WOOLNORTH RENEWABLES

Musselroe Wind Farm

Public Environmental Report 2022 - 2025

30 September 2025

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Appendix 1 Musselroe Wind Farm (EPN 8657/2) **55**

1. General Managers Statement

This is the fifth Public Environmental Report (PER) published for the Musselroe Wind Farm (MRWF) project. The PER has been prepared following the requirements set out in Section 2.3 and 3.4 of the Annual Fee Remission Guidelines (2010). This PER is also prepared to satisfy Condition G5 of the Environment Protection Notice for the project (EPN 8657/2), requiring the submission of an Annual Environmental Review (AER), that is publicly available (www.woolnorthwind.com.au/health-safety), to the Director of the Environment Protection Authority (EPA) by the 30th of September of each reporting year. This PER reporting period is July 1, 2022, to June 30, 2025.

The information contained in this PER has been carefully prepared by our Health, Safety and Environmental team, in collaboration with project staff.

I acknowledge and endorse this report.

Signed by:
Chris Sims
466F998428BC411...

Chris Sims
Acting General Manager
Woolnorth Wind Farm Holding Pty Ltd (T/A Woolnorth Renewables)
30 September 2025

2. This Report and Reporting Period

This PER provides a summary of the environmental management activities and management actions undertaken at MRWF during the reporting period (July 1, 2022, to June 30, 2025). This report fulfils the requirements of the AER requirements for 2024/25 in accordance with Condition G5 (EPN 8657/2). The reporting requirements relevant to the Commonwealth Environment Protection and Biodiversity Conservation Act (1999) (EPBC) approval (2002/683) are also reported in this document. It also provides additional information to satisfy the reporting requirements of a PER, and a summary of additional work undertaken at this site to address any environmental issues or improve environmental values. Table 1 contains details of the sections within this report and the specific compliance requirements that each section addresses.

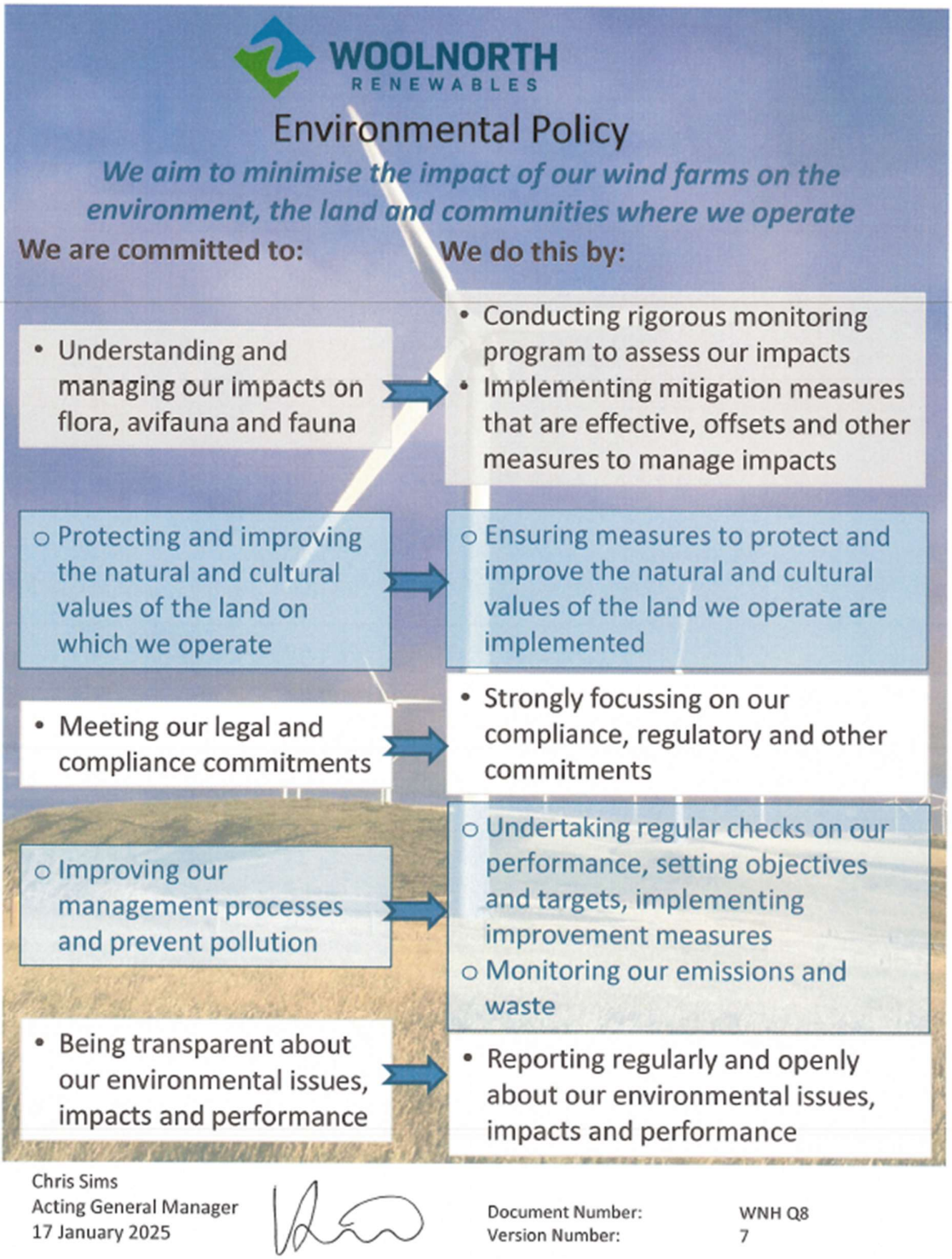
Table 1. Sections contained within this report and details of reporting requirements met.

Sections of this report	Compliance details
Statement from General Manager	Requirement of G5 of EPNs. PER requirement.
Reporting period Section 2	PER requirement
Profile - Company Section 3	PER Requirement
Environmental Policy Section 4	PER requirement
Activity Profile Sections 5	PER & part AER requirement
Legislative requirements Section 6	PER requirement
Permit Conditions Section 6	Reporting on commitments contained within EPNs. PER requirement
Environmental Management (EMS, audits, process/procedure changes, performance improvement) Section 7	PER & part AER requirement
Complaints Received from the Public Section 7.5	PER & AER requirement
Non-trivial Environmental Incidents Section 7.6	PER & AER requirement
Infringement Notices, Prosecutions or Enforcements Section 7.10, 7.11, 7.12	PER requirement
Environmental Monitoring Section 7 -10	PER requirement
Environmental Training Section 7.14	PER requirement
Community Engagement on Environmental Matters Section 7.15	PER &AER requirement
Other Environmental Management Activities Section 7.17	PER & AER requirement
Environmental Management Plans – State and Commonwealth Sections 8-10	AER requirement Reporting on commitments contained within EPNs, EPBC Approval and the State Environmental Management Plan

3. Profile – Woolnorth Wind Farm Holding Pty Ltd

Woolnorth Wind Farm Holding Pty Ltd was formed in 2012 and is a joint venture between Hydro Tasmania and Shenhua Clean Energy Holding. In February 2020, Woolnorth Wind Farm Holding Pty Ltd registered and commenced trading under the name of Woolnorth Renewables (WNR). WNR owns and operates the MRWF (168MW), as well as the Bluff Point Wind Farm (BPWF - 63MW) and Studland Bay Wind Farm (SBWF - 75MW), not reported on herein. In total, WNR has a total installed capacity of 306 MW, and owns and operates two 110 kV transmission line assets (approximately 50km per line). WNR leases the MRWF site but owns the BPWF and SBWF sites. All three site have agricultural licence arrangements to allow continued agricultural production. The Company's major administrative base is in Launceston, Tasmania.

4. Environmental Policy



5. Activity Profile

5.1 Background

The MRWF is located in far north-east Tasmania (Figure 1). MRWF Pty Ltd was previously owned by Roaring 40s Renewable Energy Pty Ltd, until 30 June 2011 when Roaring 40s was disaggregated. It was then owned by Hydro Tasmania. Ownership changed again in February 2013, and the wind farm is now owned by WNR. WNR manages MRWF, including compliance with its obligations under the Environment Protection Notice (EPN), Environmental Protection and Biodiversity Conservation Act (EPBCA) approval and other approval conditions. The regulatory compliance obligations of MRWF are the main focus of this report.

5.2 MRWF

The MRWF consists of:

- 56 Vestas (3MW) wind turbines.
- Underground 33 kV power collection system.
- An electrical substation, control room and associated buildings.
- Roads, fences and other associated infrastructure.
- A 110kV single circuit transmission line (46km in length, Figure 2), connecting the wind farm to the national electricity grid at the Derby substation.
- 30 IdentiFlight bird identification camera towers

Construction of the wind farm commenced in March 2009, and completion of the wind farm was contractually executed on 9 October 2013. For the purposes of several EPN requirements bound by the term 'commissioning/ed', July 1, 2013, is used (as 55 of the 56 wind turbines were operating by that time).

MRWF has been issued a Municipal Planning Scheme Permit (PLN/03-0161 & PLN/08-0714), an EPN (8675/2, replacing conditions attached to PLN/03-0161) and an EPBC approval (2002/683). These regulatory instruments are administered by the Dorset Council, the EPA and the Department of Climate Change, Energy, the Environment and Water (DCCEEW) respectively. Attached to these legal instruments are environmental conditions with which MRWF must comply. The preparation of this PER/AER is a requirement of the EPN. Environmental Management Plans that have been approved in accordance with the EPN and EPBC Approval also outline reporting commitments and requirements.

