation Phase	The operations phase includes all wind farm related activity after the commission date.
TMP	Traffic Management Plan

PART A ENVIRONMENTAL MANAGEMENT FRAMEWORK

1. Introduction

1.1. Project Overview

The Mortlake South Wind Farm is a renewable energy facility that will be located in Western Victoria. The wind farm will consist of 35 wind turbines with a total nameplate capacity of 157.5MW of electrical generation. The turbines will be located to the south of Mortlake over 48 rural parcels.

The construction of the Mortlake South Wind Farm will be carried out by specialist contractors under ACCIONA's direct supervision.

1.2. Purpose of this Document

This EMP establishes the environmental management procedures and controls to be implemented by ACCIONA, its employees, construction contractors and associated sub-contractors during the construction, operation and decommissioning phases of the Mortlake South Wind Farm.

This EMP addresses Condition 16 of Planning Permit 2008/0538/A for the construction and operation of the Mortlake South Wind Farm.

The objectives of the EMP are to:

- Provide information about the key environmental risk factors associated with the project.
- Provide an overview of the environmental regulatory environment in which the project exists.
- Outline ACCIONA and contractor responsibilities for environmental management.
- Detail environmental management procedures and controls.
- Outline monitoring, audit and reporting requirements for environmental management.
- Provide a transparent and layered management structure from which further construction guidelines, environmental procedures and plans can be drawn.

1.3. Document Structure

The EMP is structured in three parts:

- **Part A** of this document contains background and supporting information such as the project description, environmental risk factors, approval and licensing requirements and the environmental management framework.
- **Part B** contains the environmental management procedures to be implemented during construction.
- **Part C** outlines the environmental management procedures to be implemented during the operation and decommissioning phases of the project.

The EMP will provide the framework from which contractors will prepare activity-specific CEMPs. Where necessary, each CEMP will be reviewed and endorsed by ACCIONA prior to that contractors work commencing to ensure that they comply with the principles that have been incorporated into this EMP.

2. Project Description

2.1. Locality

The Mortlake South Wind Farm is located approximately 40kms north-east of Warrnambool and approximately 4km south of Mortlake in Victoria, as shown in Figure 2.1-1. It is wholly within the Moyne Shire Council.

The land on which the proposed wind farm is located consists of privately owned properties, primarily used for livestock grazing and cropping. The total extent of the wind farm is an area of 2,386 hectares that will continue to be used for grazing and cropping during the operation of the wind farm.

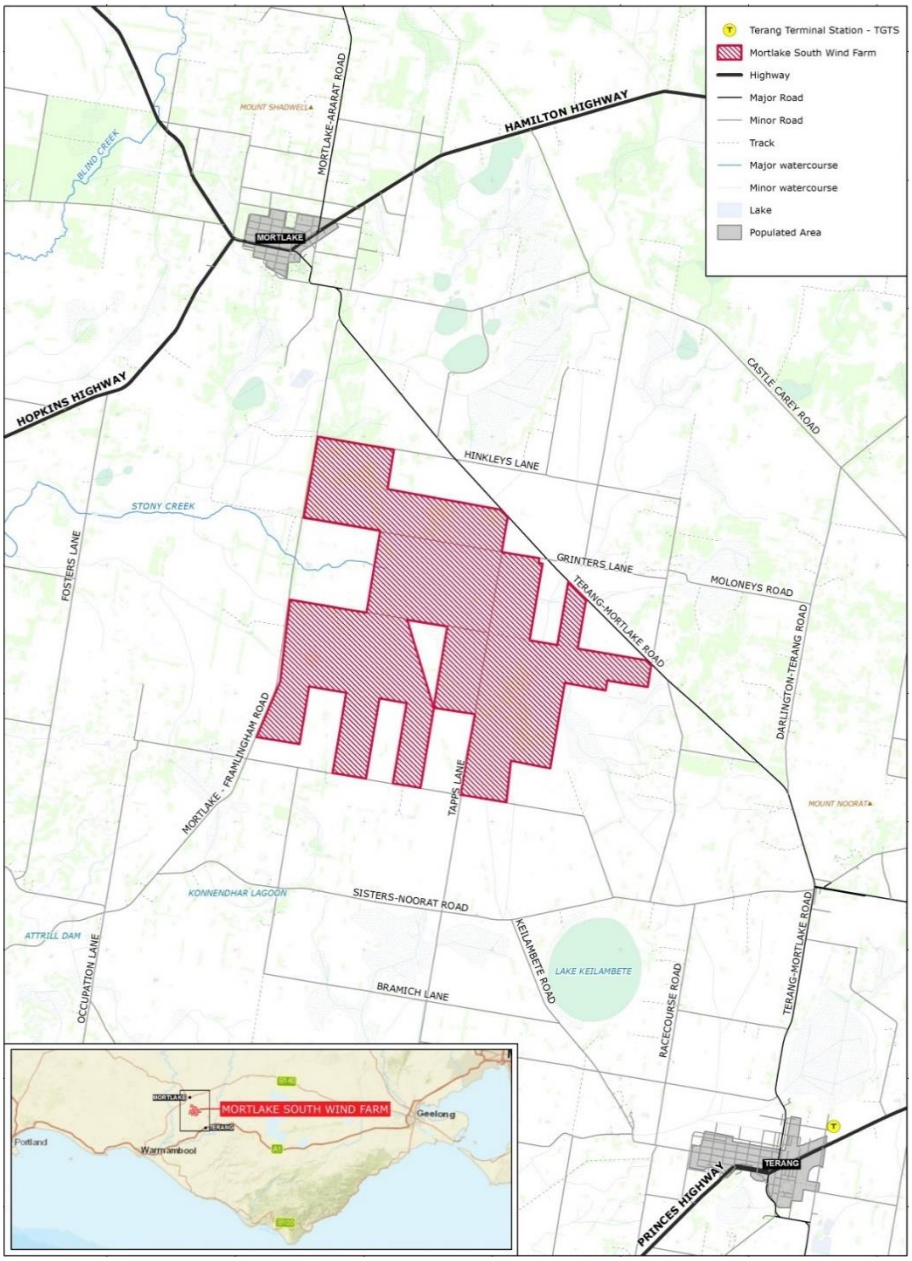


Figure 2.1-1: Locality Plan

2.2. Wind Farm Components

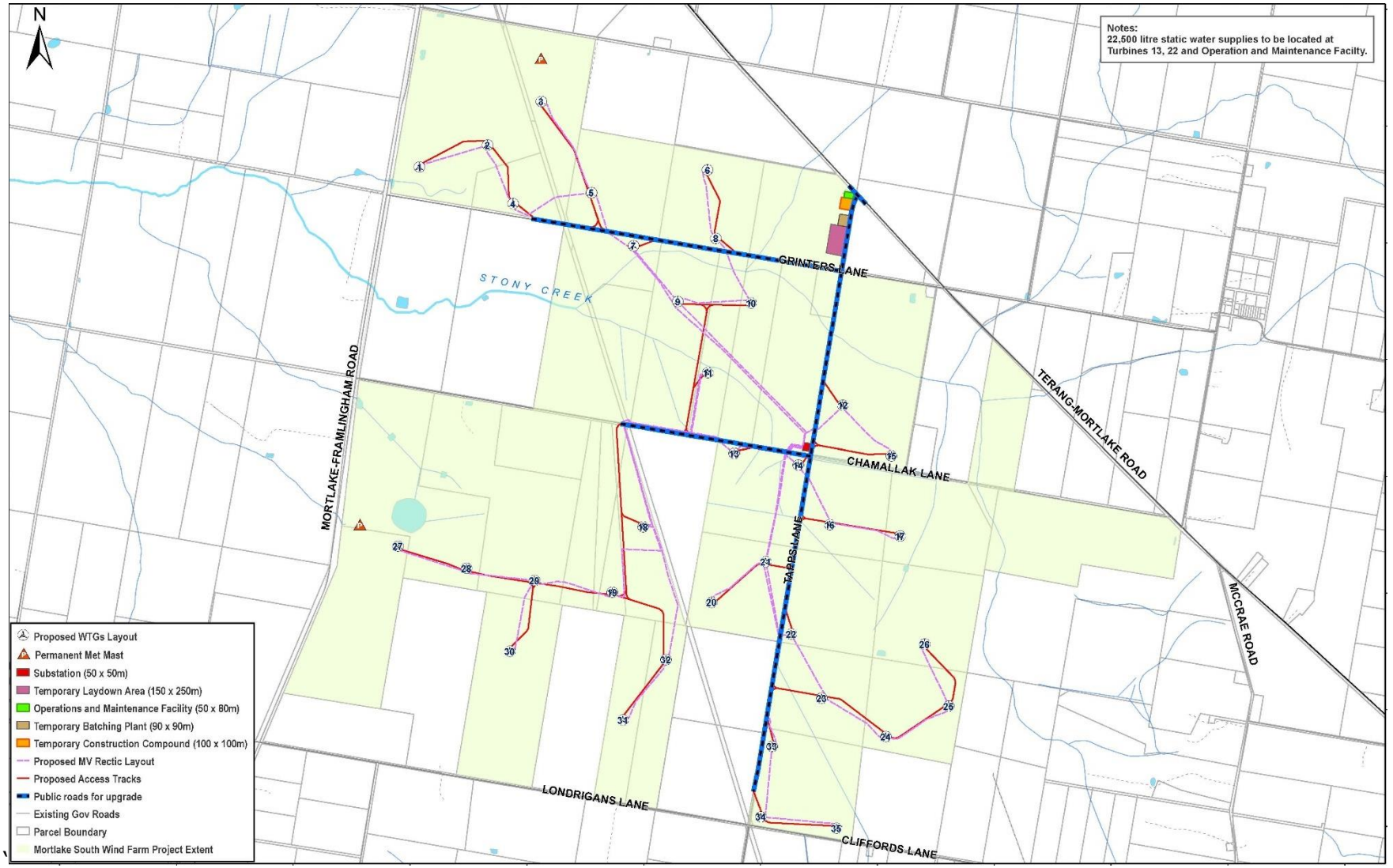
The Wind Farm will comprise the following components:

- Wind Turbine Generators;
- Access tracks;
- Substation;
- Electrical cabling;
- Operations and Maintenance facility.

In addition, during the construction phase of the project, there will be the following temporary components:

- Construction compound;
- Concrete batching plant;
- Staging areas

Figure 2.2-1: Mortlake South Wind Farm Layout



Wind Turbines Generators

Each turbine site will comprise the following components:

- A Wind Turbine Generator;
- A reinforced concrete foundation; and
- A crane pad or hardstand.

The crane pad / hardstand will comprise an area of approximately 2,000 square metres.

The wind turbine generator reinforced concrete foundation will comprise an area of approximately 700 square metres and be predominantly located below the natural ground level.

The Wind Turbine Generator will comprise a steel tower section, nacelle, hub and three blades. The electrical transformers specific to the wind turbine generator will be located internally within the steel tower.

Access Tracks

Up to 30km of access tracks will be required for construction and ongoing operation of the Wind Farm. Access tracks will be typically approximately 7m in width plus suitable drainage. Where passing bays are required, the tracks will be widened to approximately 10m.

Substation

One substation with a transformer, of up to 170 megavolt ampere (MVA) capacity to increase the voltage from 33,000 to 66,000 volts or 220,000 volts, together with ancillary equipment including a control building and overhead gantry will be provided within the Wind Farm.

This substation will occupy an area of up to 50m by 50m and will be surrounded by a security fence.

Electrical Cabling

There will be up to 55km of trenching for underground electrical 33kV cables running from turbines to the substation. Communications and earth cabling will generally run in the same trenches as the electrical cables.

Operations and Maintenance Facility

A maintenance facility will consist of two buildings. An office facility will be constructed of a concrete slab with steel or timber frame, metal or brick walls and a sheet steel roof. The building will house instrumentation, electrical and communications equipment, an office area and staff amenities and will be constructed near the main entrance point west of Tapps Lane.

A warehouse building will be constructed of a concrete slab with steel framing, sheeting and roofing, and will house spare componentry and equipment for operating the wind farm. Other permanent site facilities may include car parks and storage facilities, fuels, hazardous substances storage facilities and three permanent meteorological masts.

Temporary Construction Infrastructure

Temporary infrastructure associated with the construction phase of the wind farm will include a temporary construction compound area containing site office, storage facilities,

car parking, portable pump-out toilet facilities and amenities to be on the site for the duration of construction work. These facilities will be contained in a fenced area known as the construction compound. Due to the size of the site, additional temporary demountable amenities and storage areas may be located in areas away from the construction compound.

Construction staff will be accommodated away from the construction site and camping on site will not be permitted.

Temporary Concrete Batching Plant

A temporary concrete batching plant will be required for the proposed development. The management requirements of a concrete batching plant have been addressed in this EMP reflect a precautionary approach, in the event that such a facility is required during the construction phase.

Typically the area required for the plants and storage of materials is approximately 1ha. The actual footprint of the plant would cover is likely to be approximately 500m^2 with the remainder required for suitable access for deliveries and safe traffic management between tippers, loader and agitator trucks.

The batching plants will be used to manufacture concrete principally for the wind turbine foundations, however smaller volumes will also be manufactured for building foundations and bunding (e.g. substation facilities), culverts, etc.

2.3. Construction Activities

Construction of the Mortlake South Wind Farm will include the following activities, which will at times overlap:

- Site establishment.
- Access track and footing construction.
- Hard stand construction.
- Underground power and communication cable installation.
- Substation construction.
- Construction of the facilities building.
- Met mast erection.
- Turbine delivery and erection.
- Commissioning of the wind farm.
- Restoration of the site.

The works that require ground disturbance will be undertaken outside of significantly wet periods where practicable.

Access Track Construction

The principal access route to the site will be via Tapps Lane, via Terang-Mortlake Road, Other access points into the site will be off Grinters Lane and Chamallak Lane.

Access tracks will be utilised to access each turbine, sub-stations and facilities, and will typically be approximately 7m wide. At the conclusion of the construction phase, any access tracks not required for subsequent operation and maintenance of the wind farm

will be restored and revegetated to normal pasture cover along with batters, verges and drainage areas.

Access track construction will involve grading and removal of topsoil, placing and compacting suitable material locally sourced from commercial quarries as road base and the provision of minor drainage works. Depending on in-situ properties, a permanent geofabric product or subgrade stabilisation may be installed on the natural surface prior to placing road base.

Foundation Construction

Excavation for the turbine foundations will be carried out by mechanical equipment. If suitable, excavated material will be used as a sub road base material during access track construction.

The footings will be a reinforced concrete pad poured against natural ground or formwork. The concrete pad will be up to 2.5m thick and will be backfilled with soil. Concrete batching plants may be established on the site. These are discussed below.

Temporary Concrete Batching Plant

The construction contractor will be responsible for the establishment, operation and decommissioning of the temporary concrete batching plant(s). As such the detail in relation to the establishment of temporary plant(s) is not known at this stage.

The contractor will be bound by the requirements of this document in relation to the concrete batching plants as set out in Section B2 (Sediment, Erosion and Water Quality Management Plan) of this EMP. This Section has been prepared on the basis of the requirements contained in the EPA (1998) *Publication 628: Environmental Guidelines for the Concrete Batching Industry*.

As such it includes requirements for:

- Siting
- Design and preconstruction
- Construction
- Operation
- Decommissioning and Rehabilitation

Turbine Hardstand Construction

A hard stand area up to 2000m² will be constructed for each turbine in order to safely assemble and erect the turbines. This hard stand area will also be retained after the completion of the construction phase to facilitate future maintenance, repair or replacement of turbine parts.

Underground cable and earthing installation

The underground electrical cables will be installed in trenches approximately 1m deep to ensure a minimum cover of 0.75m. The width of the trenches will be up to 1m.

For the most part the underground cabling will be installed alongside the access tracks, however at times cabling will travel directly between locations. The surface area of disturbance required for installation of the cabling is approximately 5m in width, but will be wider if two or more trenches are required. This area will be restored and revegetated with pasture cover upon the completion of installation.

Substation Construction

A 32,000/66,000 or 220,000 volt transformer and other ancillary electrical equipment will be installed within a secured high voltage substation area.

Construction of the substation will involve levelling an area of approximately 50m by 50m. A bunded concrete pad will be constructed to support the transformer. A concrete kerb and a 2m high security fence will be constructed around the perimeter.

The substation will also consist of an elevated control building having an approximate surface area of 500 square meters, housing electrical switchgear and communications infrastructure.

Also associated with the substation will be a buried "earth grid". This will extend over the area of the substation and approximately 1m beyond the substation fence. The substation will also be equipped with lightning protection masts up to 15m in height.

Turbine Delivery and Erection

The major components of the turbines will be delivered in the following manner:

- The towers will be delivered in up to four parts by extended articulated rear-steer vehicles.
- The nacelle (gearbox and generator separated) will be delivered on low platform rear-steer trailers.
- The hub will be delivered on low platform trailers.
- The blades will be delivered on extensible trailers.

Turbine erection will involve the use of one or more large mobile cranes and auxiliary cranes. The component parts will be temporarily stored at the turbine locations where they will be assembled.

The typical component parts required for assemble of the wind turbines are listed in Table 2.3-1.

Table 2.3-1 - Components of Wind Turbine Generators

Item	Number of parts per turbine	Total number of parts for 35 turbines	Approximate Weight (tonnes)	Approximate length (m)
Tower	4	140	58 - 79	14.5 to 35
Nacelle	1	35	69	12.8
Hub	1	35	62	5.6
Drive Train	1	35	65	5
Blades	3	105	25	72.4

The construction of each tower, nacelle and rotor may be completed over several weeks depending on suitable weather conditions.

Commissioning Activities

Following connection to the grid, each wind turbine will be commissioned and commence generating electricity. During commissioning various test will be performed to ensure that the wind turbines are operating to specification and that all safety devices function correctly.

Site Restoration

Following construction and commissioning, the site will be restored by removal of contractor's facilities and any wastes or surplus materials, removal and restoration of any temporary construction areas and ongoing maintenance of any land stabilisation until adequate ground cover is established.

The final condition of the site will be reviewed in consultation with the landowners to ensure that these restoration works have been undertaken to the agreed standard.

2.4. Operation, Maintenance and Decommissioning Activities

Operational, maintenance and decommissioning activities associated with the Mortlake South Wind Farm include:

- Wind turbine generator operation and maintenance.
- Maintenance of electrical infrastructure.
- Maintenance of civil infrastructure.
- Decommissioning.

Wind Turbine Generator Operation and Maintenance

The turbines will operate 24 hours a day and will be controlled via remote control from the ACCIONA Global Control Room in Spain (along with an option for local control). The turbines will be operated to maximise energy production within the environmental, planning and operational constraints.

Wind turbines will be subject to a routine preventative maintenance regime. Approximately every six months, turbines will be shut down to enable this routine maintenance to be performed.

Corrective maintenance is also performed on turbines in the case of:

- An emergency (the turbine will shut down and an alarm will be activated).
- A defect resulting in a safety hazard or loss of generating capacity.
- Other defects observed or general plant degradation.

Electrical Infrastructure

The electrical infrastructure operates 24 hours a day and will be controlled via remote control from the ACCIONA Global Control Room in Spain.

Routine maintenance of the substation will involve the inspection, testing and maintenance of the substation plant. Inspections are usually monthly.

Maintenance of overhead lines involves annual inspections including any necessary vegetation trimming to maintain overhead line clearance distances.

Civil Infrastructure

Maintenance of the civil infrastructure involves inspections and routine grading of roads where necessary. Corrective maintenance will involve repairs as required to the civil infrastructure, typically in response to erosion.

Decommissioning

At the end of its life, the wind turbine equipment will be either replaced with comparable new equipment or the wind farm will be decommissioned. Decommissioning will involve dismantling of the turbines and other aboveground infrastructure and removing them from site.

3. Environmental Considerations

3.1. Environmental Studies

Prior to the preparation of this EMP, numerous environmental studies have been undertaken in order to understand the environmental impacts of the project. The knowledge regarding existing conditions of the site and recommendations for the project in these studies have informed the basis of this EMP.

Previous environmental studies undertaken include:

Flora and Fauna

Brett Lane & Associates Pty Ltd (2008) *Mortlake South and East Wind Farms: Flora and Fauna Assessment*

Brett Lane & Associates Pty Ltd (2008) Proposed Mortlake Wind Farms: Brolga Breeding Season Study

Brett Lane & Associates Pty Ltd (2016) *Mortlake Wind Farm: Biodiversity Impact Assessment of Modified Project Design*

Brett Lane & Associates Pty Ltd (2018) *Road Upgrade Flora and Vegetation Assessment*

Ecology Partners Pty Ltd (2008) *Brolga Mitigation Season Impact Assessment: Mortlake Wind Farm, Victoria*

Acoustics

Marshall Day Acoustics Pty Ltd (2016) *Mortlake South Wind Farm ANZ6808:2010 Noise Assessment*

ACCIONA Energy (2018) *Acoustic Study: Mortlake South Wind Farm*

Heritage and Cultural Heritage

Environmental Resource Management Australia Pty Ltd (2008) *Mortlake Wind Farm, Mortlake, Victoria: Historic Archaeological Report*

Environmental Resource Management Australia Pty Ltd (2009) *Mortlake Wind Farm, Mortlake, Victoria: Aboriginal Cultural Heritage Management Plan*

Landscape and Visual

SMEC Australia Pty Ltd (2016) *Mortlake South Wind Farm: Landscape & Visual Impact Assessment*

Geotechnical

Sinclair Knight Merz Pty Ltd (2008) *Mortlake Wind Farm: Geotechnical, Hydrology and Surface Water Assessment*

Traffic

GTA Consultants (Vic) Pty Ltd (2016) *Mortlake South Wind Farm: Transport Impact Assessment*

3.2. Environmental Risk Assessment

This section identifies the potential environmental impacts associated with the construction and operational activities and assesses the risk these impacts present to existing environmental values. The results of the risk assessment are presented in Table 3.2-2.

The risk assessment considers raw or unmitigated risk, to clearly identify those activities, which unmanaged, are likely to cause major or long-term environmental damage.

The definitions used in the risk assessment to determine likelihood and consequence, and corresponding residual risk rating, are shown in Table 3.2-1.

Implementation of the management actions presented in Parts B and C of this plan will reduce the raw risk and result in the residual risk being within acceptable limits (as determined by legislation, guidelines or the relevant regulatory authority).

It is noted that some risks are controlled via documents that are endorsed under Planning Permit 2008/0538/A which include the following documents:

- Traffic Management Plan;
- Noise Compliance Testing Plan; and
- Complaint Investigation and Response Plan.

The approved Cultural Heritage Management Plan is also considered to reduce risks associated with aboriginal heritage.

Table 3.2-1 - Risk Assessment Matrix

		Consequence				
Likelihood		**Insignificant** Minor impact with negligible effects.	**Minor** Minor local impacts with short term effects (<3 months) and low potential for widespread impact.	**Moderate** Moderate local impacts with short term effects (<3 months) and/or low potential for widespread impacts.	**Major** Major local impacts with medium term effects (3-12 months) and/or moderate potential for widespread impacts.	**Catastrophic** Severe local impacts with medium to long term effects (>12 months) and/or potential for widespread impacts. Impacts may be irreversible.
	Almost Certain Is expected to happen in most circumstances	**MEDIUM 7**	**HIGH 13**	**HIGH 17**	**EXTREME 22**	**EXTREME 25**
	Likely Will probably occur in many circumstances	**LOW 4**	**MEDIUM 11**	**HIGH 15**	**HIGH 19**	**EXTREME 24**
	Possible Could occur at some time	**LOW 3**	**MEDIUM 8**	**HIGH 14**	**HIGH 18**	**EXTREME 23**
	Unlikely Not expected to occur	**LOW 2**	**LOW 6**	**MEDIUM 10**	**HIGH 16**	**EXTREME 21**
	Rare May occur in exceptional circumstances	**LOW 1**	**LOW 5**	**MEDIUM 9**	**MEDIUM 12**	**HIGH 20**

Table 3.2-2 - Environmental Risk Assessment

Activity	Potential Environmental Impact	Risk Criteria			Control Procedure Reference
		Likelihood	Consequences	Risk Rating	
General Construction Activities					
Operation of construction machinery	Disturbance or annoyance to community from increased noise	Likely	Minor	Med	B1
	Reduction in air quality through generation of dust/air emissions (e.g. diesel fumes)	Likely	Minor	Med	B2
	Spreading of noxious weeds and pathogens	Possible	Minor	Med	B8
	Fire (connection of hot machinery with dry grass)	Rare	Major	Med	B6
	Damage to archaeological sites/heritage areas	Unlikely	Minor	Low	B9 (and CHMP)
	Sedimentation of nearby drainage lines and watercourses.	Unlikely	Minor	Low	B2
Refuelling of plant and equipment	Contamination of soil, surface water and groundwater from spills	Unlikely	Minor	Low	B4
	Fire on site resulting from ignition sources	Rare	Major	Med	B6
Transportation of construction materials and personnel to site	Disruption/delays to local traffic through increased traffic	Likely	Minor	Med	TMP

Activity	Potential Environmental Impact	Risk Criteria			Control Procedure Reference
		Likelihood	Consequences	Risk Rating	
	Dirt on public roads as a result of construction traffic	Likely	Minor	Med	B2
	Safety issues from oversized vehicles on roads	Unlikely	Major	High	Traffic Management Plan
Concrete batching plant (if required)	Land degradation from loss of topsoil from exposed surfaces.	Likely	Minor	Med	B2 and B5
	Sedimentation of nearby drainage lines and watercourses.	Unlikely	Moderate	Med	B2 and B5
	Disturbance, damage or loss of native flora and fauna.	Unlikely	Moderate	Med	B2 and B5
	Reduction in air quality through generation of dust	Unlikely	Minor	Low	B2
	Generation of waste and litter leading to poor visual amenity and pollution of environment	Unlikely	Minor	Low	B1
Upgrade of roads/access tracks					
Upgrade/widening of identified intersections in local road network	Disruption to local traffic and possible delays	Likely	Moderate	High	Traffic Management Plan

Activity	Potential Environmental Impact	Risk Criteria			Control Procedure Reference
		Likelihood	Consequences	Risk Rating	
	Reduction in air quality through generation of dust/air emissions (e.g. diesel fumes)	Unlikely	Moderate	Med	B2
	Disturbance or annoyance to community from noise	Unlikely	Moderate	Med	B1 and Noise Compliance Testing Plan
	Spreading of weeds and pathogens	Unlikely	Moderate	Med	B7 and B8
	Fire (connection of hot machinery with dry grass)	Rare	Major	Med	B6
	Sedimentation of nearby drainage lines and watercourses	Unlikely	Moderate	Med	B2 and B4
Turbine footing foundations					
Excavation of area where foundation is to be constructed	Disturbance or annoyance to community from noise	Possible	Minor	Low	B1
	Reduction in air quality through generation of dust	Unlikely	Minor	Low	B2
	Damage to archaeological sites/heritage areas	Unlikely	Minor	Low	B9 (and CHMP)
Concrete pouring	Contamination of soil, surface and groundwater from use and cleaning of concrete machinery	Unlikely	Moderate	Med	B4 and B5

Activity	Potential Environmental Impact	Risk Criteria			Control Procedure Reference
		Likelihood	Consequences	Risk Rating	
Formwork removal	Generation of waste and litter leading to poor visual amenity and pollution of environment	Possible	Minor	Low	B1
Hardstand Construction					
Clearing and earthworks associated with construction	Significant disturbance, damage or loss of flora and fauna.	Unlikely	Moderate	Med	B5
	Sedimentation of nearby drainage lines and watercourses.	Unlikely	Moderate	Med	B2
	Land degradation from loss of topsoil from exposed surfaces	Unlikely	Moderate	Med	B2
	Damage to archaeological sites/heritage areas	Unlikely	Minor	Low	B9 (and CHMP)
Underground cabling installation					
Installation of cabling (open cut trenches, and laying of cables)	Significant damage or loss of flora and fauna	Unlikely	Minor	Low	B5
	Reduction in air quality through generation of dust	Unlikely	Minor	Low	B2
	Erosion of exposed surfaces and sediment-laden runoff affecting surrounding land, drainage lines and watercourses	Possible	Minor	Low	B2

Activity	Potential Environmental Impact	Risk Criteria			Control Procedure Reference
		Likelihood	Consequences	Risk Rating	
	Damage to archaeological sites/heritage areas	Unlikely	Minor	Low	B9 (and CHMP)
Construction of terminal station, substations, overhead powerlines and facilities building					
Construction of terminal station, substations, powerlines and facilities building.	Generation of waste and litter leading to poor visual amenity and pollution of environment	Unlikely	Minor	Low	B1
	Contamination of soil, surface and groundwater from cleaning plant and equipment associated with concrete	Unlikely	Moderate	Med	B3
Operations					
Operation of site offices and compounds	Pollution from leak of septic system	Unlikely	Moderate	Med	C2
Use and storage of fuels and chemicals within the site / Routine and corrective maintenance of turbines and electrical infrastructure	Contamination of soil, surface and groundwater from leak or spill	Unlikely	Moderate	Med	C2
	Fire on site resulting from ignitions sources	Rare	Major	Med	C4
Remediation of access tracks, hard stands and underground cabling	Erosion, loss of topsoil and sedimentation of waterways	Unlikely	Moderate	Med	C1
Operation of turbines	Bird and bat mortality	Likely	Moderate	High	C3

Activity	Potential Environmental Impact	Risk Criteria			Control Procedure Reference
		Likelihood	Consequences	Risk Rating	
	Disturbance or annoyance to community from noise and shadow flicker	Rare	Moderate	Med	Complaint Investigation and Response Plan.

4. Regulatory Approvals

4.1. Overview

The following key environmental approvals have been obtained for the project:

- A Cultural Heritage Management Plan was approved by Aboriginal Affairs Victoria on 23 December 2009 under the *Aboriginal Heritage Act 2005* (Vic); and
- Planning Permit 2008/0538/A was granted on 23 April 2017 under the *Planning and Environment Act 1987* (Vic).

It is also noted that:

- The Minister for Planning determined that an Environmental Effects Statement was not required on 28 September 2007 under the *Environmental Effects Act 1978* (Vic); and
- The Minister for the Environment and Energy determined that the project was not a controlled action on 23 April 2018 under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

4.2. Planning Permit Conditions

Condition 16 of the Planning Permit 2008/0538/A requires the preparation of an Environment Management Plan to the satisfaction of the Minister for Planning. The Environment Management Plan must include a range of plans, some of which must be prepared in consultation with relevant agencies. Table 4.2-1 identifies the various plans and corresponding agencies that have been consulted with in the preparation of this EMP.

Table 4.2-1 - EMP Consultation Matrix

Requirement	Construction Phase	Operation Phase	DELWP-EP	DEDJTR	EPA	CCMA/GHCMA	CFA	MSC
Construction and Work Site Management Plan	B1	-						
Sediment, Erosion and Water Quality Management Plan	B2	C1			■	■		
Blasting Plan	B3	-						
Hydrocarbon and hazardous substance plan	B4	C2						
Flora and Fauna Management Plan	B5	C3	■					
Wildfire Prevention and Emergency Response Plan	B6	C4	■				■	■
Pest Animal Management Plan	B7	C5	■	■				
Pest Plant Management Plan	B8	C6	■	■				
Cultural Heritage Management Plan	B9	C7						
Training Program	5.3							

Requirement	Construction Phase	Operation Phase	DELWP-EP	DEDJTR	EPA	CCMA/GHCMA	CFA	MSC
Program for Reporting	5.5							
Implementation Timetable	Appendix B							

4.3. Legislative Requirements

Table 4.3-1 provides an overview of the relevant legislation and statutory instruments to be complied with or considered during the duration of the project.

Table 4.3-1 - Relevant Legislation, Regulations, Guidelines and Strategies

Legislation	Discussion
Commonwealth	
Environmental Protection and Biodiversity Conservation Act 1999	The project was declared to be "not a controlled action" and therefore no EPBC Approval has been required. The declaration does not include any specific conditions.
Native Title Act 1999	The project is located on freehold land and therefore Native Title has been extinguished.
Victorian	
Environmental Effects Act 1978	The Minister for Planning declared that the project did not require an Environmental Effects Statement.
Planning and Environment Act 1987	A planning permit is required under the *Planning and Environment Act 1987* for certain types of uses and development, including the use and development of a renewable energy facility, the removal of native vegetation and the creation or alteration of access to a road in a Road Zone, Category 1. A planning permit has been issued by the Minister for Planning for the project.
Flora and Fauna Guarantee Act 1988	A permit is required under the *Flora and Fauna Guarantee Act 1999* to take (i.e. remove) listed vegetation. Environmental studies undertaken for the project have not identified any listed flora that will be required to be removed.
Wildlife Act 1975	Any person involved in handling, relocating or caring for wildlife will be required to hold an appropriate license or authorisation under the *Wildlife Act 1975*. This includes undertaking the activities contained within the Bird and Avifauna Management Plan endorsed under the Planning Permit.
Aboriginal Heritage Act 2006	A mandatory CHMP is required for when a defined high impact activity is located in an area of cultural sensitivity under the *Aboriginal Heritage Act 2006*. A CHMP has been approved by Aboriginal Victoria for this project.

Legislation	Discussion
Heritage Act 2017	A Heritage Permit is required to undertake any works at a place listed on the Victorian Heritage Register. A Heritage Consent is required to damage or disturb a heritage place listed on the Victorian Heritage Industry. There are no heritage places listed on the Victorian Heritage Register or Heritage Inventory within the project area. As such, no *Heritage Act 2017* approvals are required.
Water Act 1989	A license is required to take or use water from a waterway, groundwater, a spring or soak or water from a dam for use other than domestic and stock use or otherwise made exempt under the *Water Act 1989*. A license is also required under the *Water Act 1989* to construct, alter, operate, remove or decommission any works on a waterway. This will include works crossing Stony Creek and other CMA designated waterways.
Roads Management Act 2004	Any occupation and/or construction on Terang-Mortlake Road will require approval from VicRoads. Any occupation and/or construction on local municipal roads will require the consent of Moyne Shire Council. The above approvals will be required prior to the commencement of upgrades to intersections and the local road network (ie. Tapps Lane, Grinters Lane and Chamallak Lane)

5. Environmental Management Framework

5.1. ACCIONA Integrated Management System Policy

ACCIONA's primary environmental policy is the Integrated Management System policy, shown in Figure 5.1-1.

acciona Energy

POLICY

Integrated Management System Policy

POLAU07101 r01

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Policy Statement

Acciona Energy (Acciona) is a leader in the renewable energy sector. Our Integrated Management System (IMS) consolidates our commitment to sustainable development and the provision of quality controlled products and services that meet and exceed customer expectations, protect the environment and the work, health and safety (WHS) of our workers and interested parties.

Our objectives:

- Comply with all statutory requirements, applicable industry standards, and Australian and International Standards and strive for best practice,
- Document processes and provide training, instruction and awareness to workers and interested parties,
- Provide safe plant and equipment through a Hazard Management approach to WHS and environmental issues,
- Establish measurable objectives and targets aimed at the identification, assessment and elimination of WHS hazards/risks and environmental harm,
- Conduct meaningful consultation on WHS issues; provide effective rehabilitation,
- Sustainable development of products and services,
- Establish continuous improvement and effectiveness measures aimed at enhancing customer satisfaction, improving WHS and environmental practices, and
- Provide adequate resources to meet the commitment of this policy.

Board/Directors/Senior Leaders of Acciona are responsible and accountable for providing the necessary resources to implement, promote and continuously improve the IMS.

Managers are responsible and accountable for implementing this policy within their business area(s) and have a duty of care to:

- Provide training and instruction to workers to ensure compliance with legislation, regulations and other obligations, including understanding the IMS,
- Ensure adequate supervision is maintained at all times and systems of work are safe and environmentally compliant, and
- Be actively involved in the development, promotion and implementation of policies and procedures.

Workers are responsible for:

- Compliance with all policies, procedures and instructions,
- Immediately reporting all hazards and incidents to their Supervisor or Manager,
- Taking reasonable care for the environment, their own WHS and that of others, and
- Actively contributing to meaningful and effective consultation.

This policy is applicable to Acciona Energy in all of its functions and operations. It will be reviewed at regular scheduled intervals, and whenever there is any operational, circumstantial or legislative change affecting the IMS.

Brett Wickham
Managing Director

Approved by: B WICKHAM Date: 21 MAY 2018	Uncontrolled when printed	T05 PAU01 GAE07019 r01

Figure 5.1-1: ACCIONA Energy Integrated Management System Policy

5.2. Implementation

Application of Management Plans

Environmental mitigation measures are incorporated into a number of management plans that have been separated into Part B (Construction) and Part C (Operation).

Part B of the EMP will apply from the commencement of construction until the commission date. Part C of the EMP will only apply after the commission date.

Roles and Responsibility

Table 5.2-1 and

Table 5.2-2 describe the roles and responsibilities of key ACCIONA personnel during the construction and operation phase of this project.

Table 5.2-1 – ACCIONA Project Personnel Responsibilities (Construction)

Position	Responsibilities
Project Manager	Handover of design and consent condition requirements to the Construction Manager, ongoing oversight and accountability across project delivery. Responsible for managing the construction work timetable in consultation with project personnel listed below.
Construction Manager	The Construction Manager will have responsibility for the overall management of the construction of the Mortlake South Wind Farm including: Final review and overall approval of CEMPs. Ensuring any design changes during construction go through ACCIONA Energy's design approval process. Managing the site and the overall environmental performance of the project during its construction including the implementation of the CEMPs. Managing community complaints with respect to environmental matters (such as air quality, noise etc.) in coordination with the Community Relations Coordinator/Manager, Environment and Planning. Responding and reporting on incidents.
HSE Manager	The HSE Manager will be located on site for the duration of the construction period and have responsibility for: Reviewing Contractor CEMPs in conjunction with the Manager Environment. Supporting the HSE Supervisor with daily inspections and management. Organising and performing internal audits of the construction site to monitor the contractor's compliance with this EMP, CEMPs and conditions of consent. Ensuring nonconforming environmental controls and practices are reported. Following up on audit findings and recommendations to ensure any remedial actions required are closed out. Sharing learning experiences between projects.
HSE Supervisor	The HSE Supervisor will be located on site for the duration of the construction period and will have responsibility for:

Position	Responsibilities
	Delivering site inductions and ensuring all persons on site are familiar with the EMP, and their environmental obligations. Undertaking weekly and monthly environmental inspections and recording performance on the inspection checklists. Identifying and reporting environmental incidents and notifying the Manager, HSEQ of any suspected incidents.
Manager, Environment and Planning	The Manager, Environment and Planning will be predominately located in the Melbourne Office and will have responsibility for: Reviewing Contractor CEMPs, to check that they are prepared to the satisfaction of ACCIONA Energy and in accordance with this EMP. Organising external environmental audits. Engaging environment specialists as required. Providing of environmental technical advice to the Manager, HSEQ. Communicating with environmental stakeholders. Participating in internal audits. Undertaking regular environmental inspections of the construction site. Ensuring that environmental incident remedial solutions are effectively implemented. Reviewing and authorising changes to this EMP in collaboration with the DELWP. Communicating of environmental incidents/breaches of permit conditions to the relevant authorities. Keeping abreast of new environmental legislation.
Community Relations Coordinator	The Community Relations Coordinator will be primarily located in the Melbourne office and has responsibility for: Managing of community complaints with respect to environmental matters (such as air quality, noise etc.) in coordination with the Site Supervisor and Manager, Environment and Manager, Construction. Preparation of community information materials. Communicating with the local community during all phases of the project.
Construction Manager	The Construction Manager will have responsibility for the overall management of the construction of the Mortlake South Wind Farm including: Final review and overall approval of CEMPs. Ensuring any design changes during construction go through ACCIONA Energy's design approval process. Managing the site and the overall environmental performance of the project during its construction. Managing community complaints with respect to environmental matters (such as air quality, noise etc.) in coordination with the Community Relations Coordinator/Manager, Environment and Planning. Responding and reporting on incidents.

Table 5.2-2 – ACCIONA Project Personnel Responsibilities (Operations)

Position	Responsibilities
Project Manager	Handover of facility and consent condition requirements to Facilities Manager.
Facilities Manager	The Facilities Manager will be predominantly located on site and have responsibility for managing the Mortlake South Wind Farm during operations. Oversee the ongoing implementation of the OEMP.
HSE Supervisor	The HSE Supervisor will be located on site for the duration of the operations and will have responsibility for: • Delivering site inductions and ensuring all staff on site are familiar with the EMP, and their environmental obligations. • Undertaking environmental inspections and recording performance on the inspection checklists. • Identifying and reporting environmental incidents and notifying the Manager Health, Safety, Environment and Quality of any suspected incident.
Manager, HSEQ	The Manager, Health, Safety, Environment & Quality will be predominately located in the Melbourne Office and have responsibility for: Supporting the onsite HSE Supervisor. Organising and performing internal audits of the site to monitor the contractor's compliance with this EMP. Ensuring nonconforming environmental controls and practices are reported. Following up on audit findings and recommendations to ensure any remedial actions required are closed out.
Manager, Environment and Planning	The Manager, Environment and Planning will be predominately located in the Melbourne Office and will have responsibility for: Overseeing the implementation of the avifauna management and monitoring program. Providing environmental technical advice to the Manager, HSEQ and Manager, Construction. Communicating with environmental stakeholders. Participating in internal audits. Organising external environmental audits. Undertaking periodic environmental inspections of the operating site. Ensuring that environmental incident remedial solutions are effectively implemented. Reviewing and authorising changes to this EMP in collaboration with DELWP. Communication of environmental incidents/breaches of permit conditions to the relevant authorities.

Position	Responsibilities
Community Relations Coordinator	The Community Relations Coordinator will be primarily located in the Melbourne office and has responsibility for: Managing of community complaints with respect to environmental matters in coordination with the Manager, Environment and Planning and Facilities Manager. Preparation of community information materials. Communicating with the local community during all phases of the project.

Contractor Responsibilities

ACCIONA will engage a number of Contractors to undertake different aspects of the wind farm construction. Each Contractor will be responsible for the environmental management of their work. The requirement to prepare a CEMP in accordance with this EMP will be included in all relevant contracts.

Contractors will be responsible for:

- Ensuring effective environmental management of all activities.
- Complying with relevant environmental legislation and consent conditions as detailed in Section 4.3.
- Preparing environmental documentation such as CEMP, process procedures, work method statements etc. to the satisfaction of ACCIONA and in accordance with this EMP before works commence.
- Ensuring all subcontractors work in accordance with their CEMP.
- Providing sufficient resources to ensure the CEMP practices are implemented by contractors' employees and sub-contractors.
- Assigning environmental responsibilities to project personnel.
- Ensuring all project personnel are suitably trained, and possess the necessary skills, to undertake their designated environment responsibilities.
- Ensuring that environmental protection requirements are communicated to all personnel and sub-contractors.
- Continual monitoring of environmental performance to ensure compatibility and continued effectiveness with the management plan objectives.
- Participating in the audit process.
- Preparing and submitting Project Monthly Environment Reports to the Site Supervisor. The monthly report will include:
    - Summary of general environmental site issues (positive and otherwise) and the proposed action to resolve them.
    - Environmental monitoring results.
    - Environmental incident report summaries.
    - An overview of any communications and/or meetings with statutory authorities.
- Registering and investigating environmental incident and complaints and provide this information to ACCIONA.

- Ensuring environmental incidents are addressed within the required time frame and that disposition/remedial solutions are effectively implemented.
- Attending meetings called to discuss environment issues.

Contracts

Contracts can vary from long term service contracts through to small contracts for minor maintenance, repair or construction activity. As a rule, major contracts will be characterised by a contract value of $250,000 and above. Contracts valued below $250,000 will be deemed minor works contracts.

For contractors undertaking minor works, environmental obligations may be addressed in a JSA format. The environmental component of the JSA must include the following:

- An outline of all potential environmental hazards and risks associated with their activities.
- Details of the systems and procedures in place for managing these risks.
- Reporting procedures for any incidents that may occur.

The JSA must be to the satisfaction of ACCIONA and be completed before works commence.

5.3. Inductions and Training

All persons accessing the site will receive training in the form of a site induction (or be accompanied on site) and tool box talks for specific environmental, fire, and emergency issues. The Construction Manager shall ensure that records of all training and personnel who have undertaken training and site inductions are maintained and can be provided upon request.

Site Induction

All contractors, employees and visitors must undertake an environmental site induction prior to gaining access to work on the Mortlake South Wind Farm site.

This induction will incorporate the basic environmental requirements for the Mortlake South Wind Farm and include information on:

- The objectives of the EMP.
- The management plans, and associated onsite control measures outlined within the EMP.
- Restricted areas and 'No-go' areas.
- Defined locations for site access, offices and major laydown areas.
- Emergency procedures.
- What to do in the event of discovery of Aboriginal cultural heritage material.
- Communication methods internally, with community members and external stakeholders.
- The responsibilities of different individuals with respect to the EMP, including who should be contacted in the event of compliance breaches.
- Basic steps that everybody should take to ensure that the EMP is complied with.

The induction will be mandatory for all first time visitors to the site.

Training

Training requirements during the construction and operational phases are determined by a Training Needs Matrix which identifies which training requirements are mandatory for all personnel entering the site or role specific.

The training program will be implemented prior to construction commencing and will continue to be implemented during the construction and operational phase for relevant staff and contractors.

Training which will be implemented during the construction and operational phases include:

- (Mandatory) Site Induction which includes obligations under the EMP for all staff and contractors entering the site. The EMP induction training covers duty of care to comply with the EMP including the management of noise, waste, sediment, erosion and water quality, hydrocarbon and hazardous substances, flora and fauna, wildfire prevention and emergency management, pest animals, pest plants and cultural heritage.
- (Role specific) Emergency and Spill Response training for site wardens which are delegates of the Construction Manager, Project Manager or Facilities Manager.
- (Role specific) Environmental Roles and Responsibility training for managers.
- (Role specific) Risk Management training for staff and contractors involved in writing, reviewing or authorising SWMS/JSEA or risk assessment which will generally include the Environment & Planning Manager, Construction Manager, HSEQ Manager, HSEQ Supervisor and Facilities Manager.

Tool Box Talks

In addition to the site induction, toolbox talks will be undertaken on a fortnightly basis. A 'Tool Box Talk' is a short training course of approximately 15 minutes delivered at the commencement of a shift that is usually directly applicable to the work about to be undertaken. These toolbox talks will include discussion of environmental issues and be regularly attended by the HSE Supervisor.

Toolbox talks will be documented and a record of them kept onsite, to be provided upon request.

5.4. Checking and Corrective Action

The following section describes how and when inspections and audits will be conducted during the construction and operational period.

Inspections

During construction, the HSE Supervisor will conduct weekly inspections of work sites to ensure this EMP is being correctly implemented. During these inspections the monitoring activities listed in Part B of this EMP will be undertaken. Weekly checklists will be completed during construction and any issues identified will be rectified where possible and subsequently signed off by the Site Supervisor. Weekly environmental checklists will be documented and be made available on request.

During operations, an HSE Supervisor will undertake quarterly inspections of the site to monitor activities listed in Part C of this EMP.

Internal Audits

An internal audit schedule will be established for the project.

Internal audits will be scheduled approximately every three months during construction and every twelve months during the first two years operations to ensure works are complying with this EMP and Contractor CEMPs. The timing of the internal operational audits will be reviewed after two years, however operational audits will be undertaken at a minimum of one every five years for the life of the wind farm. The audit will also review site induction material, assess the knowledge of staff undertaking work and review the construction phase weekly checklists. The first internal audit will be scheduled within two months of the start of a new phase of construction/operation.

External Audits

Within six months of the start of construction/operations, an external audit of the site will be undertaken by a suitably qualified environmental professional. The external audit will assess whether work practices:

- Comply with monitoring requirements listed within each management plan and the Planning Permit Conditions.
- Documentation and reporting structures required by the EMP are being successfully maintained.
- Environmental impacts on the Mortlake South Wind Farm site are being effectively managed.

At the conclusion of the audit, the auditors will prepare an audit report for ACCIONA management for its consideration and action. They will also prepare a summary document highlighting positive practices and, if observed, deficiencies to be addressed.

Depending on the results of the first external audit (i.e. there were significant deficiencies), a second external audit during the construction phase may be necessary. External audits during operation will occur annually for the first two years. Depending on the results of the second audit, a final audit in the 3rd year of operation may be necessary.

Environmental Incidents

An environmental incident is defined as an unexpected event that may result in harm to the environment and requires some action to minimise the impact or restore the environment.