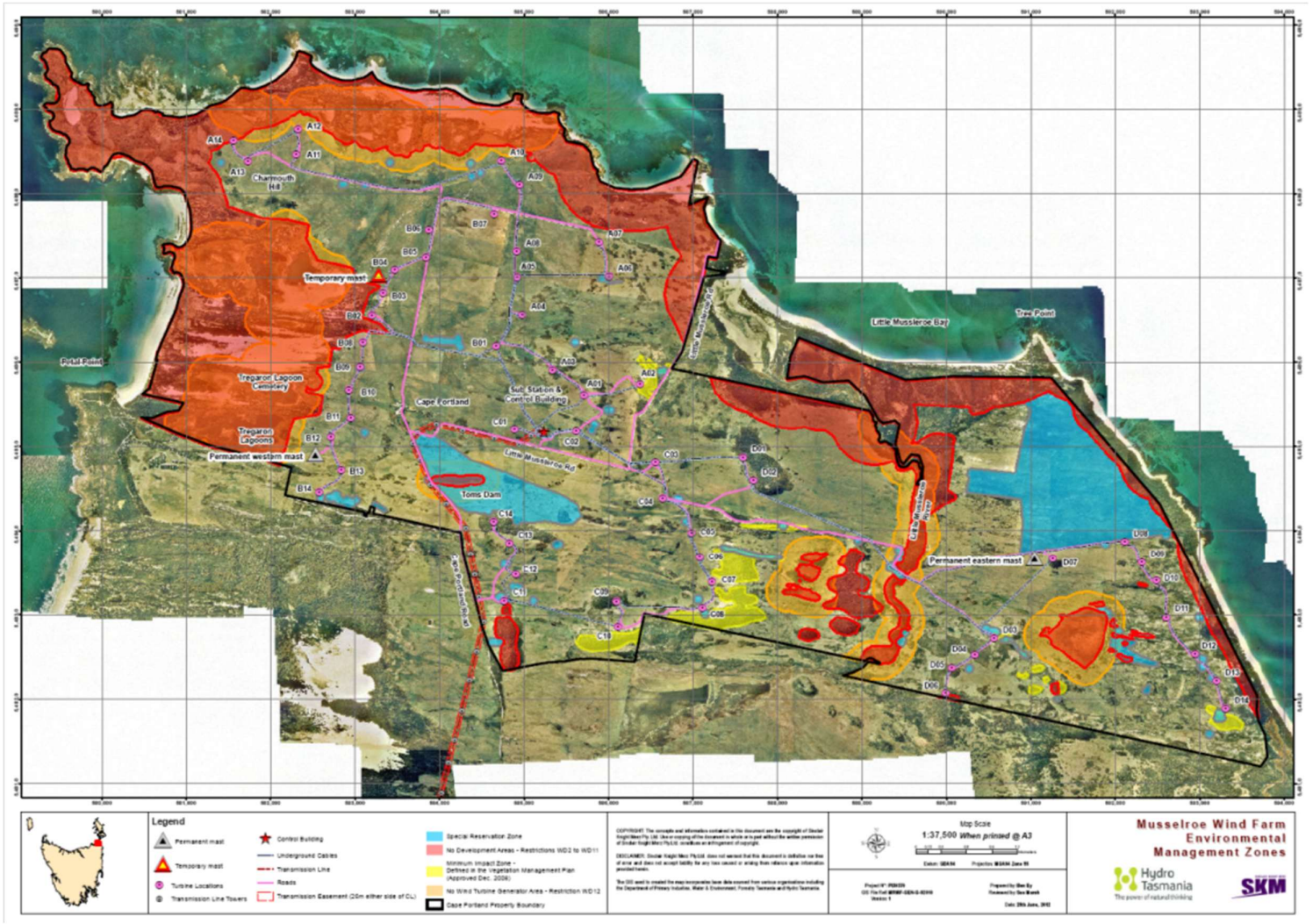


Figure 1. Musselroe Wind Farm layout.

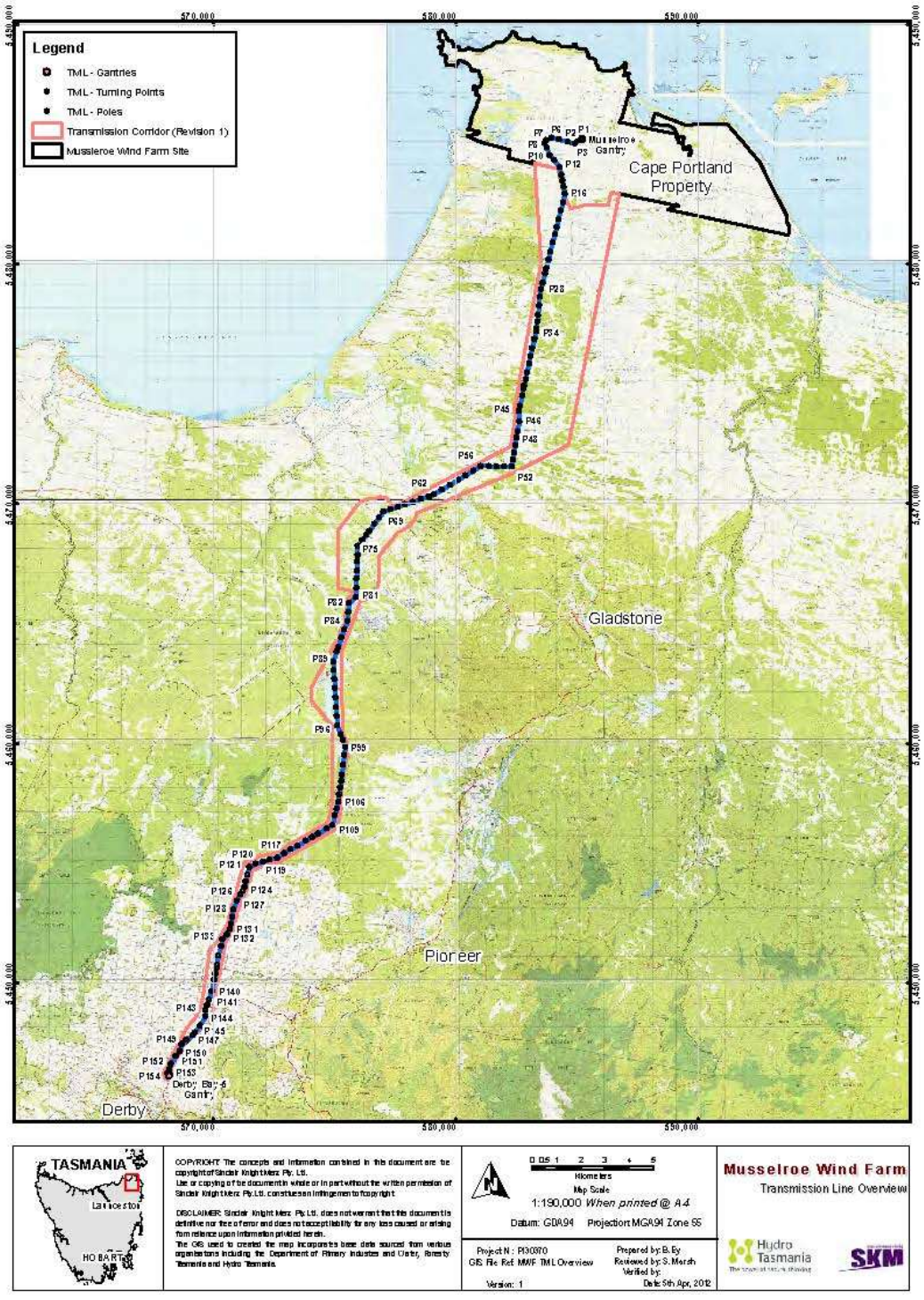


Figure 2. Transmission line alignment.

5.3 Plant and operations

Table 2 summarises the infrastructure at the MRWF, while Table 3 summarises that of the transmission line.

Table 2. Wind Farm Infrastructure.

Installed capacity	168MW
Number of turbines	56, Vestas V90
Tower height (m)	80
Rotor diameter (m)	90
Wind speed range (m/s)	4-25
Year commissioned	July 1 2013
Access roads	43 km access roads
Underground power collection system	33 kV
Control building including switch room (high voltage circuit breakers), administration offices, and workshop	Yes
Wind Monitoring Tower	Removed
IdentiFlight Bird Monitoring System (tower, imaging head and control cabinet)	30
Hazardous material store	Yes
High voltage switchyard including transformers, disconnectors, circuit breakers, overhead gantry, oil water separator	Yes
Reactive support equipment	Yes
General storage facility	Yes
Visitors Centre	Yes

Table 3. Summary of Transmission Line Infrastructure

	Notes
Configuration	Overhead monopole construction, single circuit comprising 3 conductors and an OPGW (optic fibre ground wire)
Main transmission line length	46 km
No. monopole/towers	154 (not including structures in switchyards)
Length Underground Cable	0
Bird strike mitigation	Approximately 8 spans

From an operational perspective, MRWF has been fully operational since commissioning was completed at the end of June 2013. During the reporting period, the wind farm has operated continuously and within the expected level of turbine availability. Operations have been occasionally interrupted by operational failures, most of which are unexpected and not of any material consequence. During the reporting period (July 1, 2022, through June 30, 2025) the wind farm produced approximately 1524 GwH of electricity.

5.4 Raw material consumption

The MRWF EPN does not specify or limit the consumption of any raw materials. MRWF has however monitored several commodity streams which are required for the operation of the wind farm (see Table 4). The vast majority of commodities and materials were brought to site during the construction, rather than during the operational phase of the wind farm.

Table 4. Raw materials used/brought to site during the reporting period.

	Quantities			
Purpose	2022/23	2023/24	2024/25	Source
Base course and other road materials (t)	1500	1500	1500	Rushy Lagoon
Energy Consumed (GWh)	1.3	1.3	1.0	Grid
Diesel (vehicle use)*	23.3KL	22.8KL	38.1KL	Gladstone, Scottsdale, St Helens
Water	150 KL	150KL	150KL	Self – sourced (not metered)

*Data supplied by external contractors and suppliers and is unverified

5.5 Product markets and sources of raw materials

The energy produced by the wind farm is used in the National Electricity Market. The energy is metered (measured) at the Derby sub-station and distributed from there.

As outline above, the MRWF operation does not require consumption of any raw materials.

5.6 Pollution, greenhouse gas emissions, waste, other emissions and their control measures

While the wind farms are industrial facilities, they are not significant sources of air, water or noise pollution.

Emissions to the atmosphere are generated from vehicles (exhaust emissions and dust) and gasses held on site. No significant losses of gasses used or stored on site were recorded. This includes sulphur hexafluoride (SF6), which is stored (in use) within switchgear in most wind turbines and the main switchyard circuit breakers. The volumes held on site are relatively minor and control measures are in place to minimise emissions to the atmosphere. Vehicle emissions are minimised by having a relatively new fleet of vehicles. WNR has obligations to report emissions annually under the National Greenhouse and Energy Reporting Act 2007.

Dust emissions are not specifically monitored or controlled, but regular road maintenance ensures all site roads have stable running surfaces.

Emissions to water are not likely and have not been recorded during the operation of the wind farm.

Noise emissions are generated through the operation of wind turbines and the switchyards. A noise compliance assessment was completed following construction, which demonstrated the wind farm was compliant with the noise emission requirements. There have been no complaints received by WNR regarding noise emissions from the wind farm since commissioning.

Solid wastes are produced, and waste streams are monitored and volumes recorded. Solid wastes are disposed of by Veolia Environmental Services (under contract). All recyclable materials are recycled where possible.

Waste effluent from the control building (domestic wastewater) is disposed of onsite through a mini treatment plant. Roof collected rain water is directed to drinking water tanks and other storm water to the sites drainage system.

The breakdown of the types and quantities of solid wastes generated on each site during the reporting period is provided in Table 5.

Table 5. Waste stream volumes

Waste	**Volume (m^3)***		
Year	**2022/23**	**2023/24**	**2024/25**
General waste	20	20	24
Recycling	5	5	9

*Volume estimate based on scheduled monthly skip pickup

Hazardous materials used on the wind farm sites generate a relatively small quantity of waste including oils, oily wastes and coolant from turbine servicing. All wastes from hazardous materials are appropriately segregated and disposed of by an appropriately qualified and licenced contractor.

Chemical inventories and safety data sheets (SDS) are held on each site and are regularly updated and audited. All hazardous materials such as oils, coolant and general materials such as paints, solvents, glues, herbicides etc., are retained on site at the lowest practical stock levels, and if possible and practical, only brought to site when needed.

The hazardous wastes produced at MRWF over the 2023 – 2025 reporting period is provided in Table 6.

Table 6. Hazardous/controlled waste stream volumes

Waste	Volume (L) or (m^3)		
Year	2022/23	2023/24	2024/25
Hydrocarbon liquid	3544L	3544L	3000L
Hydrocarbon solids*	9 m^3	9 m^3	9 m^3
Filters*	7.5 m^3	13.5 m^3	12.3^3
Coolant	1200L	0	0

*Hydrocarbon solids and Filters volume estimate based on scheduled monthly skip pickup

5.7 The local environment

5.7.1 Wind Farm

MRWF is located on the Cape Portland property in Tasmania's far north-east (Figure 1). The site is approximately 5,500 ha. The area is dominated by consistent westerly winds with an annual rainfall of about 600 mm.

The project area rises from coastal dunes to undulating plains and low hills up to approximately 80m above sea level. The lower areas of the site are generally poorly drained, containing a number of small naturally occurring water bodies and wetlands. Several intermittent and perennial swamps are scattered throughout the site, as are numerous man-made farm dams

The Cape Portland Wildlife Sanctuary (a private sanctuary proclaimed under the *National Parks and Wildlife Act 1970*) occupies the western side of the property, and includes numerous lagoons, the largest named the Tregaron Lagoon. These water bodies range from fresh water to saline, depending on their distance from the coast, and constitute most of the surface water on the site. In addition to the lagoon areas, other wetlands habitats occur in the north-east of the property. Six of the wetlands are listed in the Directory of Important Wetlands in Australia and have been nominated for their ecological value.

The headwaters of the Little Musselroe River is south of the Rushy Lagoon township, draining in a northeast direction into the Little Musselroe Bay estuary. The catchment includes large parts of the Rushy Lagoon property as well as the south-western part of the project area.

Adjoining the Cape Portland Wildlife Sanctuary is the Cape Portland Conservation Area (209 ha). This area is a narrow coastal Crown Land reserve that extends from high water marks to the lower water mark and includes the Petal Point area.

An area of Crown coastal reserve borders most of the north boundary of the wind farm site and extends east to link to the Musselroe Bay Conservation Area (1,750 ha).

The wind farm site and the land immediately around it are reasonably representative of the local environment. The landscape has been progressively cleared to make way for agricultural enterprises, resulting in a mosaic of relatively large expanses of cleared pasture dissected by smaller remnant patches of native vegetation. The ‘Rushy Lagoon’ agricultural property is located to the south of the wind farm.

There are no known significant local sources of pollution within the vicinity of the wind farm.

First Nations peoples have a deep spiritual connection to the immediate and local area. In particular it is the clan country of *Mannalargenna*, a significant leader, to whom many First Nations peoples today can trace their lineage. It is also important because of various significant historical events that have occurred there, and these strong connections continue into the present.

There are many records of First Nations peoples’ heritage across the wind farm site and extensive studies were undertaken prior to the construction of the wind farm (and transmission line) to minimise any possible impacts. This included realigning or moving wind turbines, cable routes, roads and part of the transmission line where necessary.

There are also a number of other significant heritage artefacts and features that represent heritage value to other cultures, including a private graveyard and building ruins.

5.7.2 Transmission Line

The transmission line is approximately 46 km long and runs in a SSW direction from the wind farm site and terminates at the Derby sub-station, approximately 3km north of the Derby township (Figure 2). The transmission line passes through various landscape types including farmland (high and low productive, grazing and cropping), scrub forests, private Eucalypt and Pine plantations and Eucalyptus woodland and forest. These landscapes provide diverse and wide-ranging habitats for numerous species of flora and fauna. Land tenures include private freehold, State Forest, State Reserve (Mt Cameron Regional Reserve) and Crown Land.

The Ringarooma and Little Boobyalla Rivers are the main drainage lines intersecting the transmission route and flow into Ringarooma Bay. Others include March Creek, Vicary's Creek and Walpole Creek. The lower floodplain of the Ringarooma River, which includes the Chimneys and Hardwickes Lagoons, is declared a Ramsar wetland.

There are no known significant local sources of pollution within the vicinity of the transmission line.

5.8 The regional environment

The regional area includes a variety of environments ranging from marine, coastal dunes and heath to pastoral and intensive agricultural land to forests and low rocky hills. The project site is located in the Dorset Municipality and is part of the Flinders Bioregion, which is described as:

> "Devonian granites dominate the elevated areas of the subregion forming low rugged ranges. These are overlain by shallow stony/gravelly gradational or duplex soils carrying *Eucalyptus amygdalina* open forest and woodland with *E. nitida* open heath on higher peaks. Quaternary/Tertiary materials overlain by deep sandy soils typify extensive lowland plains, coastal deposits and dunes. Coastal plains have been heavily modified by agricultural (grazing)."(Interim Biogeographic Regionalisation for Australia, 2000).

Winds tend from the north-west to the southerly sector for most of the year, but with occasional rain bearing north-easterlies in the summer months. Rainfall patterns in coastal areas average less than 800 mm but increases to over 1200 mm with elevation.

Prior to European settlement most of the north-east region was covered by forest. With the advent of increased human activity and fire frequency, structural changes in vegetation have occurred. The wind farm site and transmission corridor have been substantially modified as a consequence of land clearing for agriculture. Ongoing clearing, fertiliser use, regular burning and other practices associated with the agricultural land use continue to take place. Within the region a diverse range of vegetation communities exist including coastal dune vegetation scrub, scrubby coastal heath, wet heath, dry Eucalypt Forest, She-oak Forest, Melaleuca and Leptospermum scrub forest, wet Eucalypt Forest and isolated areas of rainforest.

The fauna populations of the region are diverse. Many of the birds are found in association with the shoreline and wetland areas, and some 144 native species have been documented in total. Seven of these native species have been listed under the relevant Commonwealth and state legislation. The area also has a rich mammal population, with 23 species of mammal, along with five species of frog and four species of reptile recorded in the region.

The closest population centre (other than Little Musselroe Bay) to the wind farm is Gladstone (population less than 150 people). Industrial sectors that dominate the employment in the region area include agricultural, forestry and fishing, followed by manufacturing and retail. These latter sectors are concentrated predominantly in the larger urban centres of Scottsdale (< 3,000 people)

and Bridport (approximately 1,500 people), and collectively these two towns account for approximately 44% of the Dorset Municipality population.

5.9 Significant changes to wind farm operations and environmental procedures over the reporting period

The only change to the wind farm activity that has taken place over the reporting period is the movement away from utilising human bird observers for turbine collision risk management to the IdentiFlight bird detection system. Specific information on the change can be found in sections 7.17.3 and 7.17.4.

No significant changes to the activity are expected over the next 12 months.

6. Legislative requirements

6.1 Permit conditions

MRWF Pty Ltd has been issued a Municipal Planning Scheme Permit (PLN/03-0161 & PLN/08-0714), an EPN (8657/2, replacing conditions attached to PLN/03-0161 and EPN 8675/1). A copy of the current EPN is provided in Appendix 1. MRWF also operates under an approval issued under the EPBC (approval no. 2002/683). These regulatory instruments are administered by Dorset Council, EPA and DCCEEW.

Attached to these legal instruments are conditions with which the wind farm must comply. The preparation of an AER (embodied in this PER) is a requirement of the wind farm's EPN. Environmental management plans approved in accordance with the EPN, and Commonwealth approval conditions, also outline reporting commitments and requirements. This report therefore contains the relevant reporting requirements for MRWF and the associated 110 kV transmission line.

6.2 Relevant Environmental legislation

The following legislation and policy documentation are particularly applicable to the operation and maintenance of the MRWF. Changes and updates to legislative requirements are monitored regularly.