An environmental incident can include (but is not limited to) the following:

- Spill of fuel, oil, chemical or other hazardous materials.
- Failure of temporary erosion/sediment control.
- Contamination of surface water, ground water or land.
- Breach of licence, permit condition or legislative requirements.
- Non-conformance with a management measure in this EMP or contractors' CEMPs.
- Damage to vegetation marked for protection.
- Damage to cultural heritage materials or sites.

An event that has the potential to impact on the environment (such as a spill into a contained area) is still classified as an environmental incident and should be reported as an incident with no impact.

Incident Reporting and Corrective Action

ACCIONA uses an online Issues Management Tool (Currently Quest) to record and manage all environmental incidents.

Incidents or near misses observed onsite must be reported to the ACCIONA Construction Manager during construction phase and to the Facilities Manager during the operational phase.

The person recording the incident will be competent and trained by HSEQ representative to utilise the Issues Management Tool. The person recording the incident will complete their details and assign responsibility to a person, either within ACCIONA or within the construction contractor's team, for its closure through the appropriate corrective action, in addition to describing the incident, the person raising it will be required to specify the location within the wind farm site and if applicable, the part of the EMP that was contravened. The required corrective action will also need to be included and a date for which the action must be completed specified. When the corrective action is taken, this must be detailed, signed and dated. Progress in addressing incident reports will be monitored by the Site Supervisor and the Manager, HSEQ.

Corrective actions defined during the construction phase will be communicated to staff and contractors via the Construction Manager during daily pre-start briefings. Corrective actions identified during the operational phase will be communicated to staff and contractors via the Facilities Manager.

Reporting

Internal Reporting

During the construction and operational phase relevant staff including the Project Manager, Construction Manager, HSE Manager and Supervisor, Facilities Manager, Community Relations Coordinator and Environment and Planning Manager are notified of the following as soon as practicable via the Issues Management Tool of the following:

- Any environmental incidents and complaints and their corrective actions; and
- Non-conformances and correction actions identified during regular environmental inspections and the internal and external audits.

External Reporting

During the construction and operational phase, relevant documentation including Weekly Environmental Checklists, Monthly Environmental Reporting and internal and external audits, as well as records maintained on Issues Management Tool, Consultation Manager will be made available to external authorities upon request.

Emergency Contact and Response

For all emergencies '000' must be called immediately. In the case of an environmental incident, such as a major spill, the Construction Manager/Site Supervisor and relevant regulatory agency should be contacted immediately.

The Construction Manager/Site Manager will be the nominated fire warden for the site and will be responsible for all communications to the emergency services. Contact details for relevant emergency services are provided below:

Table 5.4-1 – Emergency Contact Response

Contact	Phone No.	Address
Construction Manager	(03) 9027 1000	Level 12, 2 Southbank Boulevard Southbank VIC 3006
Country Fire Authority - District 5 HQ	(03) 5551 1500	92-94 Coleraine Road & Mt Bainbridge Road Hamilton, VIC 3300
Warrnambool Fire Station	(03) 5561 5700	61 - 67 Mortlake Road Warrnambool VIC 3280
Warrnambool Base Hospital	(03) 5563 1666	25 Ryot St Warrnambool VIC 3280
Warrnambool Police Station	(03) 5560 1333	214 Koroit St Warrnambool VIC 3280
Coroners Court of Victoria	1300 309 519	65 Kavanagh St Southbank VIC 3006

5.5. Document Availability and Review Procedures

The HSE Manager is to be the chief custodian for environmental documentation associated with this EMP. The documentation is to be readily available, and to be produced upon request.

The following documentation, as a minimum is to be maintained on site:

- A copy of the Planning Permit (including endorsed drawings and plans).
- A copy of this EMP.
- Copies of weekly environmental checklists.
- A database of all relevant training undertaken and attendees
- A database of people inducted to the site.

Every five years (or as required should significant changes to the site conditions occur) there will be a complete review of the operational EMP. This process involves examining all performance objectives and criteria to determine that they are still applicable to the site and represent current best practice in relation to environmental management.

5.6. Complaints Management

A Complaint Investigation and Response Plan is required to be developed to the satisfaction of the Minister for Planning by Condition 25 of Planning Permit 2008/0538/A. The plan will respond to all aspects of the wind farm, including (but not limited to) construction noise, construction impacts, traffic and shadow flicker.

The plan will be made publicly available on the Mortlake Wind Farm project website.

5.7. Construction Timetable

ACCIONA's construction schedule is set out in Table 5.7-1 and the plans that must be implemented during those phases.

The construction timetable has been set to undertake as much major construction activities, such as access tracks, electrical cabling installation and turbine foundation construction, as is practical prior to the winter of 2019 to minimise impacts of the construction on ephemeral wetlands, local fauna and sediment mobilisation.

Table 5.7-1 - Construction Timetable

Plans in Effect	Activity	Scheduled Date
PART B: Construction Environmental Management Plan	Site Constriction Compound Establishment	January 2019
	Batching Plant Establishment	February 2019
	On-Site Access Track Construction	February 2019 to June 2019
	Turbine Foundations	April 2019 to September 2019
	Electrical Reticulation Cabling	March 2019 to June 2019
	Turbine Erection	October 2019 to April 2020
	Substation Construction	March 2019 to August 2019
	O&M Facility Construction	April to July 2019
	Demobilisation	August 2020
PART C: Construction Environmental Management Plan	Rehabilitation and Operations	August 2020 onwards

PART B
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLANS

B1. Construction and Work Site Management Plan

Introduction

The Construction and Work Site Management Plan details the management activities that will be implemented to minimise disturbance from construction noise and waste. The management of other specific aspects of construction can be found within other specific plan, as outlined in the table below:

Table B1-1: Construction and Work Site Management Plan Elements

Planning Permit Condition 16(a)		EMP Section
i	Procedures for access and noise control	B1
i	Procedures for dust emissions	B2
i	Procedures for spills and leaks from the handling of fuels and other hazardous materials and pollution management	B4
ii	Identification of potential contaminants on site	B4
iii	Identification of all construction and operational processes that could potentially lead to water contamination	B4
iv	Identification of appropriate storage construction and operational methods to control any identified contamination risks	B4
V	Identification of waste re-use, recycling and disposal procedures	B1
vi	Appropriate sanitary facilities for construction and maintenance staff in accordance with EPA Publication 891.1 Septic Tanks Code of Practice	B2

Planning Permit Condition 16(a)		EMP Section
vii	A timetable, where practicable for the construction of turbine bases access tracks and power cabling during warmer months to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation	B1
viii	Procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation	B5
ix	The covering of trenches and holes at night time and to fill trenches as soon as practical after excavation to protect native fauna	B5
x	Removal of works, buildings and staging area on completion of construction of the project.	B2

Objectives

The key objectives of the Construction and Work Site Management Plan are to:

- To minimise the impact of construction of the Mortlake South Wind Farm on the environment.
- Limit construction noise to levels which do not cause disruption to nearby residents.
- To minimise wastes generated by construction activities, by adopting the waste hierarchy system as follows:
    - Avoid
    - Reduce
    - Reuse
    - Recycle
- To ensure that litter and waste is disposed of in a responsible manner and is not released to the environment.

Key References

EPA Industrial Waste Resource Guidelines[1]

EPA (1996) *Publication 480: Environmental Guidelines for Major Construction Sites*

EPA (2008) *Publication 1254: Noise Control Guidelines*

EPA (2011) *Noise from Industry in Regional Victoria*

EPA (2016) *Publication 891.4: Code of Practice – Onsite Wastewater Management*

EPA (2016) *Publication 1624: Industrial Waste*

Measureable Target

- No noise complaints from nearby residents during construction.
- Achieve a recycling rate of 60% for site construction waste.
- No lasting evidence of litter generated from construction activities.

General

Where practicable, major earthworks associated with construction will be undertaken during warmer months to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation. A Construction Timetable is provided in Part A of the EMP.

In the event that the works cannot occur within the warmer months, the mitigation measures in Section B2 Sediment, Erosion and Water Quality and Section B5 Flora and Fauna Management Plan will be implemented and further tailored to the wetter conditions anticipated at the site to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation.

Noise

EPA (2008) *Publication 1254: Noise Control Guidelines* sets out the following noise control criteria for construction sites:

[1] Available at: https://www.epa.vic.gov.au/business-and-industry/guidelines/waste-guidance/industrial-waste-resource-guidelines

Table B1-2: Construction Work Houses Noise Criteria

	Hours	Criteria
Normal working hours	7am to 6pm Monday to Friday 7am to 1pm Saturdays	No criteria
Weekend /evening work hours	6 to 10pm Monday to Friday 1pm to 10pm Saturdays 7am to 10pm Sundays and public holidays	Noise level at any residential premises to not exceed background noise by 10dB(A) or more for up to 18 months after project commencement. 5dB(A) or more after 18 months
Night period	10pm – 7am Monday to Sunday	Noise inaudible within a habitable room of any residential premises.

Construction activities such as benching, footing construction, cable installation, operation of machinery, traffic movements and turbine erection will generally cause temporary increases in local noise levels.

The noise sensitive receptors within 2km of the wind farm are listed and shown below.

Table B1-3: Sensitive Noise Receptors within 2km of Project Area

House ID	Closest Turbine	Distance to closest turbine	Stakeholder?
146	3	1062m	Non-stakeholder
120	30	1099m	Stakeholder
134	12	1106m	Stakeholder
145	3	1136m	Non-stakeholder
143	8	1150m	Stakeholder
154	3	1171m	Stakeholder
112	30	1177m	Non-stakeholder

House ID	Closest Turbine	Distance to closest turbine	Stakeholder?
180	1	1333m	Non-stakeholder
169	27	1340m	Stakeholder
989	3	1357m	Non-stakeholder
116	30	1380m	Stakeholder
173	27	1388m	Stakeholder
162	18	1396m	Stakeholder
107	27	1495m	Stakeholder

House ID	Closest Turbine	Distance to closest turbine	Stakeholder?
133	12	1187m	Stakeholder
153	2	1192m	Stakeholder
132	12	1234m	Non-stakeholder
179	1	1258m	Non-stakeholder
991	1	1261m	Non-stakeholder
125	31	1277m	Non - stakeholder
126	31	1284m	Non - stakeholder

House ID	Closest Turbine	Distance to closest turbine	Stakeholder?
111	27	1517m	Stakeholder
191	27	1520m	Non-stakeholder
308	25	1890m	Non-stakeholder

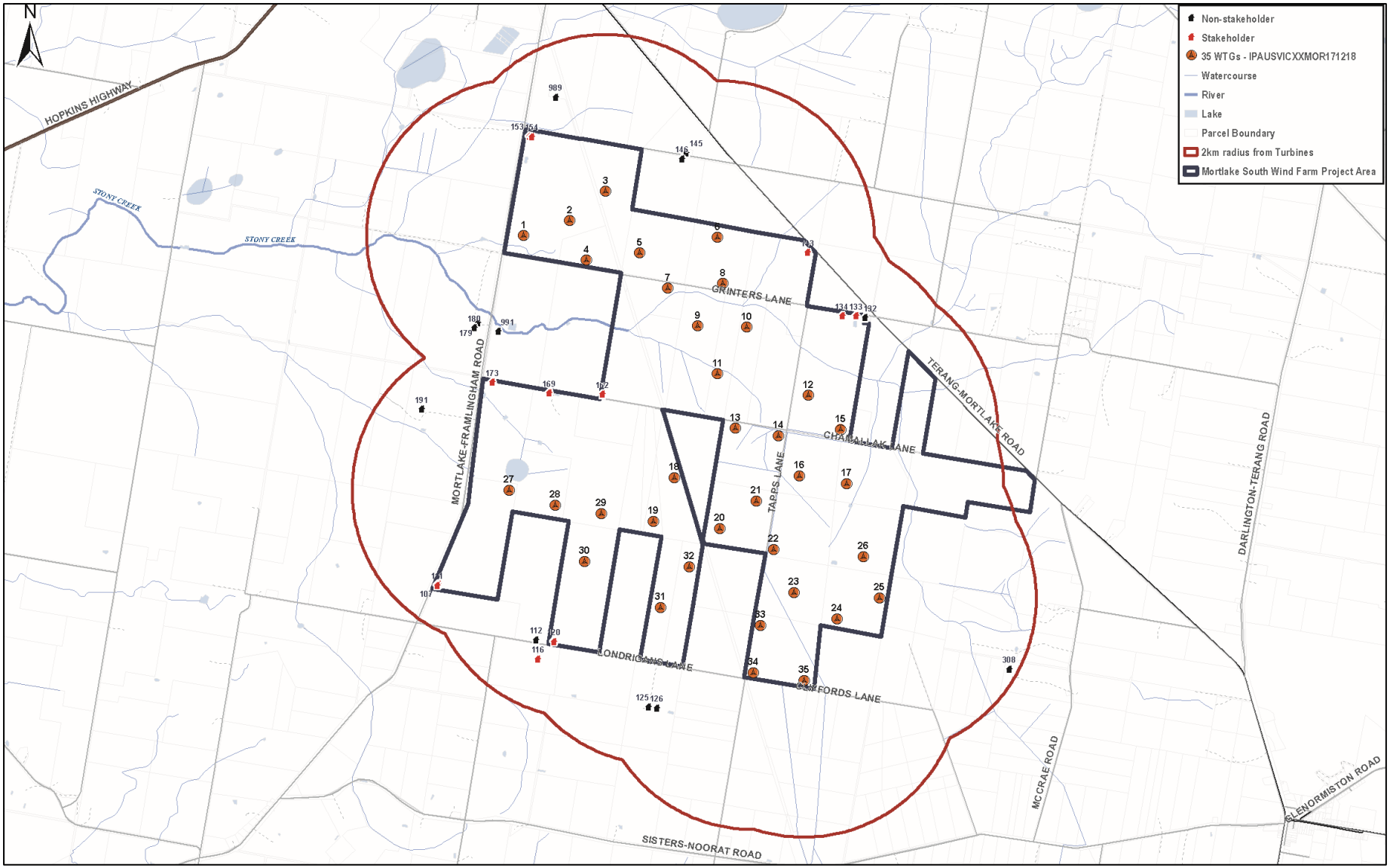


Figure B1-1 - Sensitive Noise Receptors within 2km of Mortlake Wind Farm

Waste

The Mortlake South Wind Farm is not expected to generate significant volumes of waste however there are a number of waste streams that if not managed properly could result in impacts to the environment. The principal wastes expected to be generated during construction are sewage, domestic rubbish, surplus topsoil and excavated material, packaging material and general construction debris. The handling, management and disposal of waste materials must be done so in accordance with the *Environmental Protection (Industrial Waste Resource) Regulations 2009* (Vic).

Environmental Management Measures

Table B1-4 Construction and Work Site Management Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
Access			
Site Access	**EMM-1**	All vehicles must enter and exit the project site via the Tapps Lane and Terang-Mortlake Road intersection.	Site Supervisor
Noise			
Preconstruction	**EMM-2**	Ensure all personnel are aware of environmental issues and management measures relating to noise management.	HSE Supervisor
	EMM-3	Designate access routes to site and keep drivers aware of nominated routes.	
Rock crushing	**EMM-4**	If required, site rock crusher away from nearby residences.	Site Supervisor
Plant and equipment	**EMM-5**	Ensure construction equipment is fitted with appropriate noise abatement devices (e.g. mufflers) and equipment and noise abatement devices are maintained in good working order.	HSE Supervisor

Aspect	Environmental Management Measures		Responsibility
Scheduling and Consultation	**EMM-6**	Limit construction activities to: • Between 7am and 6pm Monday to Friday and 7am to 1pm Saturdays. • Between 1pm to 6pm on Saturdays where, for practical reasons, the activity is unavoidable. • At such other times approved by the responsible authority.	HSE Supervisor
	EMM-7	Provide general information in the form of project newsletters about the type of construction activities, timing, duration and management measures being adopted to minimise disruption to the community.	
	EMM-8	Schedule excessively noisy construction activities during periods that are less likely to result in noise nuisance or disturbance.	
	EMM-9	Provide adequate notice (at least 24 hours) to residents prior to the commencement of any potentially excessive noisy construction activities.	
Complaints Management	**EMM-10**	Manage complaints in accordance with the Complaint Investigation and Response Plan endorsed under Planning Permit 2008/0538/A.	Community Relations Coordinator
Monitoring	**EMM-11**	Construction noise monitoring will take place in accordance with the Noise Compliance Testing Plan endorsed under Planning Permit 2008/0538/A.	HSE Officer

Aspect	Environmental Management Measures		Responsibility
Contingency measures for exceedances	**EMM-12**	In the case of an exceedance in noise levels at a receptor location, ACCIONA will determine: • The timing of the exceedance. • Meteorological conditions at the time of the exceedance. • The methods and type of equipment being used at the time of the exceedance and proximity to the locations at which the exceedance was recorded.	Manager, Environment and Planning
	EMM-13	If the assessment concludes that the exceedance is due to project construction activities, appropriate management measures will be taken to reduce noise emissions and vibrations from construction activities.	
	EMM-14	If noise emissions cannot be reduced, acoustical treatment of affected residences will be considered.	
Waste			
Pre-construction	**EMM-15**	Contact the respective waste and recycling organisations to arrange for: • Storage containers to be situated on site for waste collection. • The removal of waste on a regular basis. • The submission of records (volumes, costs etc).	Site Supervisor
	EMM-16	Provide appropriate domestic waste collection facilities at construction offices. These should include rubbish bins, recycling bins, designated storage areas, cigarette bins and toilet facilities.	
	EMM-17	Provide appropriate industrial waste collection facilities at all work sites, to permit appropriate segregation, storage and disposal of waste. These should include rubbish bins, skips, and designated storage areas for general waste, recycling and regulated waste.	
	EMM-18	Sanitary facility's installed in accordance with EPA (2016) Publication 891.4: Code of Practice – Onsite Wastewater Management. This replaces EPA (2008) Publication 891.1 Septic Tanks Code of Practice.	
	EMM-19	Engage a suitably qualified septic waste contractor to remove toilet waste.	

Aspect	Environmental Management Measures		Responsibility
During Construction	**EMM-20**	Induct personnel in the principles of avoid, reduce, reuse, recycle, and the appropriate systems for disposal of domestic and industrial wastes.	HSE Supervisor
	EMM-21	Stockpile and salvage reusable and recyclable waste such as soils, green waste, pallets and scrap metal.	
	EMM-22	Store and dispose of hazardous materials as per the Hydrocarbon and Hazardous Materials Management Plan (Plan B4)	
	EMM-23	Direct all waste materials to a waste management facility lawfully permitted to accept materials.	
	EMM-24	If any fill material (clean fill) is to be used on site, fill material must comply with EPA (2016) *Publication 1624: Industrial Waste*.	
	EMM-25	Ensure no on-site disposal of waste.	

Inspection and Monitoring

Table B1-5 Construction and Work Site Management Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Noise			
Receiving community/ residential complaints.	Daily	Consultation Manager	Community Relations Coordinator
Check plant and equipment are fitted with appropriate noise abatement devices (e.g. mufflers) and equipment and noise abatement devices are maintained in good working order.	Weekly	Weekly Environmental Checklist	HSE Supervisor
If work must be undertaken outside normal hours, confirm that neighbours within 2km have been informed.	Prior to works occurring	None	HSE Supervisor/ Community Relations Coordinator

Task	Monitoring Frequency	Reporting mechanism	Responsibility
If valid community complaints are received undertake monitoring at affected residences to ascertain compliance with guidelines.	Upon receipt of complaint	Consultation Manager	HSE Officer
Waste			
Volumes of waste to be monitored and recorded on the Monthly Report.	Monthly	Monthly Environmental Report	HSE Supervisor
Inspect litter bin and recycling facilities to ensure that emptying frequency is meeting demand and appropriate segregation is being undertaken.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Visually inspect site for litter generation issues.	Weekly	Weekly Environmental Checklist	HSE Supervisor

B2. Sediment, Erosion and Water Quality Management Plan

Introduction

This Sediment, Erosion and Water Quality Management Plan has been prepared to address the potential issues of erosion and sediment control during the construction of the Mortlake South Wind Farm.

The site lies within the Western Plains which is characterised by generally flat or very gentle rolling plains punctuated by volcanic high points. A geotechnical survey (Sinclair Knight Merz 2008) found that the Mortlake South Wind Farm is located within the 'Hanson Plain Sands' which has low water erosion potential and different proportions of clay through the soil profile.

The site generally has a low erosion hazard due to its gentle slope. However the soils where vegetation cover is sparse may be susceptible to erosion. Topsoil will also be susceptible to erosion following the stripping of vegetation.

Stony Creek runs through the northern part of the site and Lake Keilambete is approximately 3km southeast of the site. Nearby waterways include the Hopkins River located 10km west and Mount Emu Creek located 10km east of the site.

Based on the information obtained from the geotechnical investigations undertaken across the entire site, it is not expected that groundwater will be directly impacted during any part of construction of the wind farm (e.g. excavations associated with the turbine foundations, cable laying or access track construction). However, should groundwater be encountered during construction a range of measure will be implemented to ensure the groundwater is appropriately managed.

Objectives

- Minimise site disturbance.
- Strip and safely stockpile topsoil for later rehabilitation works.
- Divert clean water flows from upslope away from the works areas to limit their erosive potential on disturbed ground.
- Promptly rehabilitate disturbed areas.

Measurable target

- No discharge of contaminated stormwater from the site.
- No significant erosion associated with construction activities.