TASMANIAN LEGISLATION AND REGULATIONS

- Aboriginal Relics Act 1975
- Agricultural and Veterinary Chemicals (Control of Use) Act 1995
- Agricultural and Veterinary Chemicals (Control of Use) Order 2001
- Animal Welfare Act 1993
- Animal Welfare (General) Regulations 2013
- Building Act 2016
- Building Regulations 2016
- Crown Lands Act 1976
- Crown Lands Regulations 2021
- Dangerous Substances (Safe Handling) Act 2005
- Dangerous Substances (Safe Handling) Regulations 2009
- Dangerous Goods (Safe Transport) Act 2010
- Dangerous Goods (Road and Rail Transport) Act 2010
- Dangerous Goods (Road and Rail Transport) Regulations 2021
- Electricity Supply Industry Act 1995
- Electricity Supply Industry Regulations 2018
- Electricity Wayleaves and Easements Act 2000
- Environmental Management and Pollution Control Act 1994
- Environmental Management and Pollution Control (Smoke) Regulations 2019
- Environmental Management and Pollution Control (General) Regulations 2017
- Environmental Management and Pollution Control (General Fees) Regulation 2017
- Environmental Management and Pollution Control (Environmental Infringement Notices) Regulations 2016
- Environmental Management and Pollution Control (Noise) Regulations 2016
- Environmental Management and Pollution Control (Waste Management) Regulations 2020
- Explosives Act 2012
- Fire Service Act 1979

- Forest Practices Act 1985
- Forest Practices Regulations 2017
- Historic Cultural Heritage Act 1995
- Historic Cultural Heritage Regulations 2016
- Land Use Planning and Approvals Act 1993
- Land Use Planning and Approvals Regulations 2024
- Living Marine Resources Management Act 1995
- Local Government Act 1993
- Mineral Resources Development Act 1995
- National Parks and Reserves Management Act 2002
- Natural Resource Management Act 2002
- Nature Conservation Act 2002
- Resource Management and Planning Appeal Tribunal Amendment Act 2004
- State Policies and Projects Act 1993
- National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998
- State Coastal Policy 1996
- State Policy on the Protection of Agricultural Land 2009
- State Policy on Water Quality Management 1997
- Threatened Species Protection Act 1995
- Water and Sewerage Industry Act 2008
- Water and Sewerage Industry (General) Regulations 2019
- Biosecurity Act 2019
- Work Health and Safety Act 2012

COMMONWEALTH LEGISLATION AND REGULATIONS

- Aboriginal and Torres Strait Islander Heritage Protection Act 1984
- Environment Protection and Biodiversity Conservation Act 1999
- Environment Protection and Biodiversity Conservation Regulations 2000
- Civil Aviation Act 1988
- Civil Aviation Safety Regulations 1998
- National Environment Protection Council Act 1994
- National Greenhouse and Energy Reporting Act 2007
- National Greenhouse and Energy Reporting Regulations 2008
- Native Title Act 1993
- Renewable Energy (Electricity) Act 2000
- Renewable Energy (Electricity) Regulations 2001

7. Environmental Management and Monitoring

7.1 Overview of the Regulatory Approved Environmental Management Plans

Environmental monitoring at the wind farm is conducted in accordance with the approved Environmental Management Plans (EMPs).

All necessary Environmental Management Plans (EMPs) for MRWF were prepared and approved prior to commissioning of the wind farm, as required by the approval conditions, permit and/or EPN. In November 2016 the suite of State approved environmental management plans for the project were reviewed, consolidated into a single Plan ('State Environmental Management Plan 2016') and later approved by the EPA in July 2017. The review and consolidation of the Plans in

2016 primarily focussed on removing the information and commitments relating to the planning, construction and commissioning phases of the wind farm, which are/were no longer relevant. This State Environmental Management Plan was updated again in February 2020 in response to a request from the EPA to vary the Plan pursuant to condition FF7 (1) of the EPN and again in 2021 as per EPN Condition G6. Both the 2020 and 2021 reviews resulted in few changes to the overall document.

An Adaptive Management Protocol was approved by both the EPA and DAWE (now DCCEEW and DAFF) during the PER reporting period. This is described in Section 10 of this report.

The following table (Table 7) summarises the relevant management plans and their details (the current Departmental names are used).

Table 7. Status of State Environmental Management Plans for the MRWF.

Environmental Management Plan and relevant permit condition	Authority	Year last approved	Status	Reporting required in AER?*
Wader Monitoring Plan*	EPA	2021	Active, but all requirements completed	Yes
Fauna Monitoring Report	EPA	2007	Requirement completed	No
Avian Collision mitigation Report (Transline)	EPA	2007	Requirement completed	No
Schayer's Grasshopper surveys	EPA	2007	Requirement completed	No
Construction Rehabilitation Plan	EPA	2008	Requirements completed	No
Weed and Disease Management Plan*	EPA	2021	Active	Yes
Construction Solid Waste Management Plan	EPA	2009	Requirements completed	No, internal auditing
Hazardous Materials Management Plan*	EPA	2021	Active	No, internal auditing
Eagle Impact Offset Plan*	EPA	2021	Active	Yes
(Wind Farm) Vegetation Management Plan*	EPA	2021	Active	No, general comments included
Transmission Line Vegetation Management Plan*	EPA	2021	Active	No, general comments included
Wind Monitoring Tower Avifauna Management Plan	EPA	2012	Requirements completed	No
Bird and Bat Mortality Monitoring Plan*	EPA	2021	Active	Yes
Final Wind Farm Design Report	EPA	2012	Requirements completed	No
Final Transmissions Line Design Report	EPA	2012	Requirements completed	No
Adaptive Management Protocol	EPA	2021	Active	Yes
Construction and/or Operational Environmental Management Plan	Internal	Not Required	Active	Internally approved

*Included as section of Musselroe Wind Farm State Environmental Management Plan 2021

Table 7 (cont). Status of Commonwealth Environmental Management Plans for the MRWF.

Environmental Management Plan and relevant permit condition	Authority	Year last approved	Status	Reporting required in AER?*
CEM2 Turbine 6 Migratory Bird Impact Mitigation Plan	DCCEEW	Not approved	Not Required	Turbine 6 on Tank Hill was not constructed
CEM3 Wind Farm Listed Species Impact Mitigation Plan#	DCCEEW	2012	Active	No, summary and general comments included (some monitoring is reported as part of the Bird behaviour, Utilisation and mortality Monitoring Plan)
CEM4 Bird Utilisation, Behaviour and Mortality Monitoring Plan#	DCCEEW	2017	Active	Yes
Adaptive Management Protocol	DCCEEW	2021	Active	Yes
CEM5 Transmission Line Listed Species Impact Mitigation Plan#	DCCEEW	2009	Active	No, general comments included.
CEM6 Wedge-tailed Eagle Impact Offset Plan#	DCCEEW	2009	Active	No, general comments included

#compliance reporting is also conducted in accordance with Condition 7 of the EPBC Approval, e.g. "On 1 July of each year after the date of this approval, the person taking the action must provide a certificate stating that the conditions of this Approval have been complied with".

In summary, the following sections of the State Environmental Management Plan 2021 require reporting:

- Wader Monitoring Plan.
- Weed and Disease Management Plan.
- Eagle Impact Offset Plan (a consolidated version of the Wedge-tailed Eagle Impact Offset Plan and the White-bellied Sea Eagle Impact Offset Plan).
- Bird and Bat Mortality Monitoring Plan.

Relevant aspects of the Commonwealth Bird Utilisation, Behaviour and Mortality Monitoring Plan (BUBMMP) and the Adaptive Management Protocol (AMP) are also reported in this PER.

All of the above are reported in Sections 8, 9 and 10 of this report. A summary and general comments for the following plans are also provided in the same sections of this report:

- (State) Construction Rehabilitation Plan
- (State) Wind Farm Vegetation Management Plan
- (State) Transmission Line Vegetation Management Plan
- (State) Wind Monitoring Tower Avifauna Management Plan
- (Commonwealth) Wind Farm Listed Species Impact Mitigation Plan
- (Commonwealth) Transmission Line Listed Species Impact Mitigation Plan
- (Commonwealth) Wedge-tailed Eagle Impact Offset Plan.

7.2 Environmental Management System

WNR (including its operations at MRWF, BPWF and SBWF) operates its business under a Health, Safety and Environmental (HSE) management system. WNR was certified to ISO 14001 in 2013 and to ISO 45001 in 2025 and is externally audited annually to maintain its certification in both.

The HSE system includes Policies, Procedures, Forms and other documents that assist to establish and set of high-level directives to all areas of the business. This includes defining accountabilities and responsibilities, effectively outlining business and operational risks, developing procedures and protocols to effectively control and manage these risks. In addition, the system includes methods to check and review system performance and implementation and ensure a systematic continuous improvement cycle is established and implemented.

The HSE management system is described (including access to most system documents) and available on the WNR website www.woolnorthwind.com.au/health-safety.

7.3 Annual audit reports

Internal and external audits of MRWF have been conducted throughout the PER period. Audits included compliance with local, state and commonwealth requirements, internally prepared project documentation and HSE system documentation. Internal audits are conducted in accordance with system procedures. All audit findings are entered into a dedicated database and audit actions tracked. Table 8 lists the audits conducted during the PER period.

Table 8. Audits conducted during the PER period.

Year	Audit focus	Year	Audit focus
2022/23	Site operational audit	2023/24	Site Internal environmental audit
2022/23	Site Internal environmental audit	2023/24	ISO 14001 external audit
2022/23	Bushfire audit	2024/25	Site Internal environmental audit x2
2022/23	ISO 14001 external audit	2024/25	Site operational audit
2023/24	Site operational audit	2024/25	Bushfire audit
2023/24	WTG internal lift audit	2024/25	Site WH&S inspection audit x2
2023/24	EMS audit	2024/25	ISO 14001 external audit
2023/24	Bushfire audit	2024/25	ISO 45001 external audit

7.4 Report on any changes made or intended to the activity or EMS in response to the annual audits

Audits conducted over the PER period continued to drive continuous improvement in environmental management at the MRWF. All audit actions including opportunities for improvement were evaluated and where possible actions developed to address them. Implementation of actions is tracked at various levels.

There have been no material changes made or intended to be made to the activity. All audit issues have been addressed promptly.

7.5 Public Complaints

There were no public complaints in relation to environmental matters received by WNR during the reporting period. A free-call 1800 number was maintained through reporting period.

7.6 Environmental Incidents (non-trivial) and non-compliances

7.6.1 Environmental Incidents

There were seven non-trivial environmental incidents identified at the MRWF during the 2022-25 reporting period. These incidents were:

1. Wedge-tailed eagle collision, July 2022
2. Wedge-tailed eagle collision, July 2022
3. Wedge-tailed eagle collision, August 2022
4. Wedge-tailed eagle collision, June2023
5. Wedge-tailed eagle collision, October 2023
6. Wedge-tailed eagle collision, June 2024
7. Wedge-tailed eagle collision, July 2024

Other bird collisions were recorded as incidents during the reporting period and managed according to the EPN and the approved Bird and Bat Mortality Monitoring Plan (see section 8.4) and the equivalent DCCEEW approved plan. Other 'trivial' environmental incidents were documented and managed by WNR.

7.6.2 Incident follow-up, mitigation and preventative measures

The wedge-tailed eagle (WTE) incidents were managed according to the requirements outlined in the EPN and other approved management plans for the reporting of threatened species. Reporting of the incidents occurred within the required time frames. Corrective actions and offsets are required (see Sections 8.3, 9.2.3).

The Robin Radar avian detection system that was installed for testing during the last PER reporting period was decommissioned in the second quarter of 2023 due to what was deemed an unsuccessful trial. A detailed summary of the project, the test methodologies and the decisions that led to the project being ceased can be found in section 7.17.3 of the 2019-22 PER, with a brief summary provided in section 7.17.3 of the current PER.

In June 2023 the WNR board approved the procurement and installation of an IdentiFlight system for the purpose of reducing the impact of MRWF on WTE. More information on the IdentiFlight detection system is included in this report in section 7.17.4.

7.6.3 Non-compliance

WNR continued to comply with the latest approved State and Commonwealth EMPs.

There were no non-compliances with the EPN or other approval conditions identified. Internal audits conducted as a part of WNR internal audit schedule found no EPN or other approval condition related non-compliances. External audits against ISO 14001 found the site to be maintaining the standard required to continue certification. No audits were conducted by either the EPA or DCCEEW.

7.7 Infringement and environment protection notices

No legal proceedings (such as infringement notices or EPN) were served on the wind farm during the reporting period.

7.8 Environmental Procedure or process changes

As highlighted in a previous PER (2016/19) the suite of State approved environmental management plans for the project were reviewed, consolidated into a single Plan ('State Environmental Management Plan 2016') and was originally approved by the EPA in July 2017. This State Environmental Management Plan was updated again in February 2020 in response to a request from the EPA to vary the Plan specifically relating to condition FF7 (1) (Wedge-tailed Eagle Offset Plan). The Plan was reviewed again in 2021 as per EPN Condition G6. This review resulted in few changes to the document.

The technological investigation of the Robin Radar System that was initiated in 2020 was finalised and the system decommissioned in 2023, following unsuccessful trials at MRWF. Further details on this system investigation are provided in section 7.17.3.

The observer-based wind turbine shutdown program that was initiated in late 2019 was ceased in August 2024 in line with the successful commissioning of the IdentiFlight eagle identification and monitoring system. IdentiFlight was installed as a longer-term strategy for managing eagle collisions. More details on the procurement, construction/installation and operation of the IdentiFlight system are provided in section 7.17.4

7.9 Environmental Management activities and meetings

A summary of environmental management activities and meetings for the period July 2022 to June 2025 is provided in Table 9.

Table 9. Summary of environmental management activities and meetings during the reporting period.

Date	Activity or meeting	Comment
Activities undertaken and outlined in the approved EMPs are outlined in the relevant sections of this report. Other management activities and meetings held in conjunction or addition to the approved EMPS are listed in this table.		
2022/23		
Aril 2023	EPA	General catchup and discussion on proposed IdentiFlight project.
May 2023	EPA	EPN Review
2023/24		
Weekly	IdentiFlight	IdentiFlight project plan meetings
September 2023	DCCEEW	CEC | EPBC Reform briefing from DCCEEW
October 2023	Aboriginal Heritage Surveys	Australian Heritage Specialist archaeologists (IdentiFlight project)
December 2023	External Audit	External audit by BSI for ISO 14001
May 2024	EPA	Site visit
2024/25		
August 2024	Sarcoptic Mange Survey	NRE Tas Sarcoptic mange in wombats survey conducted
September 2024	EPA	Site visit to view IdentiFlight system
November - December	Zoos Victoria	Ecological surveys Pookila (New Holland Mouse)
December 2024	External Audit	External audit by BSI for ISO 14001 & 45001 certification
May 2025	State Government	Minister for Energy and Parks Nick Duigan site visit
Throughout	Discussions with mtwAC	Discussions with mtwAC regarding future collaboration opportunities
Throughout	Discussions with IdentiFlight	IdentiFlight system project and system operation meetings

7.9.1 Other Stakeholder activities

Table 10 below provides a summary of other community-based engagement activities undertaken in relation to the MRWF during the reporting period.

Table 10. Summary of other community-based engagement activities undertaken during the reporting period.

Event and comments	Year 22/23	Year 23/24	Year 24/25
Celebrating 10 Years of Blue Derby	-	-	April
The Devils Cardigan	-	June	-
Rail Trail Run Ride	September	September	September
Bridport Scallop Fiesta	August	August	August
Scottsdale Show	November	November	November
North-east Volunteer Brigade MRWF site familiarisation and BBQ	-	-	July
Mannalargenna Day	December	December	December
Gladstone Community Christmas Party	December	December	December
Gladstone Wood Chop	December	-	-
UTAS Springboard to Higher Education Bursary Program, Scottsdale High School, St Helens District High School and Winnaleah District High School	December	December	December
School Visits	Throughout year	Throughout year	Throughout year
Bridport Surf Lifesaving Club Nippers Program	Throughout year	Throughout year	Throughout year

7.10 Specific actions under EMPCA

There were no specific actions under EMPCA in relation to the activity.

7.11 Any proceedings under Tasmanian or Commonwealth environmental legislation

There were no proceedings under Tasmanian or Commonwealth environmental legislation during the reporting period.

7.12 Any other enforcement actions

There were no other enforcement actions during the reporting period.

7.13 Breaches of permit conditions or relevant limits in legislation and results that vary significantly from predictions contained in any relevant EMP

There were no breaches of the permit conditions or other relevant limits during the reporting period.

7.14 Report of staff and contractor environmental training

WNR maintains a training plan for the employees and contractors working at its sites. The training plan is an output of the HSE system that governs the MRWF operation. The training plan documents all employees and lists the mandatory and recommended training requirements for each person. Training packages have been developed in line with the training plan and are delivered both internally and externally by suitably qualified personnel. In addition to training sessions, emergency preparedness exercises have been undertaken to prepare and train site personnel for site emergency events. Table 11 documents the training sessions and emergency preparedness exercises undertaken during the reporting period.

Table 11. Training sessions and emergency preparedness exercises.

Year	Training or exercise	Activity type
2022/23	Control building flooding, electrical risk.	Desktop
2022/23	TFS site familiarisation	Field
2022/23	Chemical spill and crushed/trapped worker	Desktop
2022/23	Nacelle Evac rigging	Practical
2023/24	TFS site familiarisation	Field
2023/24	Site access blocked by violent protestors scenario	Desktop
2023/24	Helicopter collision with WTG scenario	Desktop
2023/24	Social media attack against staff and company scenario	Desktop
2023/24	TFS site familiarisation	Field
2023/24	Snake bite scenario	Desktop
2023/24	Wildfire scenario	Desktop
2023/24	Unaccounted for worker still on-site scenario	Desktop
2024/25	TFS site familiarisation	Control building
2024/25	Farm tractor accident, pinned worker scenario	Desktop
2024/25	Cyber attack incident scenario	Desktop
2024/25	EWP fire emergency scenario	Desktop
2024/25	Worker under influence of alcohol or other drugs scenario	Desktop
2024/25	Snake bite emergency response exercise	Field, practical
2024/25	Eagle handling training	Field, practical

7.15 Community and stakeholder engagement

7.15.1 Tebrakunna Visitors Centre

WNR continues to operate the Tebrakunna Visitors Centre, located on the wind farm. The venue provides visitors regional information on the history of the First Nations Peoples and also information on the wind farm. WNR estimates the visitors centre is visited by around 2000 people annually.

7.15.2 Direct community support

A number of initiatives have been maintained and/or initiated during the reporting period that involve directly supporting a local community group or project. These have included supporting Mannalargenna Day, the Scottsdale Show, activities and exercises with the local Tasmanian (volunteer) Fire Brigades (TFS), the Bridport Scallop Fiesta, Rail Trail Run (Scottsdale Rotary Club), Celebrating 10 Years of Blue Derby and other Gladstone community activities. During the reporting period WNR has provided new batteries and pads to community Defibrillators previously donated to Musselroe Bay, Ansons Bay and Pioneer.

7.15.3 Interest groups

WNR engages and supports numerous interest groups, with a working interest in the wind farm and/or property.

A close working relationship continues with Melaythenner Teeackana Warrana (Heart of Country) Aboriginal Corporation (MTWAC)), who were closely involved with the construction of the Tebrakunna Visitor Centre built during the construction phase of the project. MTWAC also organise Mannalargenna Day (December each year) to celebrate the life of Mannalargenna, a past leader of the Coastal Plains Nation.

WNR have also supported:

- the NRE/UTAS Wombat Mange survey program
- NRE Forester Kangaroo surveys
- Birds Tasmania to complete multi-decade surveys (documenting wader bird numbers)
- NE Field Naturalists
- Dorset Coastal Working Group
- Zoos Victoria Pookila (New Holland Mouse) ecological surveys

7.15.4 Schools and education

Educational support continued during the reporting period with classes from various schools conducting excursions to the wind farm to learn about the MRWF operation, large scale wind farm operations, renewable energy and other aspects of electricity generation.

7.16 Commitments to improve future environmental performance

7.16.1 Adaptive Management

WNR's commitment to continual improvement is supported using an adaptive management process. This approach provides a structured evaluation of complex environmental issues at the wind farms. It was initially formally applied to evaluate the effectiveness of management actions (including surveys) relating to WTE collisions at BPWF and SBWF. The process is now being applied to any environmental management strategy where appropriate, some of which are not complex in their nature. The approach is predicated on evidence-based management, which leads to robust and defensible decision making in environmental management. The approach has been described in previous Annual and Public Environmental Reports.

As described in Section 10 of this report, an Adaptive Management Protocol has been formalised to document the management of the WTE collision issue at MRWF.