Key References

- EPA (1991) *Publication 275: Construction Techniques for Sediment Pollution Control*
- EPA (1996) *Publication 480: Environmental Guidelines for Major Construction Sites*
- EPA (1998) *Publication 628: Environmental Guidelines for the Concrete Batching Industry*

Environmental Management Measures

Table B2-1 Sediment, Erosion and Water Quality Management Plan Environmental Mitigation Measures

Aspect	Environmental Management Measures		Responsibility
Siting and Design	**EMM-26**	Site the concrete batching plant and any onsite wastewater disposal treatment areas a minimum of 100m from any watercourses.	HSE Supervisor
	EMM-27	Site any chemical storage, waste materials, litter or any other potential source of pollution a minimum of 100m from any drainage lines or watercourses and in accordance with the EPA (1996) *Publication 480: Environmental Guidelines for Major Construction*.	
	EMM-28	The concrete batching plant will be located, designed and operated in accordance with the EPA (1998) *Publication 268: Environmental Guidelines for the Concrete Batching Industry*. Criteria for siting the concrete patching plant include: • The batching plant is not to be located on flood prone land. • The batching plant is to maintain a buffer distance of at least 100 metres to sensitive land uses (ie. residential dwellings, hospitals, schools, caravan parks and other similar uses) and waterways. • Vehicular access routes to the batching plant should minimise impacts on the environment and amenity and locality. *Note: The batching plant location shown in Figure 2.2-1 complies with the siting guidance within this EMM.*	
	EMM-29	Once construction has been completed the concrete batching plant, laydown area and buildings including construction compound will be removed and the hard stand	

Aspect	Environmental Management Measures		Responsibility
		rehabilitated to an appropriate standard unless the landowner requests it remains for ongoing farm purposes.	
	EMM-30	Delineate an area for vehicle parking.	
	EMM-31	All land disturbance must be confined to the minimum practical working area and the area of exposed soil must be minimised by avoiding vegetation clearance where practicable.	
	EMM-32	Ensure a works on waterways permit has been obtained from the Glenelg Hopkins CMA prior to ground disturbance associated with any works occurring on, under or over the bed and banks of Stony Creek and designated waterways.	
	EMM-33	Any micro-siting of turbines will consider the proximity to designated waterways and low-lying areas which could be subject to ponding and intermittent flow paths.	
Erosion and Sediment Control	**EMM-34**	Install drainage systems, erosion and sediment control devices including (but not limited to) consideration of drainage design, culverts, organic filters and sediment fencing **prior to the commencement of site works**. The final locations and specific erosion control and sediment collection structures and monitoring locations will be determined in during Safety in Design workshops and in consultation with the Civil and Electrical Construction Contractors.	HSE Supervisor
	EMM-35	Divert external water around the construction footprint using drainage structures such as catch drains and bunds.	
	EMM-36	Install geo-textile silt fences (with sedimentation basins where appropriate) on drainage lines and watercourses from the site which are likely to receive runoff from exposed and disturbed areas.	
	EMM-37	Direct storm water runoff from cleared erosion prone areas, and away from receiving drainage lines and watercourses, using retention ponds if necessary.	
	EMM-38	Discharge ponded water away from cleared areas to stable (vegetated) areas.	
Erosion and Sediment Control Inspection	**EMM-39**	Regularly inspect sediment control measures that were installed prior to construction commencing to ensure they are operating effectively.	HSE Supervisor

Aspect	Environmental Management Measures		Responsibility
Roadside drainage	**EMM-40**	Avoid compaction of table drains and roadside verges to facilitate future vegetation establishment.	HSE Supervisor
	EMM-41	Design roadside drains to discharge via an appropriately designed level spreader or riprap structure utilising locally sourced rock.	
	EMM-42	Where necessary, line roadside table drains with jute matting within 10 days of formation where possible.	
Stockpile Management	**EMM-43**	Maintain a minimum distance of 30m between stockpiles and drainage lines and watercourses.	HSE Supervisor
	EMM-44	Stockpiling is to occur outside of areas supporting sensitive flora and/or native vegetation and outside drip line of trees.	
	EMM-45	Where practicable, create separate stockpiles for each soil horizon to aid with site restoration and rehabilitation once work is complete.	
	EMM-46	Ensure stockpiles are designed with slopes no greater than 1(V):2(H).	
	EMM-47	Cover stockpiles with geo-fabric material or seed with sterile grasses if stockpiles are to remain on site for an excessive period.	
	EMM-48	Water stockpiles to suppress dust.	
	EMM-49	Monitor to determine if any dust is being generated over the site and adjacent to public roads (from sources such as cleared areas and stockpiles).	
Fill batters	**EMM-50**	Install sediment fencing within 2m of the toe of all fill batters.	HSE Supervisor
	EMM-51	Ensure fill batters do not exceed 1(V): 3(H).	
	EMM-52	Any steep batters must be treated in accordance with EPA (1991) Publication 275: Construction Techniques for Sediment Pollution Control. This will include utilising the following treatment as required:	

Aspect	Environmental Management Measures		Responsibility
		• Utilising appropriate methods where required to retain top soil (such as installing horizontal boards, mesh, branches, logs or other suitable material or pinning fibre mesh or mulch onto batters). • Rip, scarify, step or otherwise roughen earthen batters which are to be stabilized with vegetation to increase penetration of plant roots. • Spread loamy topsoil 70mm to 100mm thick over steep batters to encourage vegetation growth. • Rounding off batter crests and toes to reduce the chance of erosion.	
Dust and Dirt on Roads	**EMM-53**	Visually inspect public roads for excess dirt/mud.	HSE Supervisor
	EMM-54	Use water sprays and/or a water cart to dampen roads and access tracks if dust becomes a problem on site (due to weather conditions, volume of site traffic etc).	
Rehabilitation	**EMM-55**	Rehabilitate disturbed areas progressively and as soon as practicable following completion of work in each area.	HSE Supervisor
Sewage Management	**EMM-56**	Obtain approval from the Moyne Shire Council for the septic tank and effluent disposal system proposed to be used. The system must have a capacity of at least 9,000L and be inspected/maintained at least on an annual basis and in accordance with Council and manufacturer specifications.	Site Supervisor
	EMM-57	Use a licensed supply and disposal contractor to manage and dispose of all wastewater from portable toilet facilities.	
Water Quality Monitoring	**EMM-58**	Undertake weekly water quality sampling and monitoring at Stony Creek and its tributaries. Monitoring locations are to be within 100 metres of the construction footprint. Monitoring is to include weekly recordings of acidity (pH level), dissolved oxygen (DO), turbidity/suspended solids and conductivity. A baseline reading must be undertaken prior to the commencement of works.	HSE Supervisor
	EMM-59	Water quality metrics are to be monitored against baseline data. Should metrics indicate a significant decline in water quality, mitigation measures associated with construction will be implemented as necessary.	

Aspect	Environmental Management Measures		Responsibility
Erosion and Waterway Sedimentation Response	**EMM-60**	If erosion or sedimentation in waterways or drainage lines is observed, immediately notify the Site Supervisor who will determine appropriate remedial action. Remedial action including but not limited to: reinstate ground cover (including re-seeding), modifying the path of water runoff, exclude livestock from the area until the area is remediated.	HSE Supervisor
	EMM-61	In the event that groundwater is encountered during construction work, the groundwater will be managed by either removing it offsite, discharging it into a sewer, infiltration back into the ground, re-use for dust suppression or another appropriate method.	

Inspection and Monitoring

Table B2-2 Sediment, Erosion and Water Quality Management Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting Mechanism	Responsibility
Visual check that any necessary diversions, bunds etc. are constructed prior to ground disturbance in that area.	Prior to construction	Weekly Environmental Checklist	HSE Supervisor
Inspection of sediment control devices to confirm they are working effectively.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Surveillance for localised erosion on site.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Visually inspect public roads for excess dirt/mud.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Observe if any dust is being generated over the site or adjacent to public roads (from sources such as cleared areas or stockpiles).	Weekly	Weekly Environmental Checklist	HSE Supervisor

Task	Monitoring Frequency	Reporting Mechanism	Responsibility
Sample and analyse water quality of Stony Creek and tributaries. Recordings acidity (pH level), dissolved oxygen (DO), turbidity/suspended solids and conductivity	Weekly	Weekly Environmental Checklist	HSE Supervisor
Inspection and maintenance of any on-site septic tank and wastewater management system.	Yearly	Annual audit	HSE Supervisor

B3. Blasting Plan

A Blasting Plan **has not** been prepared as part of this EMP as no blasting is anticipated to be required.

Should any blasting activities be required, this plan will be developed and a revised EMP will be submitted to the Minister for Planning for endorsement. The blasting plan will contain the information prescribed by Condition 16(c) of Planning Permit 2008/0538/A.

B4. Hydrocarbon and Hazardous Substances Plan

Introduction

Hazardous substances associated with the construction of the Mortlake South Wind Farm are likely to include:

- Chemicals used in concrete mixing process.
- Fuels and oils used in construction machinery.
- Cleaning detergents.
- Marking paints.
- Acetylene and compressed oxygen for oxygen/acetylene cutting.
- Sealants, grout and anti-seize materials used in turbine assembly.
- Herbicides for weed control.
- Oils used in transformers.

Objectives

- Protect air, land, water and human ecological health from the impacts of hazardous materials.
- Ensure that hazardous materials are transported, stored, used and disposed in such a way as to cause no environmental damage.

Key References

- EPA (2015) *Publication 347.1 Bunding*
- Standards Australia (2017) *AS1940:2017 The storage and handling of flammable and combustible liquids*

Measurable targets

- Material Safety Data Sheets (MSDS) and Hazardous Substances registers are kept for all hazardous materials used and/or stored during construction of the Mortlake South Wind Farm.

- All hazardous substances stored correctly (as outlined in material safety data sheets).
- Spill kits present on-site during construction, stocked appropriately and located in close proximity to work activity areas.
- No environmental incidents from spills to land, ground or surface water.

Environmental Management Measures

Table B4-1 Hydrocarbon and Hazardous Substances Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
General	**EMM-62**	Establish and maintain an up-to-date library of MSDS and regulatory authority guidelines for the safe handling, transport and storage of all hazardous materials used in construction activities.	HSE Supervisor
	EMM-63	Review MSDS and any regulatory authority guidelines before handling, transporting and storing hazardous materials.	
	EMM-64	Provide a copy of all data stored within the MSDS cabinets to Victoria Police, Moyne and Warrnambool Municipal Emergency Response Co-ordinator (MERC), Ambulance Group officer and Moyne Shire Municipal Emergency Response Officer (MERO) and Municipal Fire Prevention Officer (MFPO)	
	EMM-65	Train field personnel in procedures for the safe handling, transport, storage and disposal of hazardous materials.	
	EMM-66	Provide spill response kits as necessary at hazardous materials storage facilities and to accompany vehicles, plant and equipment that contain, or are transporting, hazardous materials outside of designated hazardous material work sites. The spill response kit should be appropriate to the type and volume of hazardous goods carried and may include fire suppression equipment and spill containment materials (e.g., absorbent matting, oil booms, and sand bags). Hydraulic equipment, such as excavators, backhoes and drill rigs, must carry spill kits capable of containing hydraulic oil spills.	
	EMM-67	Ensure appropriate personal protective equipment (PPE) is available at site. This may include disposable gloves, face masks and eye protection.	
	EMM-68	Ensure chemicals, chemical wastes and other liquids are stored on site in accordance with EPA (2015) *Publication 347.1 Bunding*.	

Aspect	Environmental Management Measures		Responsibility
Substation Design	**EMM-69**	Install a concrete bunded foundation for oil containment at the substation in accordance with the requirements of AS1940.	Site Supervisor
	EMM-70	Ensure the bund is sized to contain 110% of the main transformers oil volume.	
	EMM-71	Ensure the floor of the bunded area is impervious to oil and water and drains to a collection sump.	
	EMM-72	Ensure the discharge from the pumps sump is through an interceptor to prevent discharge of oil into the stormwater system.	
Hazardous Materials Transport	When transporting hazardous materials:		HSE Supervisor
	EMM-73	Engage an appropriately licensed contractor, who has knowledge of appropriate legislation, handling and reporting procedures, to transport and dispose of hazardous materials.	
	EMM-74	Transport dangerous goods in accordance with relevant State and Federal regulations.	
Hazardous Materials Storage and Use	When storing and using hazardous materials:		HSE Supervisor
	EMM-75	Store and use hazardous materials only as specified in the MSDS and information contained on the product or container label.	
	EMM-76	Minimise the number of hazardous material storage locations.	
	EMM-77	Store hydrocarbon products (including petroleum and diesel fuel, lubricating oil, hydraulic oil and waste oil) in bunded areas constructed in accordance with AS1940.	
	EMM-78	Store flammable materials and other chemicals separately and label in accordance with regulatory requirements.	
	EMM-79	Store corrosive and toxic materials separately in a designated storage area and label in accordance with regulatory requirements.	
	EMM-80	Use chemical storage containers only for the storage of the chemical labelled.	
	EMM-81	Maintain spill response kits as necessary at hazardous materials storage facilities and on vehicles, plant and equipment that contain, or are transporting, hazardous materials outside of designated hazardous material work sites.	

Aspect	Environmental Management Measures		Responsibility
	EMM-82	Do not store, handle or use hazardous materials within 50m of a water body or watercourse or a drainage line leading to a watercourse.	
	EMM-83	Display appropriate warning signs when storing, handling or using hazardous materials.	
	EMM-84	Refuelling to take place within the bunded fuel storage area, where practical.	
Hazardous Material Disposal	**EMM-85**	When disposing of hazardous materials, collect and dispose or recycle all waste hazardous materials and their containers to approved disposal or recycling facilities.	Site Supervisor
Spill Response	**EMM-86**	If a spill occurs, immediately contain and clean up the spill in accordance with the relevant MSDS and report the spill to the Site Supervisor.	HSE Supervisor

Inspection and Monitoring

Table B4-2 Hydrocarbon and Hazardous Substances Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Ensure that hazardous substances on site are listed on the Hazardous Substances Register.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Ensure chemical storage areas are signed with the appropriate signage and maintained in good working condition.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Inspect storage facilities and bunding to check for tidiness, structural integrity and possible undetected leaks or spills.	Weekly and; After each significant rainfall event	Weekly Environmental Checklist	HSE Supervisor
Inspect that spill kits are available and stocked appropriately.	Weekly	Weekly Environmental Checklist	HSE Supervisor

B5. Flora and Fauna Management Plan

Introduction

The wind farm site lies on flat land which has been cleared for agricultural development. The site supports improved pastures that are used for grazing, as well as areas of cropping. Native vegetation within the proposed disturbance footprint for the wind farm site is limited to small areas, as highlighted in Figure B5-1. It is noted that the areas of potential native vegetation within the railway easement which may contain remnant vegetation which is subject to detailed vegetation survey during the appropriate season and has been conservatively noted as native vegetation on Figure B5-1.

A small number of wetlands, farm dams occur on and in the vicinity of the site and a degraded channel, named Stony Creek, runs across the northern section of the site. The site was found not to support any significant habitat for rare or threatened flora.

Flora and fauna at the Mortlake South Wind Farm site consists of the following:

The site is dominated by introduced pasture species and has been subject to intensive agricultural modification and production for the past 50 years.

Only one significant non-avian fauna species was recorded on the site, the Southern Bent-wing Bat. It is considered that there are unlikely to be any adverse effects upon the regional population of this species, given the lack of suitable foraging habitat for it. The Southern Bent-wing Bat is addressed in the Mortlake South Wind Farm Bat and Avifauna Management Plan (BAM Plan).

The lack of suitable habitat for other native fauna on the site makes it unlikely that any other nationally or state listed or threatened species of non-avian fauna would occur on the site.

The birds of the site are dominated by common farmland birds whose conservation significance is of least concern. No threatened species are likely to occur on the site regularly or in significant numbers due to a lack of habitat.

Infrastructure including turbines, access tracks, electrical infrastructure buildings and the batching plant is not anticipated to impact any native flora or fauna. There will be no temporary disturbance as native vegetation removed as part of the project, as the vegetation will be removed permanently and off-set as required by the planning permit. If during the detailed design phase native vegetation is identified for removal, the process outlined in the native vegetation protocol will be followed.

The Planning Permit allows for up to 0.31ha of native vegetation is removed, subject to securing suitable offsets.

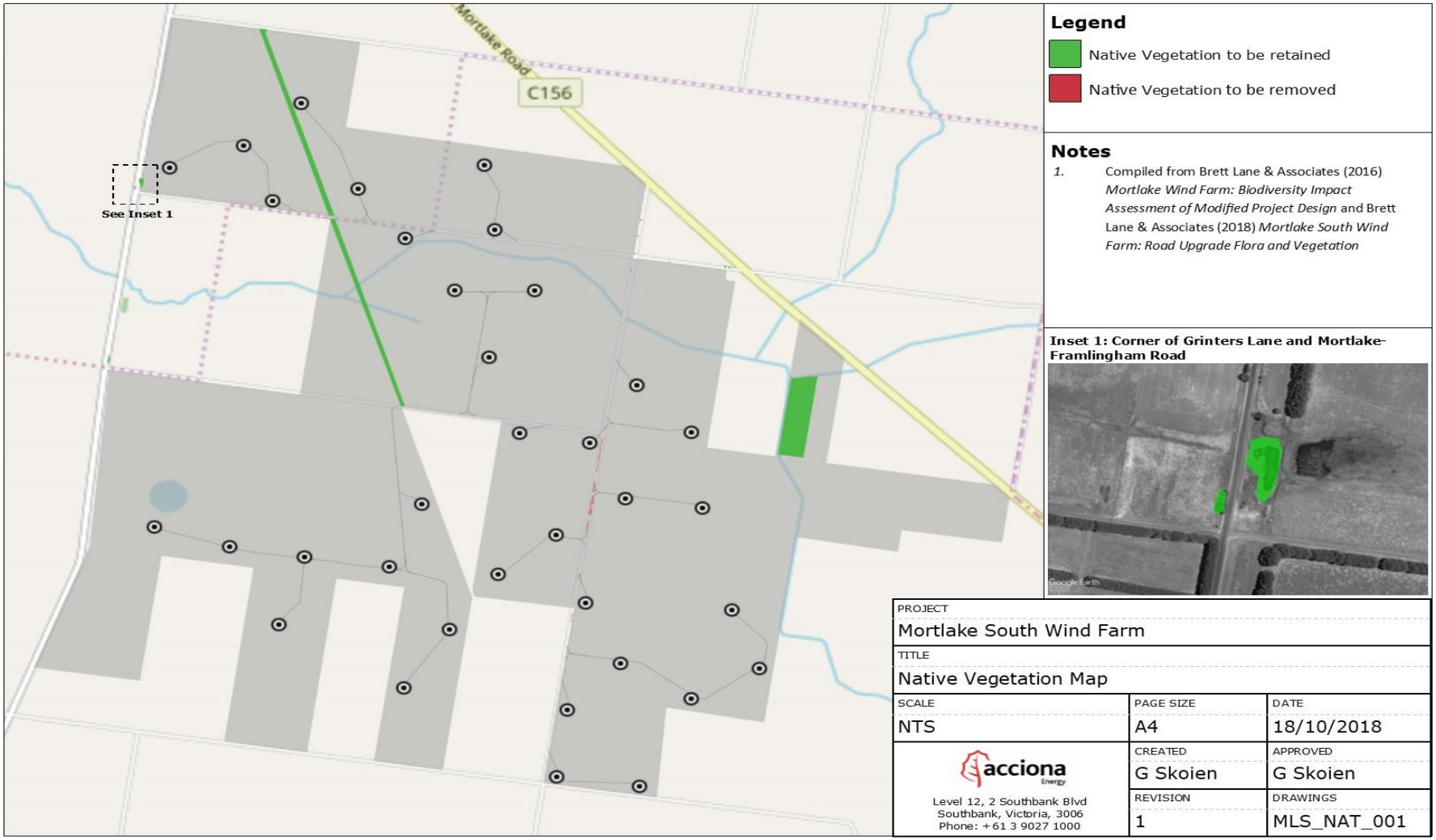


Figure B5-1: Location of On-Site Native Vegetation. Refer to Brett Lane & Associates (2018) for detailed mapping of roadside native vegetation. Refer to Appendix B for detailed mapping of native vegetation locations within road reservations.

Objectives

- Avoid the removal of native vegetation.
- Provide procedure for rehabilitation of the site
- Protect native flora and fauna habitat.
- Minimise disturbance to native fauna.

Key References

- *Wildlife Act 1975*
- DELWP (2017) *Guidelines for the removal, destruction or lopping of native vegetation*

Measurable target

- No damage to native flora and fauna that is not approved for removal.
- No significant adverse impact on native fauna species.
- Appropriate rehabilitation.

Environmental Management Measures

Table B5-1 Flora and Fauna Management Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
Pre-construction	**EMM-87**	For native vegetation that is to be removed as shown in Figure B5-1, offsets will be secured prior to the commencement of construction in accordance with the Planning Permit.	Site Supervisor
	EMM-88	Protect native vegetation to be retained in close proximity to construction areas with highly visible fencing (e.g. safety mesh).	

Aspect	Environmental Management Measures		Responsibility
	EMM-89	Where construction is to occur immediately adjacent to the disused rail reserve, and where native vegetation is present, protective fencing will be erected to prevent any accidental damage from occurring.	
Inductions	**EMM-90**	All personnel accessing the Mortlake South Wind Farm site are to be inducted on this Flora and Fauna Management Plan before entering the site.	HSE Supervisor
	EMM-91	The key personnel to be contacted in the event of a compliance breach is the on-site HSE Supervisor (or representative) and is to be clearly indicated during the induction.	
Disturbance from vehicles and machinery	**EMM-92**	Vehicles and machinery to be restricted to the approved disturbance footprint.	HSE Supervisor/Site Supervisor
	EMM-93	All areas of native vegetation outside of, but near (i.e. within 30 metres) the approved disturbance area are to be fenced off at two metres from the perimeter with high-visibility para-webbing (or similar) during the entire duration of construction/works (unless existing fencing already separates the construction works from the native vegetation). These areas are to be clearly signed as follow: "VEGETATION PROTECTION AREA – ACCESS PROHIBITED". Fencing and signage is to be maintained during the entire duration of construction/works.	
	EMM-94	All machinery and vehicles are to enter and exit the site along defined routes.	
Alteration of hydrology or soil moisture levels	**EMM-95**	All cable trenches and access tracks are to be designed and constructed in a manner which does not restrict or significantly alter surface water runoff within tributaries/catchments for areas supporting native vegetation (i.e. uphill of these areas of within permanent of ephemeral drainage lines or watercourses).	Site Supervisor
	EMM-96	Where required, this is to include the following measures to direct surface water runoff in the appropriate direction: • Appropriate levelling of access tracks • Permanent piping or provision of culverts under access tracks • Suitably designed and constructed bridges over any identified significant, permanent drainage lines or watercourses.	

Aspect	Environmental Management Measures		Responsibility
Native Trees	**EMM-97**	Any native tree or shrub pruning is to be undertaken by a suitably qualified arborist to prevent disease or unnecessary damage to woody plants or disturbance to understory vegetation during pruning.	HSE Supervisor
	EMM-98	Ensure that pruning does not exceed one third of any native tree or shrub unless a planning permit has been granted by Moyne Shire Council.	
	EMM-99	Any native trees or shrubs that die within 12 months of pruning must be replaced with the same species which was lost and maintained for 24 months.	
	EMM-100	All cable trenching and excavating will occur outside the Tree Retention Zone (TRZ) where possible, where the TRZ is an area around the tree with a radius of 12 times the diameter at breast height (capped at no less than 2 metres and no greater than 15 metres).	
Native Fauna	**EMM-101**	In the event that fauna is identified and unable to leave the construction zone safely or is found injured, a suitably qualified wildlife handler or zoologist is to be engaged to capture and appropriately manage the native fauna. The wildlife handler or zoologist will be required to hold an appropriate license or authorisation under the *Wildlife Act 1975.*	Site Supervisor
Stockpiles	**EMM-102**	Any stockpiling is to occur outside of areas supporting native vegetation.	Site Supervisor
	EMM-103	Erosion control activities are to include: • The use of sediment fences down slope of exposed soil and stockpiles. • Bunding of stockpiles. • Minimisation of the area of disturbed soil at any one time.	
Cable trenching and excavating	**EMM-104**	Limit the amount of trench opened in any one day to the distance that can be backfilled in that day to minimise the occurrence of fauna getting trapped in the trench.	Site Supervisor
	EMM-105	Temporarily fence excavated foundations with fauna proof fencing until concreted to minimise opportunities for trapping fauna	
	EMM-106	Any trenching left open overnight will be fenced with fauna proof fencing or covered over, or that the end of all trenches will be battered to enable trapped fauna to escape.	

Aspect	Environmental Management Measures		Responsibility
	EMM-107	Inspect any open trench and excavations daily, as soon as practicable following sunrise, for trapped stock and native fauna.	
	EMM-108	Engage a suitably qualified wildlife handler or zoologist to capture, handle and release any trapped native fauna. The wildlife handler or zoologist will be required to hold an appropriate license or authorisation under the *Wildlife Act 1975.*	
	EMM-109	Retrieve or release native fauna in the vicinity of suitable habitat within 100 metres of the area in which it was found trapped or was observed to have entered the trench.	
	EMM-110	Record the location, date and time and species of trapped native fauna.	
Site Rehabilitation	**EMM-111**	Following construction and commissioning, the site will be restored by: • removal of contractor's facilities and any wastes or surplus materials. • removal and restoration of any temporary construction areas. • ongoing maintenance of any land stabilisation required until adequate ground cover is established.	Site Supervisor
	EMM-112	Natural regeneration is the preferable method of rehabilitation, however if evidence of regeneration is not observed during the spring season following construction, revegetation via direct seeding and rehabilitation is to occur.	
	EMM-113	Rehabilitation and revegetation of disturbed areas in the construction zone not required for the ongoing use of the wind farm using appropriate pasture species will be used which is consistent with surrounding vegetation subject to landowner consultation.	
	EMM-114	The disturbed areas to be revegetated will be levelled and compacted prior to seeding. Reseeding of the disturbed areas by manually raking seeds through topsoil, hydroseeding or another suitable seeding methodology.	
	EMM-115	Following revegetation, pest plant management will be undertaken within 6 months of rehabilitation where deemed required by the HSE Supervisor in accordance with B8 Pest Plant Management Plan of this EMP.	

Inspection and Monitoring

Table B5-2 Flora and Fauna Management Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Regular inspections to ensure all areas of native vegetation within 30 metres of disturbance areas are suitably protected and have not been damaged or evidence of pest plants infestation.	Prior to works commencing in that area. Then weekly checks thereafter.	Weekly Environmental Checklist	HSE Supervisor
Ensure the marking on trees to be removed and/or lopped is visible.	Prior to trees being removed	None	HSE Supervisor
Regularly inspect site to ensure stockpiles are not stored under the drip line of trees or on top of native vegetation.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Regularly inspect the rehabilitation and revegetation post construction to ensure revegetation is occurring.	Monthly post construction	Weekly Environmental Checklist	HSE Supervisor
Ensure any translocation of other fauna is undertaken by a suitably qualified wildlife ecologist.	Pre and during construction	None	HSE Supervisor
Regularly inspect any protective fencing.	Weekly	Weekly Environmental Checklist	HSE Supervisor

Native Vegetation Removal Protocol

The native vegetation proposed to be removed as part of the wind farm development has been provided in Figure B5-1 of this EMP. It is noted that the areas of potential native vegetation within the railway easement will be avoided by underground boring.

Condition 36, 37, 38 and 39 of Planning Permit 2008/0538/A govern the removal of native vegetation. The permit allows the removal of up to 0.31ha of native vegetation, subject to appropriate offsetting **prior to** the removal of the native vegetation. Offsetting must be in accordance with the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (DEPI 2013).

Before any native vegetation is removed, evidence that the required offset for the project has been secured must be provided to the satisfaction of the Minister for Planning. The offset evidence can be:

- a security agreement signed by both parties, to the required standard, for the offset site or sites, including a 10 year offset management plan, or
- an allocated credit extract from the Native Vegetation Credit Register.

A copy of the offset evidence will be endorsed by the Minister for Planning and form part of the Planning Permit.

Once offsetting is achieved, areas of native vegetation to be retained within close proximity to the disturbance footprint, the following will be undertaken:

- Fencing will be used to protect native vegetation; and
- These fenced areas will be approved by the Manager, Environment and Planning prior to disturbance occurring.

B6. Wildfire Prevention and Emergency Response Management Plan

Introduction

The Mortlake South Wind Farm site is not in a high risk area for wildfires. However, fires can eventuate from hot work activities, fires within engines or from sparks from friction igniting dry grass. Therefore construction activities need to be managed in conjunction with the local Country Fire Authority (CFA) to ensure it poses no significant additional risk to the likelihood of wildfire.

Objectives

- Minimise the occurrence of fire at the Mortlake South Wind Farm site.
- Minimise damage caused in the instance of a fire.
- Construct the wind farm in accordance with CFA Guidelines.

Measurable target

- No occurrences of fire resulting from construction activities.
- All on-site employees and contractors are competent in fire response procedures.

Key References

- CFA, MFB & DSE (2014) *Fire Safety Guidelines: Identification of Street Hydrants for Firefighting Purposes*
- CFA (2017) *Emergency Management Guidelines for Wind Energy Facilities*
- Standards Australia (2009) *AS3959-2009 Construction of buildings in bushfire prone areas*
- Standards Australia (2012) *AS1851-2012 Routine service of fire protection systems and equipment*

Environmental Mitigation Measures

Table B6-1 Wildfire Prevention and Emergency Management Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
Pre-construction	**EMM-116**	Design all non-temporary buildings to comply with AS3959.	Site Supervisor
	EMM-117	Access tracks and water supply points must be designed in accordance with CFA (2017) *Emergency Management Guidelines for Wind Energy Facilities*. This includes: • All constructed roads are to have a minimum trafficable width of 4 metres with a 4 metre vertical clearance for the width of the road. • Roads must be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width. • The average grade of roads must be no more than 1 in 7 (14.4%) with a maximum of no more than 1 in 5 (20%) for no more than 50 metres. • Dips in the road must be no greater than a 1 in 8 (12.5%) entry and exit angle. • Water access points must be located in easily identifiable areas, accessible in all weather conditions. • Water access points must be designed, constructed and maintained for a load limit of at least 15 tonnes. • A turning point with a minimum radius of 10 metres is required for fire appliances at all water access points. • Fire brigade appliances must be able to park within 4 metres of the water supply outlet on a hard stand area. • Water access points must be marked by appropriate signage as per CFA, MFB & DSE (2014) *Fire Safety Guidelines: Identification of Street Hydrants for Firefighting Purposes*.	
	EMM-118	Determine, in consultation with the CFA, appropriate fire-fighting equipment to be stored on site during construction.	

Aspect	Environmental Management Measures		Responsibility
	EMM-119	Hold a site familiarisation and emergency planning workshop with the CFA and ESV to discuss fire response measures.	
Fuel Reduction	**EMM-120**	Ensure no long grass or deep leaf litter in areas where plant and heavy equipment is working.	HSE Supervisor
	EMM-121	Ensure a fuel reduced area of 4 metres is kept around the perimeter of the electricity compounds and substation facilities.	
	EMM-122	Ensure grass is kept to a height of no more than 100mm in height and no more than 10mm deep for a distance of 30 metres around constructed buildings and viewing platforms.	
During Construction	**EMM-123**	Handle flammable materials and ignition sources as per instructions on the MSDS and in accordance with the Hydrocarbon and Hazardous Substances Management Plan (Refer to Plan B4).	HSE Supervisor/ Site Supervisor
	EMM-124	Provide appropriate fire-fighting equipment at designated work sites.	
	EMM-125	Ban all fires on site for any purpose at any time.	
	EMM-126	Ensure spark-arrestors are installed and maintained on all vehicles, plant and equipment.	
	EMM-127	Ensure flashback arrestors are fitted to oxygen/acetylene equipment.	
	EMM-128	A static water storage unit will be located at the site compound during construction (Minimum 22500 litres). The tank must have at least one (preferably two) 64mm, 3 thread/25mm x 60 nominal bore British Standard Pipe round male coupling 50mm from its base unless an alternative coupling is deemed acceptable by the CFA. Outlets should be 2 metres apart.	
	EMM-129	During periods of high fire danger: • Firebreaks will be created around each turbine site, the substation site and facilities building. • The use of explosives or hot work will be banned.	

Aspect	Environmental Management Measures		Responsibility
Vehicles	**EMM-130**	All vehicles on site during construction within the fire danger period are to be equipped with the following: • Passenger Vehicles – 1Kg 2A:40B:E Dry Chemical extinguisher; • Trucks and Plant – 4.5Kg 2A:40B:E Dry Chemical extinguisher; • Trucks and Plant – 9Lt Stored Pressure Water Extinguisher with a minimum rating of 3A; • Appropriately equipped First Aid Kit; • Wheel changing equipment; • Tow rope or snatch strap • A pair of wire cutters; • A torch; • Sufficient fire blankets to cover all passengers (at least 2);	HSE Supervisor / Site Supervisor
	EMM-131	Vehicles shall be checked weekly during the Fire Season to ensure the mandatory equipment (required by EMM-130) and records maintained.	
Hot works	**EMM-132**	Obtain a 'Hot Works Permit' from the Site Supervisor prior to commencement of hot works.	Site Supervisor
	EMM-133	A fire-resistant shield will be used to prevent sparks or hot material from leaving the hot work area (10m from active grinding equipment or 1.5m from other hot work source).	
	EMM-134	A fireproof container will be used for off-cuts and butts.	
	EMM-135	The hot work area (10m from active grinding equipment or 1.5m from other hot work source) will be kept clear of all flammable material or is kept wetted down.	
	EMM-136	Appropriate fire extinguishers or water supply (with tap and hose) will be kept on hand.	

Inspection and Monitoring

Table B6-2 Wildfire Prevention and Emergency Response Management Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Inspect site to ensure that there is no build-up of flammable material on the site including petrol, wood, dried vegetation and long grass.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Inspect vehicles to ensure fire extinguishers are in appropriate operational condition as per AS1851.	Semi-annually	None	HSE Supervisor
Ensure all engineering plans for access tracks have been designed in accordance with CFA (2017) *Emergency Management Guidelines for Wind Energy Facilities*	Pre-Construction Check	None	Project Manager
Ensure all water access points and turning areas for fire vehicles remain free from obstructions and are appropriately signed.	Weekly	Weekly Environmental Checklist	HSE Supervisor

Emergency Procedures

The following steps are to be undertaken in the event of an emergency. An emergency includes but is not limited to wildfire on or close by to site, a structure fire, hazardous material incident and medical emergency:

- **Ring '000'**
- Advise Management
- Evacuate Staff and Contractors to Assembly Areas
- Account for staff/Contractors
- Conduct initial fire attack if safe to do so
- Allocate personnel to meet and liaise with CFA, Ambulance or police

- CFA to assume control in event of a fire
- Obey direction given by CFA OIC, ambulance or police officer.

B7. Pest Animal Management Plan

Introduction

This Pest Animal Management Plan aims to ensure that the construction of the Mortlake South Wind Farm does not lead to an increase in declared pest animals under the *Catchment and Land Protection Act 1994*, including Common Rat (rat), European Rabbit (rabbit) and Red Fox (fox) populations on the site.

This plan focuses on ensuring that there is no increase in habitat or food supplies for rabbits arising from the construction of the wind farm. It responds to potential risks arising from earthworks that can create additional harbour and warren opportunities for rabbits and rats.

Objectives

- Minimise the potential for the spread of pest animals on the site.
- To detail land management and control measures that will prevent the number of fox and rabbit increasing in areas affected by development of the wind farm.
- To detail documentation methods and requirements.

Measurable target

- No increase in rat, fox and rabbit habitat or food supply or introductions of other declared pest animals onsite.

Key References

- *Catchment and Land Protection Act 1996* (Vic)
- *Catchment and Land Protection Regulations 2012* (Vic)
- *Wildlife Act 1975* (Vic)
- *Prevention of Cruelty to Animals Act 1986* (Vic)
- Civil Contractors Federation (2011) *A Guide for Machinery Hygiene for Civil Construction*

- DEDJTR (2009) *Biosecurity Guidelines for Movement of Equipment*
- DEDJTR (2017) *Invasive Plants and Animals Policy Framework*
- NSW Department of Primary Industries (2005) *Humane Pest Animal Control Codes of Practice and Standard Operating Procedures*

Environmental Management Measures

Table B7-1 Pest Animal Management Plan Environmental Mitigation Measures

Aspect	Environmental Management Measures		Responsibility
General	**EMM-137**	Ensure all personnel are inducted and aware of issues and management measures relating to pest animals.	HSE Supervisor
	EMM-138	Any pest animals trapped by construction activities (ie. trenching) or otherwise in the possession of construction personal must be humanely destroyed by suitably qualified personnel in accordance with referenced guidelines.	
	EMM-139	Visual inspections during construction of disturbed areas for any pest animals including rats, rabbits and foxes. All sitings are to be recorded in a management log.	
Specific Pest Animal control: <u>Rabbits</u>	**EMM-140**	Rocks removed or moved during construction must be placed in a manner that does not create piles that form harbour for rabbits. Rocks should be spread at low density in areas of pasture or used in habitat reinstatement.	HSE Supervisor
	EMM-141	Control all rabbit burrows that become established in areas disturbed during construction through fumigation and/or warren ripping using the measures prescribed in Regulation 8 of the *Catchment and Land Protection Regulations 2012*.	
Specific Pest Animal control: <u>Rat</u>	**EMM-142**	Rocks removed or moved during construction must be placed in a manner that does not create piles that form harbour for rats. Rocks should be spread at low density in areas of pasture or used in habitat reinstatement.	HSE Supervisor

Aspect	Environmental Management Measures		Responsibility
Specific Pest Animal control: <u>Foxes</u>	**EMM-143**	All food scraps to be deposited in tamper-proof bins installed in designated storage areas.	HSE Supervisor
	EMM-144	Animal carcasses found within the wind farm to be removed immediately (with landowner permission) to lessen the availability of carrion for foxes.	
	EMM-145	Rocks removed or moved during construction must be placed in a manner that does not create piles that form harbour for foxes. Rocks should be spread at low density in areas of pasture or used in habitat reinstatement.	
	EMM-146	In the event that fox dens that become established in areas disturbed during construction, fumigation and/or infilling will be implemented.	

Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Visual inspections during construction of disturbed areas for any pest animal harbour, including rats, rabbits and foxes.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Visual inspections during construction for potential pest animal food supply or other declared pest animals onsite	Weekly	Weekly Environmental Checklist	HSE Supervisor

B8. Pest Plant Management Plan

Introduction

Pest plant species are found over most of the Mortlake South Wind Farm site. Construction activities has the potential to spread of existing weeds and plant pathogens, and to introduce weeds and pathogens to areas that were previously free of these species.

Three declared noxious weed species have been previously identified on the site during environmental surveys and are to be controlled in areas disturbed by the construction of the wind farm:

- Gorse (*Ulex europaeus*) – Regionally Controlled
- Spear Thistle (*Cirsium vulgare*) – Restricted
- Variegated Thistle (*Silybum marianum*) – Restricted

In addition to the above:

- DEDJTR has advised that there is a known infestations of Serrated Tussock (Nassella trichotoma) on land abutting the Mortlake South Wind Farm site; and
- Moyne Shire Council has advised that there are known infestations of African Boxthorn (Lycium ferocissimum) along Chamallack and Grinters Lanes.

Objectives

- Minimise the potential for the spread of pest plants and pathogens on the site.
- Minimise the potential for new pest plants or pathogens to be introduced to the site.

Measurable target

- No increases in the extent of pest plants present onsite.
- No new introductions of new noxious weed species on site.

Key References

- *Catchment and Land Protection Act 1996* (Vic)
- *Catchment and Land Protection Regulations 2012* (Vic)
- Civil Contractors Federation (2011) *A Guide for Machinery Hygiene for Civil Construction*
- DEDJTR (2009) *Biosecurity Guidelines for Movement of Equipment*
- DEDJTR (2017) *Invasive Plants and Animals Policy Framework*

Environmental Management Measures

Table B8-1 Pest Plant Management Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
Pre-construction	**EMM-147**	Provide shaker pads/cattle grids at all site entrances.	Site Supervisor
	EMM-148	Provide a hygiene wash-down facility at the construction compound. The wash-down facility will be located at least 100 m from drainage lines or designated waterways.	
	EMM-149	Ensure all personnel are inducted and aware of biosecurity issues and management measures relating to weed and pathogen spread.	
	EMM-150	Undertake pest plant survey to confirm the extent of pest plant distribution prior to disturbance.	
Exposed earth management	**EMM-151**	Minimise areas of exposed earth to prevent invasion of pest plants.	Site Supervisor
	EMM-152	Rehabilitate and revegetate bare earth with appropriate non-invasive species as outlined in EMM-112 to EMM-115.	
Traffic Management	**EMM-153**	Ensure that all vehicles and plant machinery stay on approved access tracks to minimise the risk of pest plant spread.	Site Supervisor
	EMM-154	Ensure all vehicles/ plant/ machinery report to the construction compound when arriving on site on a daily basis. All ground-breaking plant/ machinery will be inspected on arrival. Any vehicles/ plant/ machinery which is determined to contain soil, plant	

Aspect	Environmental Management Measures		Responsibility
		material or compounds which may contain any seed or plant parts capable of growing must be washed down.	
	EMM-155	The wash down will be undertaken using cold water, through a high-pressured hose.	
	EMM-156	Following wash down, the vehicle/plant/machinery is to be subsequently inspected and be free of any soil or plant material prior to accessing the remainder of the site.	
	EMM-157	All materials and products including soil, sand, gravel, rock, water, fertiliser, mulch, seed, plants and packaging are to be sourced from appropriately licenced quarries and suppliers and free of pest plant material before entering the site.	
	EMM-158	A record of material being imported to site will be maintained during the construction of the wind farm. The log will include material description, quantity, source of the material and deposition at the site.	
Weed Control	**EMM-159**	Control listed weeds in areas disturbed by the construction of the wind farm for at least 24 months immediately following the completion of each stage of works.	HSE Supervisor
	EMM-160	Control any significant weed outbreaks resulting from wind farm construction adjacent to areas supporting native vegetation at least 24 months following the completion of each stage of works.	
	EMM-161	Adopt precision weed control methods outlined in Regulation 7 of the *Catchment of Land Protection Regulations 2012*. This shall include spot-spraying in accordance with the product label and directions for use, of a herbicide product that is registered by the Australian Pesticides and Veterinary Medicines Authority. The label of the herbicide must allow for the control of the relevant weed species.	
	EMM-162	If herbicide is delivered through a hand held appliance, a compatible marker dye must be incorporated into the herbicide	
	EMM-163	Do not apply herbicide in wet areas or within two days of rain (before or after).	

Inspection and Monitoring

Table B8-2 Pest Plant Management Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Visual inspections of construction sites and disturbed areas for any weed growth including noxious species.	Weekly	Weekly Environmental Checklist	HSE Supervisor

B9. Cultural Heritage Management Plan

Introduction

A CHMP was approved by Aboriginal Affairs Victoria (AAV) (now Aboriginal Victoria) in 2009. Compliance with an approved CHMP is a legislative requirement pursuant to Section 67A of the *Aboriginal Heritage Act 2006* (Vic). The CHMP did not locate any artefacts within the Mortlake South Wind Farm.

The CHMP identifies two areas of high likelihood for aboriginal archaeological significance. The design of the wind farm has intentionally avoided disturbing these areas. The remaining areas are considered to have a low likelihood of containing aboriginal archaeological significance or artefacts.

Contingency plans have been incorporated into both the CHMP and this EMP in the event cultural heritage or human remains are discovered during construction.

Objectives

- Minimise the impact to Aboriginal cultural heritage.
- Manage impacts where they cannot be avoided.

Measurable target

- No damage to aboriginal cultural heritage outside of the CHMP activity area.

Key References

- Environmental Resource Management Australia (2008) *Mortlake Wind Farm, Mortlake, Victoria: Aboriginal Cultural Heritage Management Plan*

Environmental Management Measures

Table B9-1 Cultural Heritage Management Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
Pre-construction	**EMM-164**	Engage a Heritage Advisor to prepare a cultural heritage induction booklet.	HSE Supervisor
Inductions	**EMM-165**	All personnel accessing the Mortlake South Wind Farm site are to be inducted on the CHMP before entering the site.	HSE Supervisor
	EMM-166	The key personnel to be contacted in the event of a compliance breach are to be clearly indicated during the induction.	
Disturbance from vehicles and machinery	**EMM-167**	Vehicles and machinery to be restricted to the approved disturbance footprint, where practicable.	HSE Supervisor
	EMM-168	Protect areas of suspected Aboriginal cultural heritage in close proximity to construction areas with highly visible fencing or safety mesh during the entire duration of construction/works. Fencing is to be maintained during the entire duration of construction/works.	
	EMM-169	All machinery and vehicles are to enter and exit the site along defined routes.	
Discovery of aboriginal cultural heritage	**EMM-170**	If any suspected aboriginal cultural heritage material is discovered on site, follow the aboriginal cultural heritage contingency plan.	HSE Supervisor
Discovery of human remains	**EMM-171**	If any suspected human remains are discovered on site, follow the discovery of human remains contingency plan.	HSE Supervisor

Inspection and Monitoring

Table B9-2 Cultural Heritage Management Plan Inspection and Monitoring

Task	Monitoring Frequency	Reporting mechanism	Responsibility
Ensure construction works do not extend outside the area assessed under the CHMP.	Weekly	Weekly Environmental Checklist	HSE Supervisor

Aboriginal Cultural Heritage Contingency Plan

This plan summarises the requirements of the contingency plan contained within the approved CHMP. The contingency plan must be read on conjunction with the approved CHMP.

Contingency for the Discovery of Aboriginal Cultural Heritage

A person who discovers or suspects they have discovered Aboriginal cultural heritage during construction activities within the activity area covered by this CHMP will immediately notify the person in charge of the activity. The person in charge of the activity must then suspend any relevant works at the location of the discovery and within five metres of the extent of the suspected site.

The person in charge of the activity must then contact a Heritage Advisor who, after consultation with the RAP/s or (in the absence of (a) RAP/s) the RAP applicant/s or (in the absence of (a) RAP applicant/s) AV will evaluate the Aboriginal cultural heritage to determine if the material is part of a known site or is a new site. The Heritage Advisor will then be engaged to update and/or complete site records and advise on possible management strategies.

Within a period of three (3) working days a decision/recommendation will be made by the Heritage Advisor in consultation with a representative of the RAP and the Sponsor in regard to the process to be followed to manage the cultural heritage in a culturally appropriate manner, and how to proceed with the works.

In instances where salvage of discovered Aboriginal cultural heritage is required, decisions about how to proceed with salvage excavation must be made on a case-by-case basis by the Heritage Advisor, in conjunction with a representative of the RAP. Aboriginal Victoria may also be consulted. The methodology of any salvage excavation must be appropriate to the site type(s) discovered and the nature, extent and significance of the site(s). For this reason, and in order to avoid the application of salvage methodologies which are inappropriate to the type of Aboriginal cultural heritage discovered, this contingency plan does not propose any particular methodological details for the salvage of Aboriginal cultural heritage unexpectedly discovered during the proposed activity. It should be noted, however, that any

salvage excavation undertaken following the unexpected discovery of Aboriginal cultural heritage will abide by Regulation 61 of the Aboriginal Heritage Regulations 2007 and be undertaken in accordance with proper archaeological practice.

Failure of parties to reach an agreed course of action in this manner will be classed as a Dispute under this agreement – the contingency plan in the approved CHMP regarding dispute resolution must be followed.

Work may recommence within the area of exclusion:

- When the appropriate protective measures have been taken;
- Where the relevant Aboriginal cultural heritage records have been updated and/or completed;
- Where all parties agree there is no other prudent or feasible course of action; or
- Once any relevant dispute has been resolved.

Where relevant ACCIONA and the RAP representative will ensure that the above steps are followed and that legal obligations and requirements are complied with at all times.

Contingency for the Removal, Curation and Custody of Aboriginal Cultural Heritage (Artefacts)

Should any Aboriginal cultural heritage be discovered during the proposed activity, the custody of Aboriginal cultural heritage should comply with the requirements of the *Aboriginal Heritage Act 2006* and be assigned in the following order of priority (as appropriate):

1. The RAP for the land from which the Aboriginal cultural heritage has been salvaged;
2. Any relevant registered native title holder for the land from which the Aboriginal cultural heritage has been salvaged;
3. Any relevant native title party (as defined in the Aboriginal Heritage Act 2006) for the land from which the Aboriginal cultural heritage has been salvaged;
4. Any relevant Aboriginal person or persons with traditional or familial links with the land from which the Aboriginal cultural heritage has been salvaged;
5. Any relevant Aboriginal body or organisation which has historical or contemporary interests in Aboriginal heritage relating to the land from which the Aboriginal cultural heritage has been salvaged;
6. The owner of the land from which the Aboriginal cultural heritage has been salvaged;
7. The Museum of Victoria.

Should, in the course of community consultation, it be determined that any of the above people or groups (except the Museum of Victoria) wish to rebury the Aboriginal cultural heritage then the following must occur:

The relevant site record card must be updated and a 'collection' component form must be completed.

The reburial location should be known, relocatable, and in an area which is protected from future development or disturbance.

Artefacts to be reburied should be placed in a durable container with reference to provenance and with the catalogue and assessment documentation.

It should be noted that any Heritage Advisor engaged to investigate any Aboriginal cultural heritage has the right to retain custody of Aboriginal cultural heritage for a period of up to one year for analysis.

Discovery of Human Remains Contingency Plan

If any suspected human remains are found during any activity, works must cease immediately. The Victoria Police and the State Coroner's Office must be notified immediately following any such discovery. If there are reasonable grounds to believe that he remain are Aboriginal, the Coronial Admissions and Enquiries hotline must be immediately notified on 1300 888 544.

This advice has been developed further and is described in the following 5 step contingency plan. Any such discovery at the activity area must follow these steps.

1. Discovery:

- If suspected human remains are discovered all activity in the vicinity must stop to ensure minimal damage is caused to the remains; and
- The remains must be left in place, and protected from harm or damage.

2. Notification:

- Once suspected human skeletal remain have been found, the Coroner's Office and the Victoria Police must be notified immediately;
- If there is reasonable grounds to believe the remains are Aboriginal Ancestral Remains, the Coronial Admissions and Enquiries hotline must be immediately notified on 1300 888 544
- All details of the location and nature of the human remains must be provided to the relevant authorities.
- If it is confirmed by these authorities that the discovered remains are Aboriginal skeletal remains, the person responsible for the activity must report the existence of the human remains to the Victorian Aboriginal Heritage Council in accordance with Section 17 of the *Aboriginal Heritage Act 2006*.

3. Impact Mitigation or Salvage:

- The Victorian Aboriginal Heritage Council, after taking reasonable steps to consult with any Aboriginal person or body with an interest in the Aboriginal human remains will determine the appropriate course of action as required by s.18(2)(b) of the *Aboriginal Heritage Act 2006*.
- An appropriate impact mitigation or salvage strategy as determined by the Victorian Aboriginal Heritage Council must be implemented (this will depend on the circumstances in which the remains were found, the number of burials found and the type of burials and the outcome of consultation with any Aboriginal person or body);

4. Curation and Further Analysis:

- The treatment of salvaged Aboriginal human remains must be in accordance with the direction of the Victorian Aboriginal Heritage Council.