Other methods of ensuring continuous improvement

WNR is committed to the continuous improvement principles that underpin both the ISO 14001 and 45001 standards and the HSE system applied to the operations and maintenance of MRWF. Opportunities to improve environmental performance are identified and evaluated through systematic processes such as management reviews, corporate level planning, internal and external auditing, site inspections, quarterly site HSE meetings and weekly toolbox meetings. The commitment to continuous improvement is outlined in the WNR Environmental Policy included in section 4.

Other evidence of WNR's commitment to continual improvement is the attendance at relevant national and international conferences and forums (to keep abreast of the latest research and management strategies), the continual tracking of scientific literature on various topics, and the publication and presentation of data from these sites.

7.17 Other Environmental Management Activities

7.17.1 Eagle management overview

Wedge-tailed eagle mortalities at MRWF are recognised by WNR as a significant environmental and business concern. Woolnorth, as an experienced wind farm operator, understands the complexity of the issue, the difficulties in understanding it and the various aspects and pitfalls of trying to establish mitigation solutions that have, or are likely to have, tangible and successful outcomes. Various technologies and mitigation options have been tested or implemented by WNR at MRWF and also at the company's other assets, the Bluff Point and Studland Bay Wind Farms

Since the wind farm was commissioned in mid-2013 several measures have been developed, implemented or tested, and these have been described in previous reports. During this reporting period a significant investment was made in a new strategy for direct collision prevention. Measures and actions relevant to the 2024/25 and PER reporting periods are described below.

7.17.2 GPS tracked eagles

For several years WNR have been working with Tasmanian eagle specialists and researchers. WNR have both supported research projects through offsets, but also, have been engaged in other collaborative ways. Through these collaborations, in mid-2019, WNR supported researchers to attach a GPS tracking device to a resident male WTE at the MRWF site. Following the successful attachment of the first device, in early 2020, WNR again supported researchers to place GPS trackers on another 4 adult eagles as a part of a larger Tasmanian wide project. These 4 adults were either considered resident (3) to the MRWF site or local (1) to the broader area, with each MRWF eagle being part of a breeding pair with a unique territory on the site, this being confirmed through site observations.

WNR supported the project through direct financial support, procurement of specialist project equipment (net launcher, GPS trackers) and through the setting up of site-based stations where the eagles were captured.

Since the establishment of the project and the fitting of the trackers, most adult birds continue to occupy their original territories successfully as adult breeding pairs. Two of the birds stopped

transmitting data in 2022, due to malfunction of the unit on the bird called “Bonnie” and either a malfunction or death of the bird called “Stella”. Genetic analysis was conducted to confirm whether Stella could be associated with a WTE feather-spot identified around the same time, however, DNA extraction from the collision victim was not successful. Following these events, from October 2024 the Telstra 3G network was disabled resulting in all the remaining trackers being left unable to transmit data. Work to recapture these birds and fit them with 4G enabled devices and allow this research to continue is currently being assessed.

7.17.3 Robin Radar system assessment

In 2020, a radar procured from the Dutch company Robin Radar Systems was installed for trialling at MRWF. The details of the procurement, installation and assessment methodologies are outlined in the MRWF PER 2019-22, section 7.17.3. This last PER also outlined four final project milestones, which were defined to assist Woolnorth in determining if the technology would reach the project’s objectives. These milestones were,

1. Evaluate targets, eagle recognition and wind turbine shut down on a bigger data set.

2. Identify suitable locations for a two Radar solution (each Radar intended to cover half of the wind farm), upgrade the radar with new hardware.

3. Final evaluation of the performance based on ONE radar covering half the farm.

3. Project direction summary (on going feasibility decision)

The results from these final areas of investigation demonstrated some capacity of the technology to operate as an eagle collision mitigation strategy, but not at the required levels of accuracy or reliability i.e. there were unacceptably high levels of missed detections and misclassifications. These findings left a residual risk of eagle mortality for the site that was too high. Based on these findings, the system was decommissioned in 2023 and return to the manufacturer. This project, funded and management by WNR, has provided valuable findings for the broader Australian wind industry.

7.17.4 Observer-based turbine shutdown program

In response to the higher-than-expected number of WTE mortalities in 2019, Wildspot Consulting were engaged to provide bird observers at MRWF in November 2019. The primary function of these observers was to shut down wind turbines when a WTE (or white-bellied sea eagle) was perceived to be at risk due to its proximity to a turbine. This program was maintained up until the end of August 2024 when the program was ceased following the installation, testing and commissioning of the IdentiFlight system in late August 2024.

On a daily basis, covering the vast majority of daylight hours, three to four observers were stationed at vantage points around the site and equipped with radio communication. In peak times a roaming observer was utilised to enhance the program. A centrally located observer had direct access to the software that controls the wind turbines. If a WTE was deemed to be at risk, the relevant turbine/s were shut down until the bird was clear from the area.

Figure 3 provides a summary of the program, showing the number of flights for both wedge-tailed eagles and white bellied seas eagles and the number of turbine shutdowns conducted by the observers per month. A strong relationship can be seen between the number of birds and the number of turbine shutdowns, however, the slope of the latter suggests an increasing cautiousness

in the observers over time. The data for both species of eagles also suggests an increasing number of flights observed over the program.

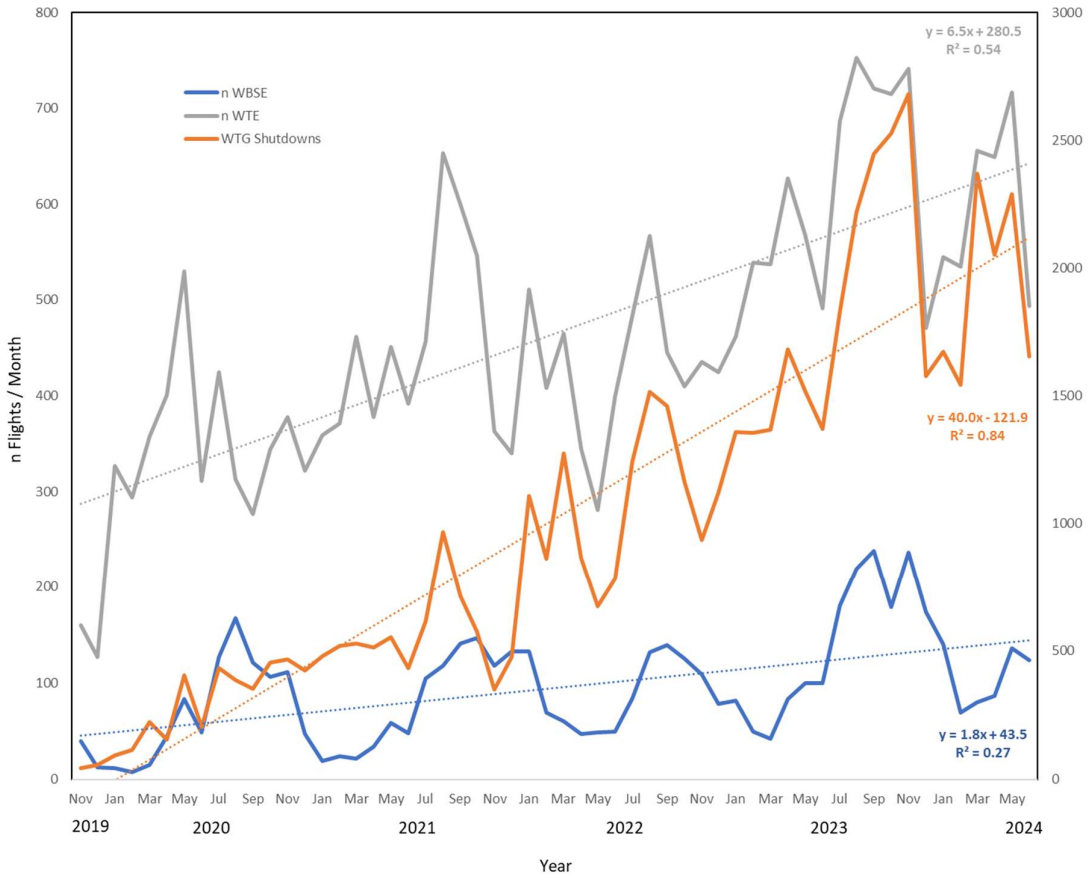


Figure 3. Number of flights per month for both wedge-tailed eagles (WTE) and white-bellied sea eagles (WBSE). Recorded from the start of the observer-based shutdown program in November 2019 through to the end of the 2023-24 reporting period. Also shown is the number of turbine shutdowns per month. The slope for each data set is also provided, showing a substantial increase in the number of eagles being observed across the period of the study (23% average annual increase for WTE).

7.17.5 IdentiFlight Installation

Background

A contract with IdentiFlight IdentiFlight was executed in July 2023 for the supply and installation of an integrated detection system that blends artificial intelligence with high precision optical technology to detect eagles and other avian species. The IdentiFlight system was and still is regarded as the most advanced technology available for managing collision risk between eagles and wind turbines.

System Overview

The IdentiFlight system installed at MRWF consists of 30 monopole towers with high precision optical cameras mounted on each tower (Figure 4), coupled with Artificial Intelligence (AI) networks that rapidly analyses the collected image data. The IdentiFlight stations are strategically located across the wind farm, with approximately one IdentiFlight tower for each two wind turbines. Each IdentiFlight station has visibility of an approximate one-kilometer hemisphere, and all cameras have overlapping fields of view, providing coverage of the entire airspace above and around the wind turbines. Each IdentiFlight station is connected to a nearby turbine (power and communications), and data from field located IdentiFlight stations is sent over the wind turbine communications network (optic fibre) to an IdentiFlight Base Station located at the wind farm control building.