5. Reburial:

- Any reburial site(s) must be fully documented by an experienced and qualified archaeologist, clearly marked and all details provided to AV;
- Appropriate management measures must be implemented to ensure that the remains are not disturbed in the future.

PART C
OPERATIONAL ENVIRONMENTAL MANAGEMENT PLANS

C1. Sediment, Erosion and Water Quality Management Plan

Introduction

During the operation of the Mortlake South Wind Farm, maintenance of access tracks, hard stands, landscaping, drainage works and underground cabling may require excavation and trenching. Potential impacts include erosion by stormwater runoff causing scouring of land, loss of topsoil and increased sediment deposition in the onsite drainage systems and natural waterways.

Objectives

- Minimise soil erosion and sediment-laden runoff from disturbed areas.
- Maintain existing surface water quality during operation.

Measurable Targets

- No discharge of significantly sediment-laden runoff from site.
- No significant erosion associated within operational activities.

Environmental Management Measures

Table C1-1 Sediment, Erosion and Water Quality Management Plan Environmental Management Measures

Aspect	Environmental Management Measures		Responsibility
Operation	**EMM-172**	Remove silt fences, installed during construction, that are no longer required to ensure that they do not obstruct natural flow paths.	Facilities Manager
	EMM-173	Install drainage systems, erosion and sediment control devices prior to the commencement any maintenance or remedial site works that involve significant ground disturbance works.	
	EMM-174	Divert external water around any areas to be significantly disturbed using drainage structures such as catch drains and bunds.	

Aspect	Environmental Management Measures		Responsibility
	EMM-175	Maintain a minimum distance of 30m between stockpiles and drainage lines and watercourses.	
	EMM-176	Ensure stockpiles are designed with slopes no greater than 2:1 (horizontal/vertical).	
	EMM-177	Cover stockpiles with geo-fabric material or seed with sterile grasses if stockpiles are to remain on site for an excessive period.	
	EMM-178	Water stockpiles to suppress dust.	
	EMM-179	Rehabilitate disturbed areas progressively and as soon as practicable following completion of work in each area.	
	EMM-180	Maintain access tracks within the wind farm site to minimise erosion and sedimentation.	
	EMM-181	Immediately remediate localised erosion on site and implement control measures including (but not limited to) reinstating ground cover (re- seeding), modifying the path of water runoff and exclude livestock from the area until the area is remediated.	
	EMM-182	Undertake annual inspections for any permanent on-site waste water management system.	

C2. Hydrocarbon and Hazardous Substances Management Plan

Introduction

Hazardous substances stored onsite during operations will include oils and lubricants, paints, resins, greases and glues. These substances will be stored in a designated room located within the wind farm substation boundary and maintenance facility. The building will be roofed and bunded with an impervious material.

The substation will be constructed with an oil catchment and separation system and a bund to hold at least 110% of the oil in the transformers.

Objectives

- To manage hazardous substances onsite in order to minimise potential risk or hazards to the environment and to minimise potential environmental impacts from spills.

Measureable Targets

- All hazardous materials stored correctly and appropriately registered (e.g. MSDS registers).
- Spill kits are present onsite, stocked appropriately and located in close proximity to work activity areas throughout the operation of the Mortlake South Wind Farm.
- No environmental incidents/spills to occur to land, ground or surface water.

Key References

- EPA (2015) *Publication 347.1 Bunding*

Environmental Management Measures

Table C2-1 Hydrocarbon and Hazardous Substances Management Plan Environmental Mitigation Measures

Aspect	Environmental Management Measures		Responsibility
Operation	**EMM-183**	Manage all hazardous substances in accordance with relevant legislation and guidelines.	Facilities Manager
	EMM-184	Ensure Material Safety Data Sheets are available for all chemical stored and used on site.	
	EMM-185	Install and maintain a flammable substance storage cabinet for the storage of flammable substances (e.g. paints).	
	EMM-186	Provide spill kits on site in a readily accessible location for use in the event of a spill. Replace used items within spill kits immediately after use.	
	EMM-187	Ensure all diesel tanks, drums and refuelling areas are bunded.	
	EMM-188	Regularly inspect substation oil containment and separation system to ensure it is maintained in good working order.	
	EMM-189	Ensure chemicals, chemical wastes and other liquids are stored on site in accordance with EPA (2015) *Publication 347.1 Bunding*	

C3. Flora and Fauna Management Plan

Introduction

An ecological assessment of the Mortlake South Wind Farm was undertaken by Brett Lane and Associates in 2016.

The wind farm site lies on flat land which has been predominantly cleared of its original vegetation for agricultural development. The site supports improved pastures that are used for grazing, as well as areas of cropping. The only exception to this is in selected locations along Grinters Lane and Tapps Lane. The VicTrack rail reserve that bisects the site.

Vegetation along Grinters Lane and Tapps Lane will be removed and offset in accordance with the requirements of the Planning Permit. Crossing points for electrical reticulation have been located in areas known to be free of native vegetation or where boring to avoid native vegetation is practical.

The site was found not to support any significant areas of native vegetation and/or habitat for rare or threatened flora. It was noted that the critically endangered Southern Bent-wing Bat (SBWB) was recorded on site in 2007 and that the 2016 assessment did not include bat surveys.

Impacts on native fauna during the operational phase are primarily associated with potential impacts on birds and bats arising from blade strike. A Bat and Avifauna Management Plan has been developed that outlines the inspection and management measures that will be implemented on the site during the first five years of operation to ensure the wind farm does not have a significant impact on birds or bats.

Objective

- To avoid impacting native vegetation during operations.
- To avoid or minimise potential adverse impact to fauna during operations.

Measurable Target

- No significant disturbance of native vegetation.
- Compliance with the Bat and Avifauna Management Plan.

Environmental Management Measures

Table C3-1 Flora and Fauna Management Plan Environmental Management Measures

Aspect	Environmental Management Measure		Responsibility
Operations	**EMM-190**	Ensure all vehicles remain on access tracks to ensure native vegetation is not impacted and to limit the spread of pest plants.	Facilities Manager
	EMM-191	Ensure no native vegetation is removed without a planning permit from Moyne Shire Council unless an exemption within the Moyne Planning Scheme applies.	
	EMM-192	In the event that injured fauna is identified, a suitably qualified wildlife handler or zoologist is to be engaged to capture and appropriately manage the native fauna. The wildlife handler or zoologist will be required to hold an appropriate license or authorisation under the *Wildlife Act 1975*	
	EMM-193	Undertake routine dead bird, bat and animal searches, reporting, targeted studies, and management in accordance with the Bat and Avifauna Management Plan.	Manager, Environment and Planning / External Consultant

C4. Wildfire Prevention and Emergency Response Management Plan

Introduction

The wind farm presents a potential fire risk to the surrounding areas. To reduce the risk of electrical failure and potential fire associated with this failure, all electrical and communication cables required between turbines have been placed underground. In addition, turbines have been designed with the following safety measures:

- Fire detection systems.
- Lightning protection devices.
- Dedicated monitoring systems within each wind turbine that detect temperature increases in the turbines and shuts them down when the threshold temperature is reached.
- Fully enclosed electrical equipment.
- Circuit breakers and fuses to interrupt any electrical faults.

A bushfire management and electrical line clearance plan will be prepared for the site prior to commissioning.

Objectives

- To minimise the risk and impacts of wildfire.
- To ensure the Mortlake South Wind Farm is prepared in the event of a wildfire.

Key References

- CFA, MFB & DSE (2014) *Fire Safety Guidelines: Identification of Street Hydrants for Firefighting Purposes*.
- CFA (2017) *Emergency Management Guidelines for Wind Energy Facilities*.

Measurable Targets

- No occurrences of fire resulting from the operation of the Mortlake South Wind Farm.
- All onsite employees and contractors are competent in fire response procedures.

Environmental Management Measures

Table C4-1 Wildfire Prevention and Emergency Response Plan Environmental Management Measure

Aspect	Environmental Management Measure		Responsibility
Consultation and Training	**EMM-194**	Ensure all staff are trained in emergency response procedures.	Facilities Manager
	EMM-195	Regularly liaise with local fire authorities.	
	EMM-196	Invite local emergency response authorities on a site tour to familiarise themselves with the site (including the location of water infrastructure) and fire response measures, within three months after the commencement of operations. This shall include invitations to the following authorities: • CFA District 5 Operations Manager, Operations Officers, Local CFA Volunteer Brigade and CFA Group Management. • Victoria Police, Moyne Shire Council and City of Warrnambool Municipal Emergency Response Coordinators. • Ambulance Victoria Group Officer. • Moyne Shire Council Municipal Emergency Resource Officer and Municipal Fire Prevention Officer.	
	EMM-197	Develop a plan with local emergency response authorities that identifies site entrances, access roads on site, location of water supply sources etc., within three months after the commencement of operations.	
	EMM-198	In the event of a fire on the site, '000' will be called immediately and all water trucks and any onsite holding tanks will be made available for use.	
	EMM-199	Emergency Assembly area will be clearly identified and illustrated on site plans.	
	EMM-200	Include details of the wind farm's emergency response procedures in a community newsletter, within three months after the commencement of operations.	
Total fire ban days and fire danger periods	**EMM-201**	During days of total fire ban or fire danger periods:	Facilities Manager

Aspect	Environmental Management Measure	Responsibility
	• Vehicle travel will be confined to public and wind farm roadways • Hot work is not permitted (except where required in emergency circumstances such as catastrophic plant failure).	
Building Standards	**EMM-202** Ensure grass is kept to a height of no more than 100mm in height and no more than 10mm deep for a distance of 30 metres around constructed buildings and viewing platforms. **EMM-203** Ensure a fuel reduced area of 4 metres is kept around the perimeter of the electricity compounds and substation facilities.	Facilities Manager
Access and Emergency Information	**EMM-204** Maintain adequate access to and within the wind farm for fire trucks by providing: • A 4m wide trafficable surface. • An all-weather access capable of accommodating a vehicle of 15 tonnes for the trafficable road width. • An average grade of no more than 1 in 7 (14.4%) (8.1°) with a maximum of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres. • Dips in the road are to be limited to no more than a 1 in 8 (12.5%) (7.1°) entry and exit angle; • A turning point with a minimum radius of 10m at all water storage tanks and all 'dead-ends'. Turbine hardstands provide adequate turning points with a minimum area of 20m x 30m **EMM-205** An Emergency Information cabinet will be provided at the main access point to the operating Wind Farm. The cabinet will include the following: • Detailed site plan clearly identifying all main roads and access points and the internal road network and all static water storage locations, • Contact information for site including after-hours contacts, • Copy of all Material Safety Data Sheets. **EMM-206** The contents of the Emergency Information Cabinet will be provided to the following relevant personnel to assist in planning and response during an emergency:	Facilities Manager

Aspect	Environmental Management Measure		Responsibility
		• Victoria Police, Moyne Shire Council and City of Warrnambool Municipal Emergency Response Coordinators. • Ambulance Victoria Group Officer. • Moyne Shire Council Municipal Emergency Resource Officer and Municipal Fire Prevention Officer. • CFA District 5 Operations Manager.	
	EMM-207	If any access points are to be locked Fire Service '003' padlocks will be used.	
	EMM-208	A static water storage unit will be located at the maintenance facility for the life of the project (22500 litres). Two additional 22500 litre static water supplies will be installed at locations shown on plans endorsed under the planning permit. All tanks must have at least one (preferably two) 64mm, 3 thread/25mm x 60 nominal bore British Standard Pipe round male coupling 50mm from its base unless an alternative coupling is deemed acceptable by the CFA. Outlets should be 2 metres apart.	
Vehicles	**EMM-209**	All permanent site vehicles are to be equipped with the following items during fire danger periods: • Passenger Vehicles – 1Kg 2A:40B:E Dry Chemical extinguisher, Trucks & Plant – 4.5Kg 2A:40B:E Dry Chemical extinguisher • Trucks and Plant – 9Lt Stored Pressure Water Extinguisher with a minimum rating of 3A • Appropriately equipped First Aid Kit; • Wheel changing equipment; • Tow rope or snatch strap • A pair of wire cutters; • A torch; • Sufficient fire blankets to cover all passengers (at least 2);	HSE Supervisor/ Site Supervisor
	EMM-210	Vehicles shall be checked weekly during the Fire Season to ensure the mandatory equipment (required by EMM-209) and records maintained.	

Emergency Procedures

The following steps are to be undertaken in the event of an emergency. An emergency includes but is not limited to wildfire on or close by to site, a structure fire, hazardous material incident and medical emergency:

- **Ring '000'**
- Advise Management
- Evacuate Staff and Contractors to Assembly Areas
- Account for staff/Contractors
- Conduct initial fire attack if safe to do so
- Allocate personnel to meet and liaise with CFA, Ambulance or police
- CFA to assume control in event of a fire
- Obey direction given by CFA OIC, ambulance or police officer.

C5. Pest Animal Management Plan

Introduction

This Pest Animal Management Plan aims to ensure that the construction of the Mortlake South Wind Farm does not lead to an increase in declared pest animals under the *Catchment and Land Protection Act 1994*, including Common Rat (rat), European Rabbit (rabbit) and Red Fox (fox) populations on the site.

This plan focuses on ensuring that there is no increase in habitat or food supplies for rabbits during operation of the wind farm. It responds to potential risks arising from the creation of additional harbour and warren opportunities for rabbits.

Objectives

- The operation of the Mortlake South Wind Farm does not lead to an increase in numbers of pest animal species, namely fox and rabbit, on the site.
- To implement a post-construction monitoring program of fox and rabbit, in areas affected by development of the wind farm.

Measurable Targets

- No increase in the presence (i.e. incidental sightings) of pest animal's onsite.

Environmental Management Measures

Table C5-1 Pest Animal Management Plan Environmental Management Measure

Aspect	Environmental Management Measures		Responsibility
Pest Animal Control	**EMM-211**	Undertake pest animal control for all areas disturbed by the wind farm for 2 years post construction, as necessary. All pest control activity is to be captured in the management log.	Facilities Manager
	EMM-212	Any pest animals trapped by operational activities or that otherwise come into the possession of wind farm personal must be humanely destroyed by suitably qualified personnel in accordance with referenced guidelines.	

Aspect	Environmental Management Measures		Responsibility
Rabbits	**EMM-213**	Control all rabbit burrows that become established in areas disturbed by the wind farm through fumigation and/or warren ripping using the measures prescribed in Regulation 8 of the *Catchment and Land Protection Regulations 2012*.	Facilities Manager
Rats	**EMM-214**	Materials stored during operations must be placed in a manner that does not create piles that form harbour for rats.	Facilities Manager
Foxes	**EMM-215**	All food scraps to be installed in tamper-proof bins installed in designated storage areas.	Facilities Manager
	EMM-216	If fox dens become established in areas disturbed by the wind farm, fumigation and infilling will be implemented, together with the removal of any harbour nearby.	
	EMM-217	Animal carcasses found within the wind farm to be removed immediately (with landowner permission) to lessen the availability of carrion for foxes.	

C6. Pest Plant Management Plan

Introduction

Pest plant species are found over most of the Mortlake South Wind Farm site. Operation activities may provide an opportunity for the spread of existing weeds and plant pathogens, and the introduction of weeds and pathogens to areas that were previously free of these species.

Three declared noxious weed species have previously been identified on the site during previous environmental surveys and are to be controlled in areas disturbed by the construction of the wind farm:

- Gorse (*Ulex europaeus)* – Regionally Controlled
- Spear Thistle *(Cirsium vulgare)* – Restricted
- Variegated Thistle (*Silybum marianum)* – Restricted

In addition to the above:

- DEDJTR has also advised that there is a known infestations of Serrated Tussock (*Nassella trichotoma*) on land abutting the Mortlake South Wind Farm site.
- Moyne Shire Council has advised that there are known infestations of African Boxthorn (Lycium ferocissimum) along Chamallack and Grinters Lanes.

Objectives

- To ensure that weeds are not spread during maintenance activities and to control weeds growing beside wind farm infrastructure.
- Minimise the potential for new pest plants or pathogens to be introduced to the site.

Measurable target

- No significant increases in the extent of pest plants present onsite.

Environmental Management Measures

Table C6-1 Pest Plant Management Plan Environmental Management Measures

Aspect	Environmental Management Measure		Responsibility
Operation	**EMM-218**	Undertake pest plant survey post-construction to determine whether there is evidence of pest plant infestations within the disturbance areas which were not observed during the pre-construction survey. If so implement management measures outlined in EMM-225 to EMM-227. All control activities are to be recorded in a management log.	Facilities Manager
	EMM-219	Undertake monthly inspections of pest plants, including noxious species, within the footprint of turbines, the site compound, sub-station, met masts and access tracks.	
	EMM-220	Monitor and where necessary control listed weeds in areas disturbed by the construction of the wind farm for the first 2 years of operation.	
	EMM-221	Ensure all personnel are inducted and aware of issues and management measures relating to weed and pathogen spread.	
	EMM-222	Provide an area for vehicle clean down at the facilities building.	
	EMM-223	Ensure vehicles/plant/machinery use the designated area on site for clean down when required, prior to leaving the site.	
	EMM-224	Ensure that all vehicles and plant machinery stay on approved access tracks to minimise the risk of pest plant spread.	
Control Measures	**EMM-225**	Adopt precision weed control methods outlined in Regulation 7 of the *Catchment of Land Protection Regulations 2012*. This shall include spot-spraying in accordance with the product label and directions for use, of a herbicide product that is registered by the Australian Pesticides and Veterinary Medicines Authority. The label of the herbicide must allow for the control of the relevant weed species.	Facilities Manager
	EMM-226	If herbicide is delivered through a hand held appliance, a compatible marker dye must be incorporated into the herbicide	
	EMM-227	Ensure non-target kill does not exceed 1% projective foliage cover in any given area. Herbicide is not to be applied in wet areas or within two days of rain (before or after).	

C7. Cultural Heritage Management Plan

Introduction

A CHMP was approved by Aboriginal Affairs Victoria (AAV) (now Aboriginal Victoria) in 2009. Compliance with an approved CHMP is a legislative requirement pursuant to Section 67A of the *Aboriginal Heritage Act 2006* (Vic).

Objectives

- No impacts on Aboriginal cultural heritage.

Measurable Target

- No damage to Aboriginal cultural heritage.

Environmental Management Measures

Table C7-1 Cultural Heritage Management Plan Environmental Management Measures

Aspect	Environmental Management Measure		Responsibility
Operations	**EMM-228**	Ensure all vehicles remain on designated areas and access tracks to avoid impacting any Aboriginal cultural heritage outside of the development footprint.	HSE Supervisor
	EMM-229	All maintenance works requiring ground disturbance are to be within the activity area approved under the CHMP.	
Inductions	**EMM-230**	All personnel accessing/working at the Mortlake South Wind Farm site are to be inducted on the CHMP.	HSE Supervisor
	EMM-231	The key personnel to be contacted in the event of a compliance breach are to be clearly indicated during the induction.	

C8. Decommissioning and Rehabilitation Management Plan

Introduction

The operator of the wind farm must notify the Minister for Planning in writing no later than two (2) months after any or all wind turbines have permanently ceased to generate electricity.

Objectives

- To minimise environmental impacts and rehabilitate the site at the end of the decommissioning phase.
- To ensure that all Planning Permit Conditions are met during the decommissioning of the site.

Measurable Targets

- Site has been rehabilitated at the end of the decommissioning phase.

Environmental Management Measures

Table C8-1 Decommissioning and Rehabilitation Management Plan Environmental Management Measures

Aspect	Environmental Management Measure		Responsibility
Decommissioning	**EMM-232**	Notify The Minister for Planning in writing of the intention to decommission the Mortlake South Wind Farm.	Facilities Manager
	EMM-233	Prepare and submit a decommissioning Traffic Management Plan to the Minister for Planning for approval and when approved, implement the plan.	
	EMM-234	Prepare and submit a decommissioning Revegetation Management Plan to the Minister for Planning for approval and when approved, implement the plan.	
	EMM-235	Within 12 months of notification to decommission the wind farm, undertake the following:	

Aspect	Environmental Management Measure	Responsibility
	• Remove all above ground non-operational equipment. • Remove and clean up any residual spills or contamination. • Rehabilitate all storage, construction, access tracks and other areas affected by the project decommissioning, if not required for the ongoing management of the land.	

Appendix A Construction Environmental Monitoring Program

Weekly Monitoring Checklist

Aspect	Tasks	Monitoring Frequency	Reporting mechanism	Responsibility
Waste Management	Inspect litter bin and recycling facilities to ensure that emptying frequency is meeting demand and appropriate segregation is being undertaken.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Visually inspect site for litter generation issues.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Air Quality and Dust	Check plant and equipment are fitted with appropriate noise abatement devices (e.g. mufflers) and equipment and noise abatement devices are maintained in good working order.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Observe if any dust is being generated over the site or adjacent to public roads (from sources such as cleared areas or stockpiles).	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Visually inspect public roads for excess dirt/mud.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Sediment, Erosion and Water	Inspection of sediment control devices.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Surveillance for localised erosion on site.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Sample and analyse water quality of Stony Creek and tributaries. Recordings acidity (pH level), dissolved oxygen (DO), turbidity/suspended solids and conductivity	Weekly	Weekly Environmental Checklist	HSE Supervisor
Hydrocarbon and Hazardous Materials	Ensure that hazardous substances on site are listed on the Hazardous Substances Register.	Weekly	Weekly Environmental Checklist	HSE Supervisor

Aspect	Tasks	Monitoring Frequency	Reporting mechanism	Responsibility
	Ensure chemical storage areas are signed with the appropriate signage and maintained in good working condition.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Inspect storage facilities and bunding to check for tidiness, structural integrity and possible undetected leaks or spills.	Weekly After each significant rainfall event	Weekly Environmental Checklist	HSE Supervisor
	Inspect that spill kits are available and stocked appropriately.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Wildfire and Emergency Prevention	Inspect site to ensure that there is no build-up of flammable material on the site including petrol, wood, dried vegetation and long grass.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Ensure all water access points and turning areas for fire vehicles remain free from obstructions and are appropriately signed.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Flora and Fauna	Regular inspections to ensure all areas of native vegetation within 30 metres of disturbance areas are suitably protected and have not been damaged.	Prior to works commencing in that area. Then weekly checks thereafter.	Weekly Environmental Checklist	HSE Supervisor
	Regularly inspect site to ensure stockpiles are not stored under the drip line of trees or on top of native vegetation.	Weekly	Weekly Environmental Checklist	HSE Supervisor
	Regularly inspect any protective fencing and signage.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Pest Animal	Visual inspections of construction sites and disturbed areas for pest animal harbour, open and active entrances, including live rats, rabbits and foxes.	Weekly	Weekly Environmental Checklist	HSE Supervisor

Aspect	Tasks	Monitoring Frequency	Reporting mechanism	Responsibility
Pest Plant	Visual inspections of construction sites and disturbed areas for any weed growth including noxious species.	Weekly	Weekly Environmental Checklist	HSE Supervisor
Aboriginal Cultural Heritage	Ensure construction works do not extend outside the area assessed under the Cultural Heritage Management Plan (CHMP).	Weekly	Weekly Environmental Checklist	HSE Supervisor

Monthly Monitoring Checklist

Aspect	Tasks	Monitoring Frequency	Reporting mechanism	Responsibility
Waste Management	Volumes of waste to be monitored and recorded on the Monthly Report.	Monthly	Monthly Environmental Report	HSE Supervisor
Wildfire and Emergency Prevention	Inspect vehicles to ensure fire extinguishers are in appropriate operational condition as per AS1851.	Monthly	Monthly Environmental Checklist	HSE Supervisor

Appendix B Implementation Timetable

Table APPB-1 provides a timetable for the establishment of Environmental Mitigation Measures contained within Plans B1 to B9. Responsibilities for these actions are held identified in the relevant environmental management measure.

Table APPB-1 Construction EMP Implementation Timetable

Estimated Timing	Related EMM(s)	Action
Jan 2019	-	Ensure relevant environmental documentation is available on-site (ie. planning permit, this EMP)
Jan 2019	EMM-15	Establish on-site waste and recycling collection.
Jan 2019	EMM-18; EMM-19; EMM-56; EMM-57	Obtain approval from Moyne Shire Council and establish on-site sanitary facilities, septic system and effluent disposal system. Engage suitably qualified waste contractor to dispose of wastewater.
Jan 2019	EMM-32	Secure works on waterways permit from the Glenelg Hopkins
Jan 2019	EMM-34	Undertake Safety In Design workshop with Civil and Electrical contractors to determine final locations, collection structures and monitoring locations for drainage systems and erosion and sediment control devices.
Feb 2019	EMM-34	Install drainage, erosion and sediment control devices.
Jan 2019	EMM-59	Undertake baseline water quality measurements for acidity (pH level), dissolved oxygen (DO), turbidity/suspended solids and conductivity at Stony Creek and tributaries.
Jan 2019	EMM-62; EMM-64	Establish MSDS library and provide copy of library to nominated stakeholders.
Dec 2018	EMM-87	Secure native vegetation offsets for vegetation that is to be removed.
Feb 2019	EMM-93	Establish native vegetation fencing where vegetation is within 30 metres of the disturbance area.
Jan 2019	EMM-101; EMM-108; EMM-138	Engage suitably qualified wildlife handler(s) to be on notice if fauna is required to be managed, captured or humanely destroyed.

Estimated Timing	Related EMM(s)	Action
Jan 2019	EMM-118	Establish and deploy appropriate firefighting equipment to be stored on-site during construction in consultation with the CFA.
Feb 2019	EMM-119	Hold site familiarisation and emergency planning workshop with CFA and ESV to discuss fire response measures.
Feb 2019	EMM-147	Deploy shaker pads/cattle grids at all site entrances.
Jan 2019	EMM-148	Deploy hygiene wash down facility
Jan 2019	EMM-150	Undertake pest plant survey to confirm the extent of pest plant distribution prior to disturbance.
Dec 2018	EMM-164	Engage a Heritage Advisor to prepare cultural heritage induction booklet and present to construction team.
August 2020	EMM-29	Remove concrete batching plant, laydown area and buildings including construction compound. Remove hardstand unless land owner requests it remains for ongoing agricultural purposes.

Table APPB-2 provides a timetable for the establishment of Environmental Mitigation Measures contained within Plans C1 to C8. Responsibilities for these actions are held identified in the relevant environmental management measure.

Table APPB-2 Operational EMP Implementation Timetable

Estimated Timing	Related EMM(s)	Action
August 2020	EMM-172	Remove remnant silt fences and other sediment control devices to ensure natural flow paths are unobstructed.
August 2020	EMM-111	Rehabilitate any areas not progressively remediated during the construction process.
October 2020	EMM-196 EMM-197 EMM-200	Invite local emergency response authorities on a site tour to familiarise themselves with the site within three months after the commencement of operations. Develop plan with local emergency response authorities that identifies site entrances, location of water supplies etc. within three months after the commencement of operations and publish details in community newsletter.

Estimated Timing	Related EMM(s)	Action
August 2020	EMM-208	Establish permanent static water supplies as shown on plans endorsed under the planning permit.
August 2020 to August 2022	EMM-211	Undertake post-construction pest animal control activities in disturbed areas.
August 2020 to August 2022	EMM-218; EMM-220	Undertake pest plant survey post-construction to determine whether there is evidence of new pest plant investigations not observed during the pre-construction survey, Monitor and where necessary control listed weeds in areas disturbed by the construction of the wind farm for the first two years of operations.

Appendix C Mapped Roadside Native Vegetation and BIOR Report

Notes: The following vegetation can be removed subject to suitable offsets being acquired and credit extracts endorsed by the Minister for Planning:

Grinters Lane between Tapps Lane and Mortlake-Framlingham Road:

- Full removal of Habitat Zones P and Q.

Tapps Lane between Terang-Mortlake Road and Londrigans Lane:

- Full removal of Habitat Zones A, B, C, D, E, F, G, H, I, J, K, T, U and V.

Biodiversity impact and offset requirements report

This report **does not represent an assessment by DELWP** of the proposed native vegetation removal. It provides biodiversity information for low risk-based pathway applications for permits to remove native vegetation under clause 52.16 or 52.17 of the planning schemes in Victoria.

Date of issue: **27/09/2018**
Time of issue: **9:18 am**

DELWP ref: BLA_2018_165

Project ID	G2013_BLA_12020_Roadreserve_180921

Summary of marked native vegetation

Risk-based pathway	**Low**
Total extent	0.236 ha
Remnant patches	0.236 ha
Scattered trees	0 trees
Location risk	A

Strategic biodiversity score of all marked native vegetation	0.151

Offset requirements if a permit is granted

If a permit is granted to remove the marked native vegetation, a requirement to obtain a native vegetation offset will be included in the permit conditions. The offset must meet the following requirements:

Offset type	**General offset**
General offset amount (general biodiversity equivalence units)	0.019 general units
General offset attributes	
Vicinity	Glenelg Hopkins Catchment Management Authority (CMA) **or** Moyne Shire Council
Minimum strategic biodiversity score	0.121[1]

See Appendices 1 and 2 for details in how offset requirements were determined.

NB: values presented in tables throughout this document may not add to totals due to rounding

[1] Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Next steps

This proposal to remove native vegetation must meet the application requirements of the low risk-based pathway and it will be assessed under the low risk-based pathway.

If you wish to remove the marked native vegetation you are required to apply for a permit from your local council. Council will then refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

The biodiversity assessment report from NVIM and this biodiversity impact and offset report should be submitted with your application for a permit to remove native vegetation you plan to remove, lop or destroy.

This report provides the following information to meet application requirements for a permit to remove native vegetation:

- Confirmation of the risk-based pathway of the application for a permit to remove native vegetation
- The area of the patch of native vegetation and/or the number of any scattered trees to be removed
- The strategic biodiversity score of the native vegetation to be removed
- The offset requirements should a permit be granted to remove native vegetation.

Refer to the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* and for a full list and details of application requirements.

APPROVED FOR THE MINISTER FOR PLANNING

SHEET 120 OF 154

Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne.

For more information contact the DELWP Customer Service Centre 136 186

Appendix 1 – Biodiversity impact of removal of native vegetation

Habitat hectares

Habitat hectares are calculated for each habitat zone within your proposal using the extent and condition scores in the GIS data you provided.

Habitat zone	Site assessed condition score	Extent (ha)	Habitat hectares
1-1-A	0.130	0.005	0.001
2-1-B	0.130	0.005	0.001
3-1-C	0.390	0.002	0.001
4-1-D	0.390	0.002	0.001
5-1-E	0.390	0.001	0.000
6-1-F	0.390	0.045	0.017
7-1-G	0.390	0.003	0.001
8-1-H	0.390	0.028	0.011
9-1-I	0.390	0.055	0.022
10-1-J	0.390	0.015	0.006
11-1-K	0.390	0.011	0.004
12-1-V	0.390	0.031	0.012
13-1-T	0.390	0.005	0.002
14-1-U	0.390	0.011	0.004
15-1-P	0.130	0.007	0.001
16-1-Q	0.130	0.008	0.001
TOTAL			**0.086**

Clearing site biodiversity equivalence score(s)

The general biodiversity equivalence score for the habitat zone(s) is calculated by multiplying the habitat hectares by the strategic biodiversity score.

Habitat zone	Habitat hectares	Strategic biodiversity score	General biodiversity equivalence score (GBES)
1-1-A	0.001	0.194	0.000
2-1-B	0.001	0.196	0.000
3-1-C	0.001	0.220	0.000
4-1-D	0.001	0.122	0.000
5-1-E	0.000	0.100	0.000
6-1-F	0.017	0.156	0.003
7-1-G	0.001	0.159	0.000
8-1-H	0.011	0.159	0.002
9-1-I	0.022	0.160	0.003
10-1-J	0.006	0.160	0.001
11-1-K	0.004	0.160	0.001
12-1-V	0.012	0.116	0.001
13-1-T	0.002	0.119	0.000
14-1-U	0.004	0.120	0.001
15-1-P	0.001	0.100	0.000
16-1-Q	0.001	0.191	0.000

Appendix 2 – Offset requirements detail

If a permit is granted to remove the marked native vegetation the permit condition will include the requirement to obtain a native vegetation offset.

To calculate the required offset amount required the biodiversity equivalence scores are aggregated to the proposal level and multiplied by the relevant risk multiplier.

Offsets also have required attributes:

- General offsets must be located in the same Catchment Management Authority (CMA) boundary or Local Municipal District (local council) as the clearing and must have a minimum strategic biodiversity score of 80 per cent of the clearing.[2]

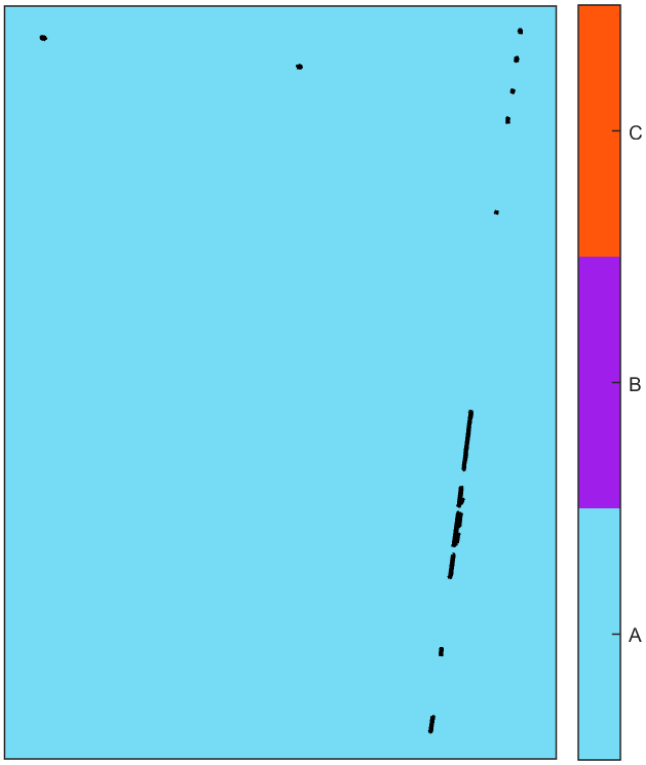
The offset requirements for your proposal are as follows:

Offset type	Clearing site biodiversity equivalence score	Risk multiplier	Offset requirements	
			Offset amount (biodiversity equivalence units)	Offset attributes
General	0.013 GBES	1.5	0.019 general units	Offset must be within Glenelg Hopkins CMA or Moyne Shire Council Offset must have a minimum strategic biodiversity score of 0.121

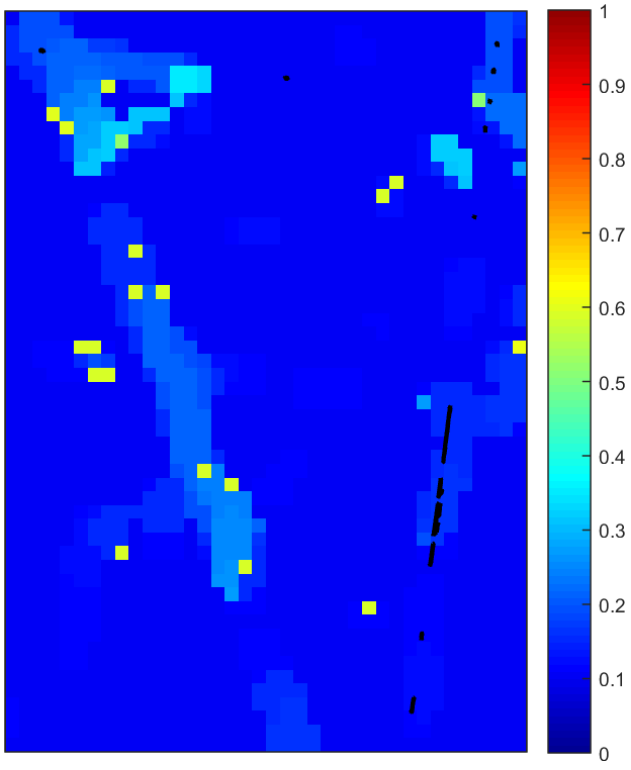
[2] Strategic biodiversity score is a weighted average across habitat zones where a general offset is required

Appendix 3 – Images of marked native vegetation

1. Native vegetation location risk map



2. Strategic biodiversity score map



3. Aerial photograph showing marked native vegetation

Glossary

Condition score

This is the site-assessed condition score for the native vegetation. Each habitat zone in the clearing proposal is assigned a condition score according to the habitat hectare assessment method. This information has been provided by or on behalf of the applicant in the GIS file.

Dispersed habitat

A dispersed species habitat is a habitat for a rare or threatened species whose habitat is spread over a relatively broad geographic area greater than 2,000 hectares.

General biodiversity equivalence score

The general biodiversity equivalence score quantifies the relative overall contribution that the native vegetation to be removed makes to Victoria's biodiversity. The general biodiversity equivalence score is calculated as follows:

$$\boldsymbol{General\ biodiversity\ equivalence\ score} = \boldsymbol{habitat\ hectares} \times \boldsymbol{strategic\ biodiversity\ score}$$

General offset amount

This is calculated by multiplying the general biodiversity equivalence score of the native vegetation to be removed by the risk factor for general offsets. This number is expressed in general biodiversity equivalence units and is the amount of offset that is required to be provided should the application be approved. This offset requirement will be a condition to the permit for the removal of native vegetation.

$$\boldsymbol{Risk\ adjusted\ general\ biodiversity\ equivalence\ score} = \boldsymbol{general\ biodiversity\ equivalence\ score\ clearing} \times \mathbf{1.5}$$

General offset attributes

General offset must be located in the same Catchment Management Authority boundary or Municipal District (local council) as the clearing site. They must also have a strategic biodiversity score that is at least 80 per cent of the score of the clearing site.

Habitat hectares

Habitat hectares is a site-based measure that combines extent and condition of native vegetation. The habitat hectares of native vegetation is equal to the current condition of the vegetation (condition score) multiplied by the extent of native vegetation. Habitat hectares can be calculated for a remnant patch or for scattered trees or a combination of these two vegetation types. This value is calculated for each habitat zone using the following formula:

$$\boldsymbol{Habitat\ hectares} = \boldsymbol{total\ extent}\ (\boldsymbol{hectares}) \times \boldsymbol{condition\ score}$$

Habitat importance score

The habitat importance score is a measure of the importance of the habitat located on a site for a particular rare or threatened species. The habitat importance score for a species is a weighted average value calculated from the habitat importance map for that species. The habitat importance score is calculated for each habitat zone where the habitat importace map indicates that species habitat occurs.

Habitat zone

Habitat zone is a discrete contiguous area of native vegetation that:

- is of a single Ecological Vegetation Class
- has the same measured condition.

Highly localised habitat

A highly localised habitat is habitat for a rare or threatened species that is spread across a very restricted area (less than 2,000 hectares). This can also be applied to a similarly limited sub-habitat that is disproportionately important for a wide-ranging rare or threatened species. Highly localised habitats have the highest habitat importance score (1) for all locations where they are present.

Minimum strategic biodiversity score

The minimum strategic biodiversity score is an attribute for a general offset.

The strategic biodiversity score of the offset site must be at least 80 per cent of the strategic biodiversity score of the native vegetation to be removed. This is to ensure offsets are located in areas with a strategic value that is comparable to, or better than, the native vegetation to be removed. Where a specific and general offset is required, the minimum strategic biodiversity score relates only to the habitat zones that require the general offset.

Offset risk factor

There is a risk that the gain from undertaking the offset will not adequately compensate for the loss from the removal of native vegetation. If this were to occur, despite obtaining an offset, the overall impact from removing native vegetation would result in a loss in the contribution that native vegetation makes to Victoria's biodiversity.

To address the risk of offsets failing, an offset risk factor is applied to the calculated loss to biodiversity value from removing native vegetation.

$$\textit{Risk factor for general offsets} = 1.5$$

$$\textit{Risk factor for specific offset} = 2$$

Offset type

The specific-general offset test determines the offset type required.

When the specific-general offset test determines that the native vegetation removal will have an impact on one or more rare or threatened species habitat above the set threshold of 0.005 per cent, a specific offset is required. This test is done at the permit application level.

A general offset is required when a proposal to remove native vegetation is not deemed, by application of the specific-general offset test, to have an impact on any habitat for any rare or threatened species above the set threshold of 0.005 per cent. All habitat zones that do not require a specific offset will require a general offset.

Proportional impact on species

This is the outcome of the specific-general offset test. The specific-general offset test is calculated across the entire proposal for each species on the native vegetation permitted clearing species list. If the proportional impact on a species is above the set threshold of 0.005 per cent then a specific offset is required for that species.

Specific offset amount

The specific offset amount is calculated by multiplying the specific biodiversity equivalence score of the native vegetation to be removed by the risk factor for specific offsets. This number is expressed in specific biodiversity equivalence units and is the amount of offset that is required to be provided should the application be approved. This offset requirement will be a condition to the permit for the removal of native vegetation.

$$\textit{Risk adjusted specific biodiversity equivalence score} = \textit{specific biodiversity equivalence score clearing} \times 2$$

Specific offset attributes

Specific offsets must be located in the modelled habitat for the species that has triggered the specific offset requirement.

Specific biodiversity equivalence score

The specific biodiversity equivalence score quantifies the relative overall contribution that the native vegetation to be removed makes to the habitat of the relevant rare or threatened species. It is calculated for each habitat zone where one or more species habitats require a specific offset as a result of the specific-general offset test as follows:

$$\textbf{Specific biodiversity equivalence score} = \textbf{habitat hectares} \times \textbf{habitat importance score}$$

Strategic biodiversity score

This is the weighted average strategic biodiversity score of the marked native vegetation. The strategic biodiversity score has been calculated from the *Strategic biodiversity map* for each habitat zone.

The strategic biodiversity score of native vegetation is a measure of the native vegetation's importance for Victoria's biodiversity, relative to other locations across the landscape. The *Strategic biodiversity map* is a modelled layer that prioritises locations on the basis of rarity and level of depletion of the types of vegetation, species habitats, and condition and connectivity of native vegetation.

Total extent (hectares) for calculating habitat hectares

This is the total area of the marked native vegetation in hectares.

The total extent of native vegetation is an input to calculating the habitat hectares of a site and in calculating the general biodiversity equivalence score. Where the marked native vegetation includes scattered trees, each tree is converted to hectares using a standard area calculation of 0.071 hectares per tree. This information has been provided by or on behalf of the applicant in the GIS file.

Vicinity

The vicinity is an attribute for a general offset.

The offset site must be located within the same Catchment Management Authority boundary or Local Municipal District as the native vegetation to be removed.

Figure 1: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Wetland (EVC 125)
- Plains Grassy Woodland (EVC 55_61)

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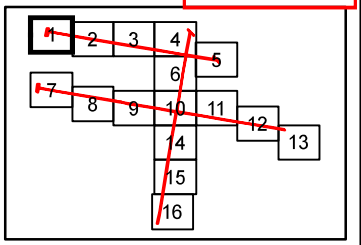

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Figure 2: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Woodland (EVC 55_61)

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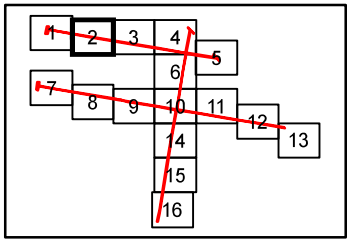

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Figure 3: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Woodland (EVC 55_61)

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SHEET 131 OF 154

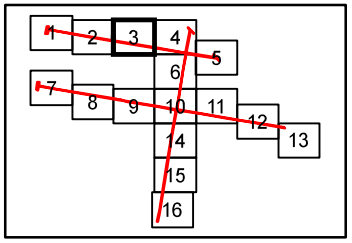

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Figure 4: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Wetland (EVC 125)
- Plains Grassy Woodland (EVC 55_61)

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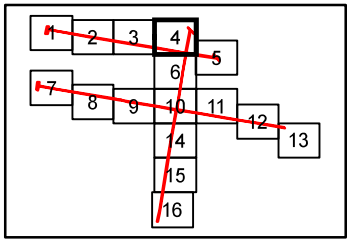

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Figure 5: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Woodland (EVC 55_61)

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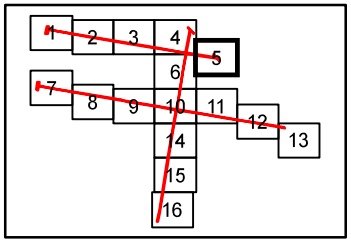

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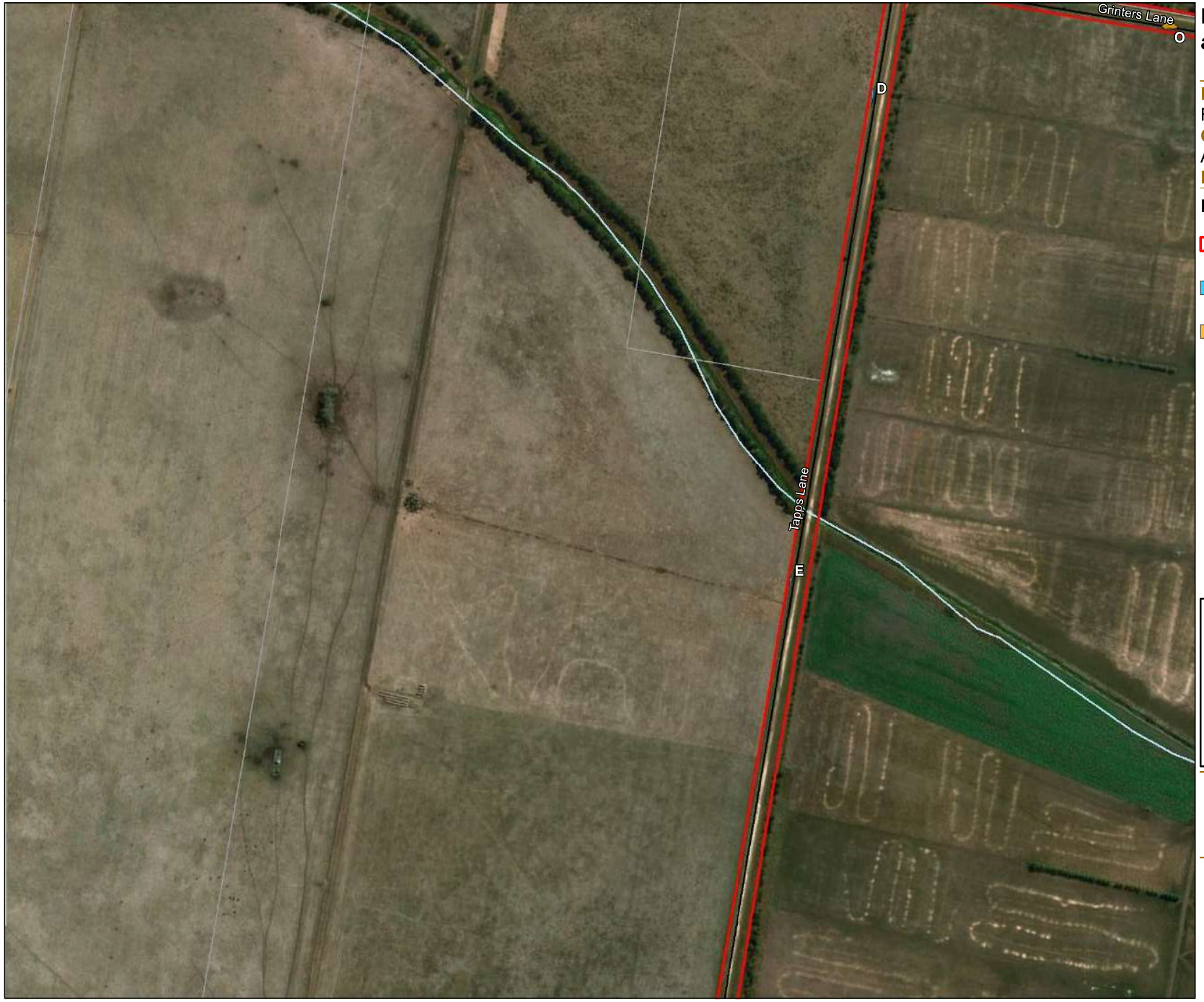

Figure 6: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Wetland (EVC 125)
- Plains Grassy Woodland (EVC 55_61)