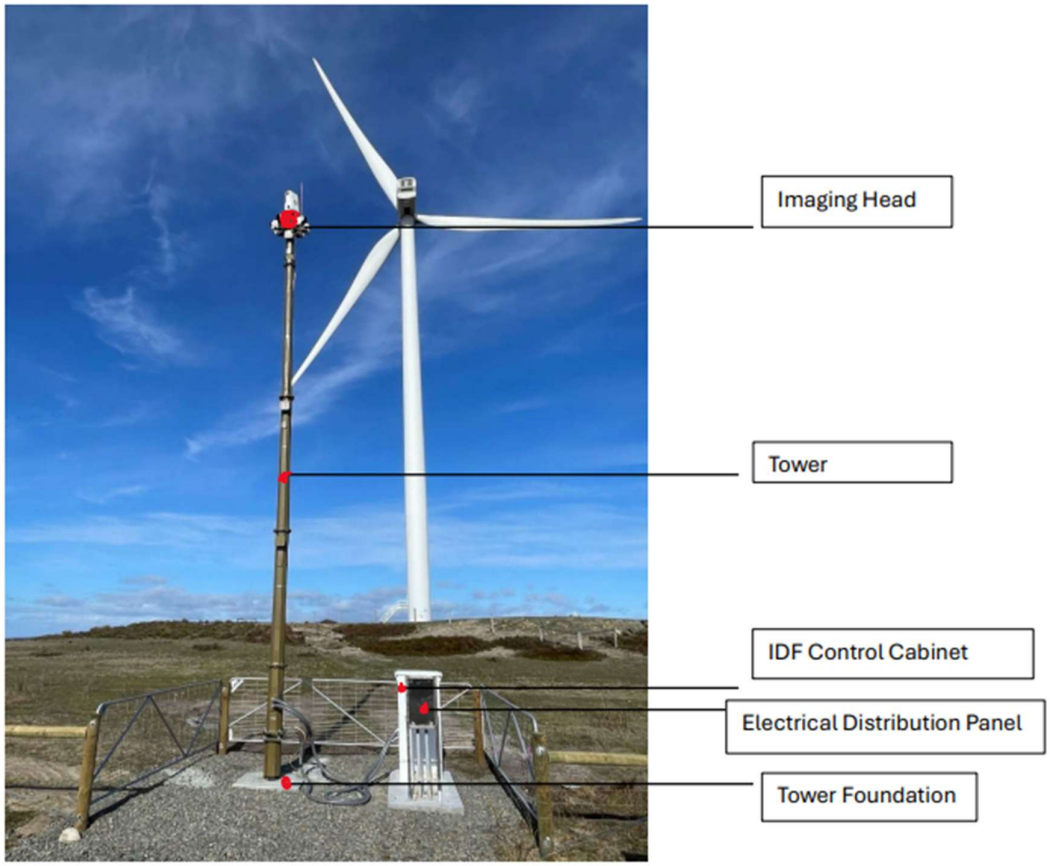


Figure 4. Key components of each IdentiFlight tower installed at MRWF.

The IdentiFlight System tracks the movement of objects in the sky around the wind farm and quickly determines whether they are birds, then whether the bird is a wedge-tailed eagle. If a positive identification is made, IdentiFlight commences tracking the eagle, recording its position and trajectory in real time relative to the turbines. Pre-defined curtailment conditions are then used to shutdown (curtail) turbines if the trajectory of the bird indicates it would cross the rotor swept area of a turbine. When an eagle is at risk, the IdentiFlight Base Station issues a signal to the wind farm SCADA/VOB system, which sends control signals to curtail one or more turbines to avert risk of eagle collision. Once the eagle is no longer at risk, another signal is sent to restart the turbine. The IdentiFlight system can track multiple eagles simultaneously and shut down any number of turbines required to avoid a collision. The system is supported by a web platform (dashboard) to allow the owner of the system to visualise a range of real time and historical data (see Figure 5).

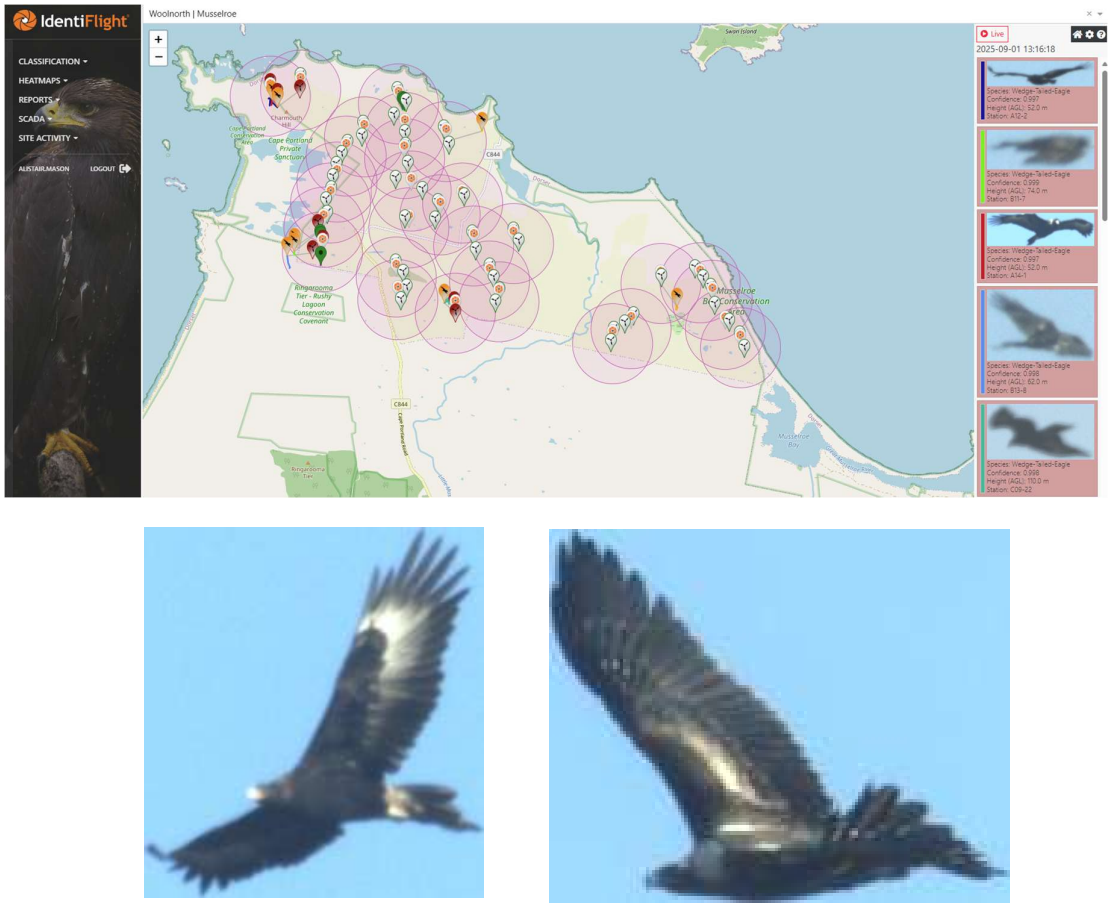


Figure 5. One of the display options available on the IdentiFlight dashboard showing the site overview, along with two photos of a wedge-tailed eagle from the system.

Construction

Following a detailed site analysis and system design by IdentiFlight in conjunction with the WNR HSE, Operations and Engineering departments, the IdentiFlight site locations and cable routes for power and fibre were finalised. Aboriginal heritage surveys were conducted for all 30 sites and their associated cable route prior to physical works commencing in January 2024. The construction of the project was managed directly by WNR and local electrical, civil and engineering contractors were engaged. The construction works included (see also Figure 6),

- Marking out of sites and cable routes
- Locating and marking of underground assets (high voltage cables, water pipes and Telstra assets)
- Trenching for underground cables and fibre
- Installation of underground cables and fibre
- Individual site excavation including auguring holes for embedded tower foundations
- Electrical and fibre installation at IdentiFlight sites and associated wind turbines
- Concreting of embedded foundations, control cabinet and distribution cabinet foundations
- Cattle fencing of specific IdentiFlight sites
- Mounting of IdentiFlight control cabinets
- IdentiFlight tower installation
- Imaging head installation
- Base station installation and fibre connections (control building)

In July 2025 technicians from IdentiFlight attended site for the installation of the imaging heads, base station (control building) and configuration of the system. From September 2025 the system went live for testing and field validation and the WildSpot bird observers ceased operation on the site.

Figure 6. Photos from the construction and installation of the IdentiFlight system at MRWF. Clockwise from top shows the conduits positioned prior to the slab being poured for the control cabinet at each IdentiFlight tower, the installation of the control cabinet, a telehandler carefully lowering the embedded tower section prior to pouring the concrete footing, the tower being positioned ready for bolting to the embedded section, and final standing of the tower ready for the attachment of the imaging head by IdentiFlight technicians.

Following 10 months of operation through to the end of the reporting period, the system was performing to its design specifications and successfully curtailing turbines in the presence of wedge-tailed eagles. While an ongoing optimisation program continues, the current operation of the system has seen a substantial increase in the number of wedge-tailed eagles being identified and an increase in the associated number of curtailments, when compared to the observer-based program that ran from late 2019 (Figure 7).

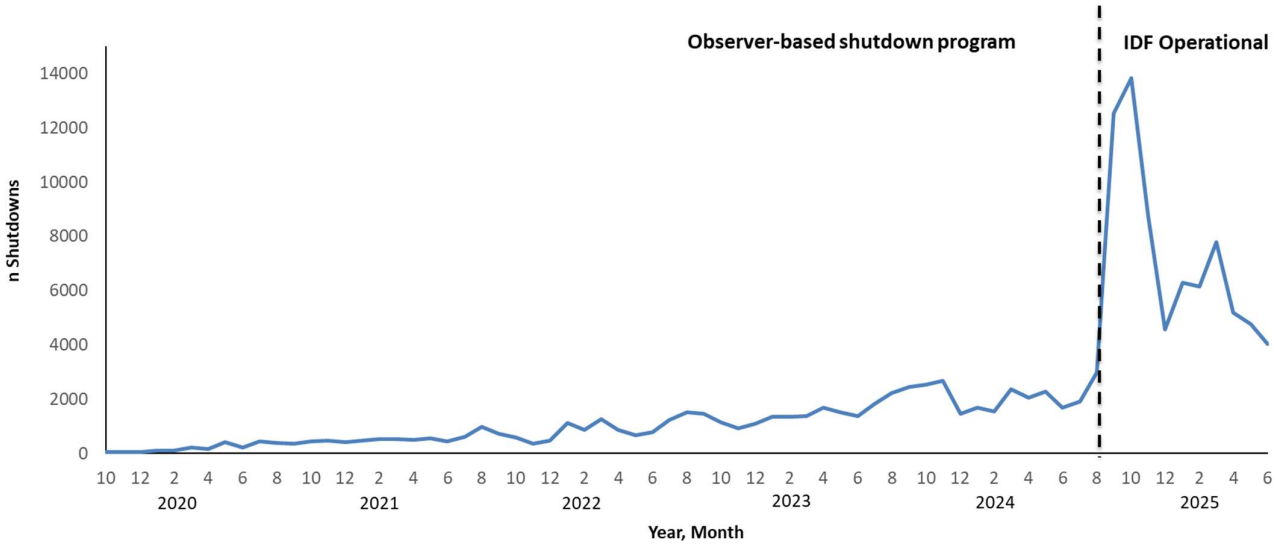


Figure 7. Number of shutdowns (curtailments) implemented under both a human observer-based program and the following the IdentiFlight installation.