APPROVED FOR THE MINISTER FOR PLANNING
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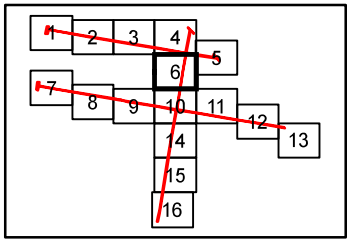

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Figure 7: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Heavier soils Plains Grassland (EVC 132_61)

EPBC listed community

- NTGVVP

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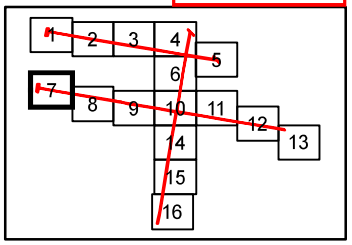

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Figure 8: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

Study area (indicative only, due to data constraints)

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SHEET 136 OF 154

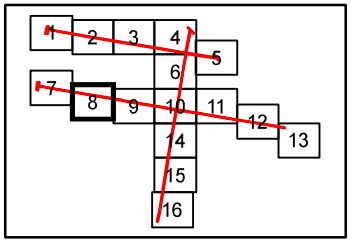

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Figure 9: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

Study area (indicative only, due to data constraints)

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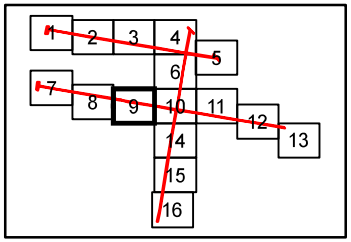

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Figure 10: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Wetland (EVC 125)

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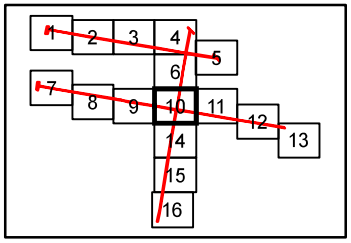

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Figure 11: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

Study area (indicative only, due to data constraints)

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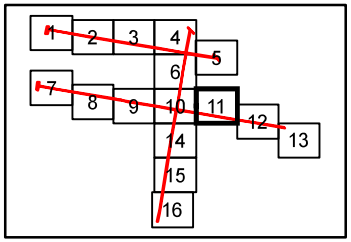

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Figure 12: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

Study area (indicative only, due to data constraints)

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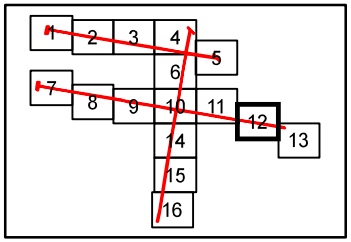

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Figure 13: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

Study area (indicative only, due to data constraints)

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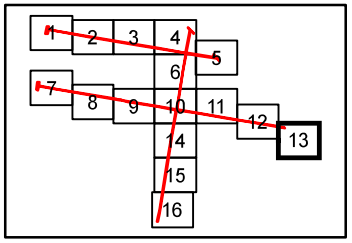
SHEET 141 OF 154



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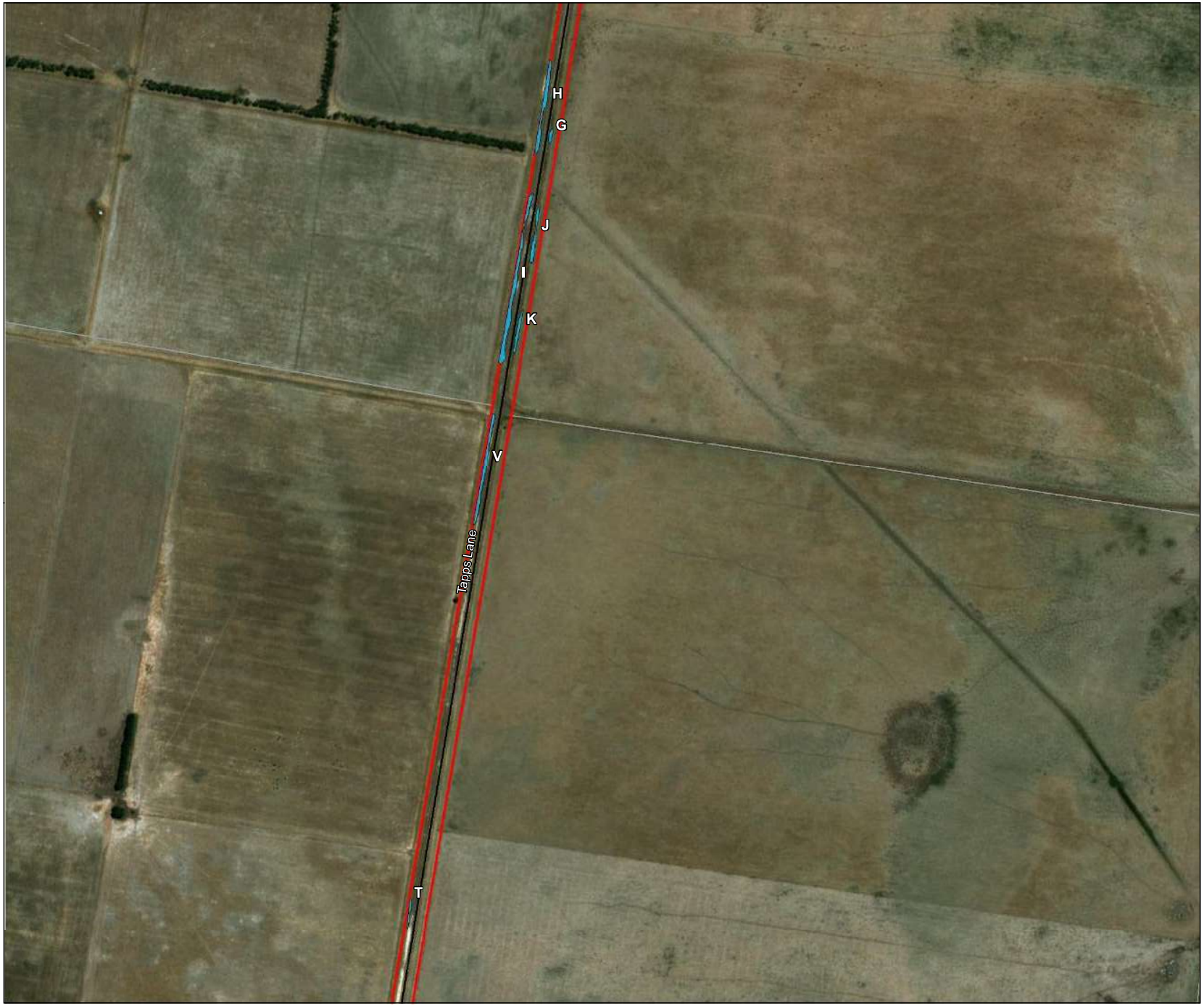

Figure 14: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Wetland (EVC 125)

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SHEET 142 OF 154

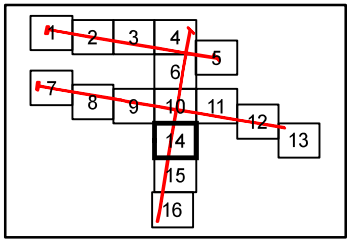

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Figure 15: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

- Study area (indicative only, due to data constraints)
- Plains Grassy Wetland (EVC 125)

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SHEET 143 OF 154

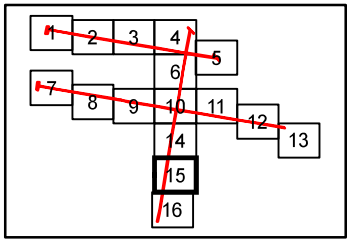

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Figure 16: Study area and native vegetation

Project: Mortlake South Wind Farm
Client: ACCIONA Energy Australia Global Pty Ltd
Date: 8/11/2017

Legend

Study area (indicative only, due to data constraints)

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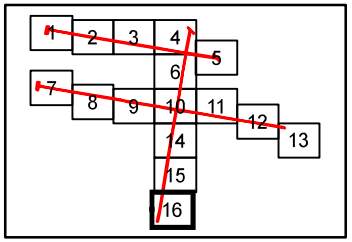

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Appendix D Permit Compliance Assessment

The following provides a response against each of the permit requirements contained within Condition 16 of the Mortlake South Wind Farm Permit:

Condition			Response
		Before the development starts, an environmental management plan must be prepared to the satisfaction of the Minister for Planning, in consultation with the Department of Environment. Land, Water and Planning – Environment Portfolio (DEWLP Environment Portfolio), Moyne Shire Council, Country Fire Authority and other agencies as specified in this condition or as further directed by the Minister for Planning. The environmental management plan may be prepared in sections or stages. When approved, the plan will be endorsed by the Minister for Planning and will then form part of this permit.	**APPROVED FOR THE MINISTER FOR PLANNING** SHEET 145 OF 154
a		A construction and work site management plan which must include:	A Construction and Work Site Management Plan is provided as Plan B1. Some of the items called for by the Planning Permit conditions are more appropriately located in other plans within the EMP, however these have been cross-referenced in Table B1-1 to demonstrate compliance.
a	i	Procedures for access, noise control, dust emissions, spills and leaks from the handling of fuels and other hazardous materials and pollution management. Such construction and work site procedures are to be in accordance with the Environment Protection Authority Publication 480, Environmental guidelines for major construction sites and any other EPA requirements;	These procedures have been incorporated into the following sections: • Access: B1 (EMM-1) • Noise Control: B1 (EMM-2 to EMM-11) • Spills and Leaks from the handling of fuels and other hazardous materials and pollution management: Cross-Referenced in Table B1-1 and included within the B4 - Hydrocarbon and Hazardous Substances Plan.
a	ii	the identification of all potential contaminants stored on site;	Cross-Referenced in Table B1-1 and included within the B4 - Hydrocarbon and Hazardous Substances Plan.
a	iii	the identification of all construction and operational processes that could potentially lead to water contamination;	Table 3.2 – Risk Assessment, Cross-Referenced in Table B1-1 and included within the Hydrocarbon and Hazardous Substances Plan.

Condition			Response
a	iv	the identification of appropriate storage, construction and operational methods to control any identified contamination risks;	Cross-Referenced in Table B1-1 and included within the B4 - Hydrocarbon and Hazardous Substances Plan.
a	v	the identification of waste re-use, recycling and disposal procedures;	Included within EMM-15 to EMM-25.
a	vi	appropriate sanitary facilities for construction and maintenance staff in accordance with the Environment Protection Authority Publication 891.1 Septic Tanks Code of Practice;	Included within EMM-18.
a	vii	a timetable, where practicable for the construction of turbine bases, access tracks and power cabling during warmer months to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;	The Construction Timetable has been provided in Section 5.7 (Construction Timetable). The timetable prioritises completing as much major civil works (turbine bases, access tracks and cabling) prior to winter 2019 as is practicable.
a	viii	procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;	Cross-Referenced in Table B1-1 and included within the B5 - Flora and Fauna Management Plan (EMM-92, EMM-93, EMM-94).
a	ix	the covering of trenches and holes at night time and to fill trenches as soon as practical after excavation, to protect native fauna; and	Cross-Referenced in Table B1-1 and included within the B5 - Flora and Fauna Management Plan (EMM-106).
a	x	the removal of works, buildings and staging area on completion of construction of the project.	Cross-Referenced in Table B1-1 and included within the B2 - Sediment, Erosion and Water Quality Management Plan (EMM-29).
b		A sediment, erosion and water quality management plan. This plan must be prepared in consultation with the Corangamite Catchment Management Authority, the Environment Protection Authority and other authorities as may be directed by the Minister for Planning. The plan must include:	B2 - Sediment, Erosion and Water Quality Management Plans have been provided in Appendix B2 and C1.

Condition			Response
b	i	Procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: - all land disturbances must be confined to a minimum practical working area; - soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed and replaced as soon as possible in sequence; and - stockpiles must be located away from drainage lines;	EMM-34 to EMM-38 provide for the installation of erosion and sediment control devises to ensure silt does not exit the site during and after construction. Rehabilitation is to occur as soon as practicable as defined by EMM-55. Other specific requirements include: • Minimising land disturbance (EMM-31) • Stockpiling soil in separate soil horizons (EMM-45) • Stockpile setbacks from drainage lines (EMM-43)
b	ii	Criteria for the siting of any temporary concrete batching plant associated with the development of the wind energy facility and the procedure for its removal and reinstatement of the site once its use finishes. The establishment and operation of any such temporary concrete batching plant must be designed and operated in accordance with the Environment Protection Authority Publication 628 Environmental Guidelines for the Concrete Batching Industry;	EMM-28 sets out criteria for siting the concrete batching plant in accordance with EPA Publication 628, and removal of the batching plant is set out in EMM-29. It is noted that the batching plant location will be defined in the Condition 1 Endorsed Plans and is in accordance with EPA Publication 628.
b	iii	The installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;	EMM-34 to EMM-38 provide for the installation of silt control devices, including sedimentation fencing. The final locations and methods of sediment control devices will be determined on appointment of Civil and Electrical Construction Contractors.
b	iv	Procedures to suppress dust from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and/or wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;	EMM-48 and EMM-54 provides for water spraying for roads and stockpiles if dust becomes an issue. EMM-47 provides for covering stockpiles with geofabric of stockpiles that are to remain on-site for excessive periods of -time. EMM-55 requires disturbed areas to be rehabilitated progressively as soon as practicable following the completion of work in each area.

Condition			Response
b	v	procedures to ensure that steep batters are treated in accordance with Environmental Protection Authority Publication 275 Construction Techniques for Sediment Pollution Control;	EMM-52 requires steep batters to be treated in accordance with EPA Publication 275. It should be noted that the site is very flat.
b	vi	procedures for waste water discharge management;	EMM-38, EMM-56 and EMM-57 provide for waste water discharge management.
b	vii	a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;	EMM-34 to EMM-38 provide a range of measures which will provide the concentration and diversion of waters onto steep or erosion prone slopes. EMM-60 provides a response procedure where erosion or sedimentation in waterways or drainage lines is observed.
b	viii	pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;	EMM-43 to EMM-48 provide pollution management measures for stockpiles.
b	ix	incorporation of pollution control measures outlined in Environment Protection Authority Publication 480 Environmental Guidelines for Major Construction Sites;	The EMP references a range of measures contained within EPA Publication 480 including: • Sediment controls and minimising erosion (EMM-34 to EMM-38). • Management of Stockpiles and Matters (EMM-50 to EMM-52). Other plans within the EMP also reference pollution control measures from EPA Publication 480, specifically within B1 Construction and Work Site Management Plan as those requirements relate to Noise and Waste.
b	x	siting of concrete batching plant and any on-site wastewater and disposal and disposal treatment fields at least 100 metres from any watercourse;	EMM-26 to EMM-29 identifies that the concrete batching plant and on-site wastewater disposal must be at least 100 metres from any watercourse.
b	xi	Appropriate capacity and an agreed program for annual inspection and regular maintenance of any on-site wastewater management system constructed to service staff, contractors or visitors; and	Annual inspections of any on-site wastewater treatment system is provided for in both Plan B2 - Sediment, Erosion and Water Quality Management Plan and Plan C1 - Sediment, Erosion and Water Quality Management Plan.

Condition			Response
b	xii	A program of inspection and remediation of localised erosion within a specified response time.	A weekly inspection and monitoring program for localised erosion has been incorporated into the EMP. The commitments are presented in the last table in B2 - Sediment, Erosion and Water Quality Management Plan and Plan C1 - Sediment, Erosion and Water Quality Management Plan
c		A blasting plan. This plan is only required if blasting is proposed to be undertaken at the site as part of the construction of the wind energy facility. The plan must include the following:	**Not provided – no blasting is proposed**
d		A hydrocarbon and hazardous substances plan. The plan must include:	A Hydrocarbon and Hazardous Substances Plan is provided in Plan B4 and Plan C2.
d	i	procedures for any on-site, permanent post-construction storage of fuels, lubricants or waste oil to be in bunded areas; and	EMM-187 provides that all permanent post-construction diesel tanks, drums and fuelling areas are bunded. EMM-189 provides that chemicals, chemical waste and other liquids are stored in accordance with EPA Publication 347.1.
d	ii	Contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with Environment Protection Authority requirements.	EMM-81 provides for the maintenance of spill kits, while EMM-86 requires spills to be cleaned up in accordance with the relevant MSDS and reported to the Site Supervisor.
e		A flora and fauna management plan to be prepared in consultation with the Department of Sustainability and Environment [DELWP Environment Portfolio]. This plan must include:	This plan has been provided in Plan B5 - Flora and Fauna Management Plan and Plan C3 - Flora and Fauna Management Plan.
e	i	Measures to protect native vegetation in the site area including application of the Native Vegetation Management Framework principles.	Measures to protect native vegetation are identified in EMM-90 to EMM-103 for construction activities. It is noted that no vegetation is intended to be removed, except native vegetation required to be removed as a result of upgrades to public roads.
e	ii	measures to protect native fauna during construction and operation of the wind farm; and	EMM-101 identifies measures to protect native fauna generally, however it is noted that trenching activities are the largest potential risk to native fauna during the construction process, which is addressed in EMM-104 to EMM-110 which identify measures to stop native fauna from becoming trapped during trenching activities.

Condition			Response
			EMM-192 and EMM-193 provide operational mitigation measures, including cross-referencing ACCIONA's requirements to implement a Bird and Avifauna Management Plan.
e	iii	Procedures for the rehabilitation of construction zones with appropriate pasture species.	EMM-111 to EMM-115 nominate procedures for the rehabilitation of construction zones with appropriate pasture species.
f		A wildfire prevention and emergency response plan prepared to the satisfaction of the Minister for Planning in consultation with the Country Fire Authority, the DELWP Environment Portfolio and Moyne Shire Council. This plan must include and consider:	This plan has been provided in Plan B6 - Wildfire Prevention and Emergency Response Plan and C4 - Wildfire Prevention and Emergency Response Plan.
f	i	constructed roads should be a minimum of (4) four metres trafficable width with a four metre (4m) vertical clearance for the width of the formed road;	EMM-117 references this requirement.
f	ii	roads should be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width;	EMM-117 references this requirement
f	iii	the average grade of should be no more than 1 in 7 (14.4%) (8.1°) with a maximum of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres;	EMM-117 references this requirement
f	iv	dips in the road should have no more than a 1 in 8 (12.5%) (7.1 °)entry and exit angle;	EMM-117 references this requirement
f	v	water access points shall be located in safe easily identifiable areas, accessible in all weather conditions;	EMM-117 references this requirement
f	vi	water access points should be designed, constructed and maintained for a load limit of at least 15 tonnes;	EMM-117 references this requirement

Condition			Response
f	vii	a turning point with a minimum radius of 10 metres is required for fire appliances at all water access points;	EMM-117 references this requirement
f	viii	fire brigade appliances should be able to park within four (4) metres of the water supply outlet on a hard standing area;	EMM-117 references this requirement
f	ix	bulk static water storages (22500 Litre) should be provided adjacent to main access tracks for fire fighting. Locations should be determined in consultation with CFA Fire safety officers and with operational staff;	EMM-128 references this requirement for the construction period, and EMM-208 identifies 22,500 static water storage units will be located at the O&M facility and at two additional locations as shown on the endorse plans.
f	x	all tanks should be manufactured with at least one (preferably two) 64mm, 3 thread/25mm x 60 mm nominal bore British Standard Pipe (BSP) round male coupling 50 mm from their base. Outlets should be a minimum of two (2) metres apart;	EMM-128 references this requirement
f	xi	water access points are to be marked by appropriate signage as per CFA's Guidelines for Identification of Street Hydrants for Fire Fighting Purposes;	EMM-117 references this requirement
f	xii	grass should be no more than 100mm in height and leaf litter no more than 10mm deep for a distance of (30) thirty metres around constructed buildings and viewing platforms;	EMM-122 references this requirement.
f	xii	a fuel reduced area of (4) four metres should be maintained around the perimeter of electricity compounds and sub station type facilities;	EMM-121 references this requirement.
f	xiv	there should be no long grass or deep leaf litter in areas where plant and heavy equipment will be working;	EMM-120 references this requirement.

Condition			Response
f	xviii	all plant and heavy equipment should carry at least one 9 Litre Water Stored pressure fire extinguisher with a minimum rating of 3A;	EMM-130 references this requirement for the construction period of the wind farm.
f	xviii	internal fire protection systems, where appropriate, to assist with fire suppression;	Section C4 - Wildfire Prevention and Emergency Response Plan identifies that turbines will have various fire protection systems in place.
f	xviii	lighting protection devices, where appropriate, installed on each wind farm;	Section C4 - Wildfire Prevention and Emergency Response Plan identifies that the turbines will incorporate lighting protection devices.
f	xviii	dedicated monitoring systems within each wind turbine that detect temperature increases in turbines and shuts them down when the threshold temperature is reached;	Section C4 - Wildfire Prevention and Emergency Response Plan identifies that dedicated monitoring systems will be installed for each turbine to detect temperature increase and shut down turbines in the event a threshold temperature is reached.
f	xix	construction of the wind farm outside the fire season where possible;	It will not be possible to construct the wind farm outside of the fire season, noting other requirements to focus construction during dryer months to avoid impacts on waterways and wetlands. EMM-129 provides for responses to periods of high danger.
f	xx	a program of training of volunteer and paid CFA personnel in fire suppression in and around the wind energy facility.	EMM-196 identifies a program of inviting CFA and other emergency services personnel to the wind farm to develop fire response measures.
g		A pest animal management plan to be prepared in consultation with the DELWP Environment Portfolio and the Department of Economic Development, Jobs, Transport and Resources, to the satisfaction of the Minister for Planning. This plan must include:	This has been provided in Plan B7 - Pest Animal Management Plan and Plan C6 - Pest Animal Management Plan.
g	i	procedures for the control of pest animals, particularly by avoiding opportunities for the sheltering of pests; and	EMM-140, EMM-141 and EMM-142 provides procedures to control pest animals via avoiding sheltering opportunities.

Condition			Response
g	ii	follow-up pest animal control for all areas disturbed by the wind energy facility construction works for a period of two years following the completion of the wind energy facility.	EMM-211 commits to undertaking pest control for all areas disturbed by the wind farm for two years post-construction.
h		A pest plant management plan to be prepared in consultation with the DELWP Environment Portfolio and the Department of Economic Development, Jobs, Transport and Resources, to the satisfaction of the Minister for Planning. This plan must include:	This has been provided in Plan B8 - Pest Plant Management Plan and Plan C6 - Pest Plant Management Plan.
h	i	procedures to prevent the spread of weeds and pathogens from earth moving equipment and associated machinery including the cleaning of all plant and equipment before transport to the site and the use of road making material comprising clean fill that is free of weeds;	• EMM-150 requires a pest plant survey to confirm the extent of pest plant distribution prior to disturbance. • EMM-148 provides a wash down facility at the construction compound. EMM-154 to EMM-156 provide a procedure for undertaking vehicle wash down. • EMM-157 requires imported materials to be free of pest plant material before entering the site. • EMM-211 requires a post-construction pest plant survey and remediation actions if any infestations have occurred.
h	ii	revegetation of disturbed areas; and	EMM-152 provides for the revegetation of disturbed areas (and cross-references measures previously identified in the Flora and Fauna Management Plan).
h	iii	a protocol to ensure follow-up weed control is undertaken on all areas disturbed through 'construction of the wind energy facility for a minimum period of 2 years following completion of the works.	EMM-220 provides a monitoring and control program for weeds for a two years following the completion of construction.
i		A training program for construction workers and permanent employees or contractors at the wind energy facility site including a site induction program relating to the range of issues addressed by the Environmental Management Plan.	Section 5.3 identifies the training program required as part of the site induction process, including mandatory requirements to be inducted into the EMP, as well as more role specific inductions.
j		A program for reporting including a register of environmental incidents, non-conformances, complaints, corrective actions and advice on to whom the reports should be made.	Section 5.4 reporting processes, including the use of Quest to register, monitor and resolve incidences.

Condition			Response
k		A timetable for implementation of all programs and works identified in a plan referred to in Conditions 16. a) to 16. j) above.	Section 5.7 provides the construction timetable for the project. Programs and measures have been structurally separated into construction requirements and operation requirements within Part B and C of the EMP identifying when all programs and works must occur. Appendix B provides an implementation timetable for all relevant actions contained within the EMP to be established.