7.17.6 Eagle Impact Review

The EPA and WNR agreed on conducting an Eagle Impact Review (EIR) to assist in determining whether the wind farm mortalities are impacting on the local WTE populations in the Musselroe/Cape Portland region. Woolnorth proposed five projects to provide streams of information to assist, and the EPA endorsed these projects. See Table 12 for a summary of the EIR projects and their current status. It is important to highlight that most of the projects are collecting data/metrics that could, however, be considerably impacted by other landscape influences for which we cannot measure or fully understand. Therefore, the ability to clearly and unequivocally determine the impact of wind farm eagle mortalities will not be possible.

Table 12. Eagle impact review (EIR) projects and status.

Project title and description	Status at the end of the reporting period
Eagle observation study – single study A repeat of the two eagle movement studies conducted at the site. The study will contribute to the EIR by determining a current rate of utilisation for comparison with previous periods of observation (and corresponding rates of utilisation).	This study has been completed.
Where, where, wedgie (http://naturetrackers.com.au/**) – multi-year study** *Where, where, wedgie* is a state-wide eagle observation study. WNR participated in the study by placing observers in the Musselroe/Gladstone regions to collect eagle data. This study will contribute to the EIR by providing data for a regional level comparison of eagle data (e.g. count of observations, count of individuals) collected in the Musselroe/Gladstone Region with other regions in Tasmania.	WNR continue to support the project by continuing data collection. Discussions with statisticians has determined that it is not currently possible to compare the site collected data with data collected elsewhere. Despite this, WNR will continue to support the project and contribute to the surveys.
Wedge-tailed eagle nest checks – multi-year study This study will assess the nest activity and breeding success of up to 15 known eagle nest sites in an approximate 30km radius from the wind farm site. This study will contribute to the EIR by providing regional level nest activity and breeding success data for comparison with state-wide data.	All known nest sites in the study area have been checked (post breeding season) across 4 years 17/18, 18/19, 19/20 and 20/21. Checks were conducted by a mix of aerial and ground surveys. Any statistical assessment of the data is unlikely to provide any insight into wind farm impacts. Nests survey information has been compiled and provided to the NVA. The broader study is considered complete, however WNR continue to check some nest sites local to the site, as outlined in Section 7.17.6
Genetic assessment of collision victims and nest 'cast-off' material. – multi-year study All collision victims continue to be sampled for DNA. Off-cast material collected from nest sites such as excreta, feathers, eggshell, pellets can sometimes yield DNA. Using DNA fingerprinting the collision victims will be compared with DNA extracted from 'off-cast' material from nests and other sources to develop an assessment of relatedness and population structure on the wind farm. This study will contribute to the EIR by providing details on the origin of the collision victims (e.g. local vs itinerant).	The collection of material from the sources outlined continue to take place. The other source of genetic material has been from the GPS tracked birds as samples are taken from them as they are trapped. A round of analysis was undertaken through 2024 on all of the material that has been collected to date, utilising Single Nucleotide Polymorphism technology through the University of Tasmania. The results were limited to some degree by a proportion of the samples not yielding adequate levels of genetic material. Despite this, no apparent duplications in the material identified through collision monitoring was found demonstrating no concerns with the records for these events. Some degree of sibling relatedness exists between the samples. More detailed genetic analyses will likely take place in the future as more samples are collected and the technology advances in the extraction of DNA from decayed or compromised material.

Assessment of individuals through remote stations on the wind farm. Following the techniques of Driscoll and Koronkiewiscz (2016), cameras located at fixed stations will be used to collect basic eagle characteristics (count, species, age, time of day) and possibly identify individuals based on plumage or other unique features. This study will contribute to the EIR by providing site level data on the age and number of individuals using the wind farm site. If successful, off site installations may provide a comparative data set.	The trial was completed in 2020. A detailed report was provided in the 2018/19 AER which presented the majority of the relevant information and conclusions of the study. The study is considered complete.

7.17.7 Eagle nests at MRWF site

Throughout the PER reporting period, relevant WTE and white-bellied sea eagle (WBSE) nests across the property (and adjacent) were monitored. See Figure 8 below. Several new nests were identified in 2024/25 through field surveys conducted in areas of known previous nest sites or observed highly concentrated eagle activity. Nest observations were regularly conducted across the PER period, with most nests capable of being viewed from a distance (using binoculars).

Several of the known nest sites have been actively used across the PER reporting period and information has been included in each AER (2022/23 and 2023/24). The following Table (Table 13) summarises the status of the known nest sites.

Table 13. Summary of nest sites on (and immediately adjacent) the MRWF site.

Nest Id	Comment
2838	This nest site is no longer present, it fell down during storms in 2024. Previously is was actively used by 'Malu', one of the GPS tracked individuals.
2466	The nest was originally a WTE nest but during this PER period was used by WBSEs.
2836	The nest was discovered in 2021 as a result of the GPS tracked bird program. This nest was constructed by 'Bob'. It was constructed in a small tree and was relatively exposed. In June 2025 the nest could not be located, it is assumed that the nest or tree has blown down.
2322	The nest site is no longer present. The nest tree was severely damaged during a storm event and prolonged rain.
2699	The nest was discovered during the trapping campaign for the GPS tracked bird program. The nest is within the territory of 'Bob'. It was possibly used in the 2020/21 breeding season however in late 2021/ early 2022, the nest was lost from the tree. The nest was constructed in a small, dead eucalypt. 'Bob' in the lead up to the 2024/25 breeding season has been observed by IdentiFlight regularly in this area, but despite an extensive search in June 2025, no new nest has been identified.
2535	This is an active WBSE nest site. The site has been used continuously over the PER period.
2323	This nest site was previously occupied by the WBSEs currently nesting at site 2535. Observations indicate the nest is still present and in relatively good condition. It has not however been occupied in recent years.
2058	This nest site is no longer present. The tree was severely damaged in a storm event.
2835	This nest was the replacement nest for 2058. It was constructed by 'Bonnie'. Observations in mid-2021 revealed the nest had fallen from the tree.
2837	The nest was discovered in 2021 as a result of the GPS tracked bird program. The nest being used by Stella. Observations in mid- 2021 revealed the site was in good condition and active. No observation of the nest site has since been undertaken.
'Possible unverified'	This nest site was identified in the 2020/21 breeding season as a result of the eagle observer program. WBSEs were observed carrying sticks to the mapped location (Figure 8). Observations of the WBSEs carrying nest material into this site was also observed in the lead up to the 2022/23 breeding season. The nest is yet to be visited (largely due to access difficulties) and it is yet to be recorded on the NVA.

Figure 8. Wedge-tailed eagle and white-bellied sea eagle nests across the property, with their Nest Id number corresponding to the record in the Natural Values Atlas.

7.17.8 Roadkill removal project

The roadkill removal program along the Cape Portland Road was maintained throughout the PER reporting period. The project was originally initiated due to a number of WTE being killed in the area as a result of vehicle collisions (n. 3 in 2014/15) and numerous observations of WTE/WBSE feeding on roadkill. The program involves a dedicated technician (whilst travelling to and from MRWF) relocating roadkill to safer area, such as the non-roadside of an adjacent farm fence or to the edge of the bush line. Fifty to 70 carcasses are typically removed each month, some of which are observed to have eagles feeding on them at the time they are identified.

8. State Environmental Management Plans

8.1 Wader Monitoring Plan

8.1.1 Bird Utilisation studies

The required post construction bird utilisation surveys have been completed. A summary of the results was included in the MRWF PER 2016-2019 (and the 2016/17 AER) and also reported separately to the EPA and DCCEEW.

8.1.2 Crepuscular and nocturnal movements

Monitoring of bird and bat collisions (see Section 8.4) has not detected a significant impact to priority species (or any species) known to be crepuscular or nocturnal in behaviour. As such no action was required during the reporting period.

8.1.3 Avoidance behaviour around turbines

The 2016/19 Public Environment Report provided a summary of the findings of the eagle avoidance study.

8.2 Weed and Disease Management Plan

8.2.1 Operational Phase Commitments

All areas of disturbance associated with the wind farm footprint are regularly surveyed for the existence of weeds. This is generally conducted throughout the reporting period as a part of the farm wide weed control program and routine road and hardstand maintenance. Herbicide treatment is the most common control technique utilised, but mechanical removal is also used on larger stands.

Monitoring of the transmission line for various issues, including weeds, is ongoing and conducted on a regular/annual basis. Sections of the transmission line corridor have previously been managed for the presence of any weed species through chemical application and mechanical removal. Transmission line weed populations are best described as localised with small numbers of individual plants.

8.2.2 Controlling the spread of weeds

As the wind farm and transmission line are in the operational phase, the majority of works undertaken on either the wind farm or on the transmission line infrastructure are accessed via formed, all weather roads. As such there are no significant controls required to manage the spread of weeds and soil borne diseases. The exception to this is weed management works, vegetation management works and bird mortality surveys, where off-road access is required. Standard wash-down guidelines, as per the *Tasmanian Wash-down Guidelines*, and internal environmental management procedures are applied to these tasks where required.

Weed management works across the property (farm wide weed control program) have continued during the reporting period (outside of the footprint of the wind farm). Works have continued to focus of gorse, to a lesser extent boxthorn, with a long-term view to visually-eradicating both noxious weed species. A paddock-by-paddock approach has been implemented since construction, which involves handing-over weed free paddocks to the property farm licensee, for ongoing maintenance. Figure 9

shows the paddocks that have been declared noxious weed free and those paddocks still undergoing weed treatment as of June 2025.

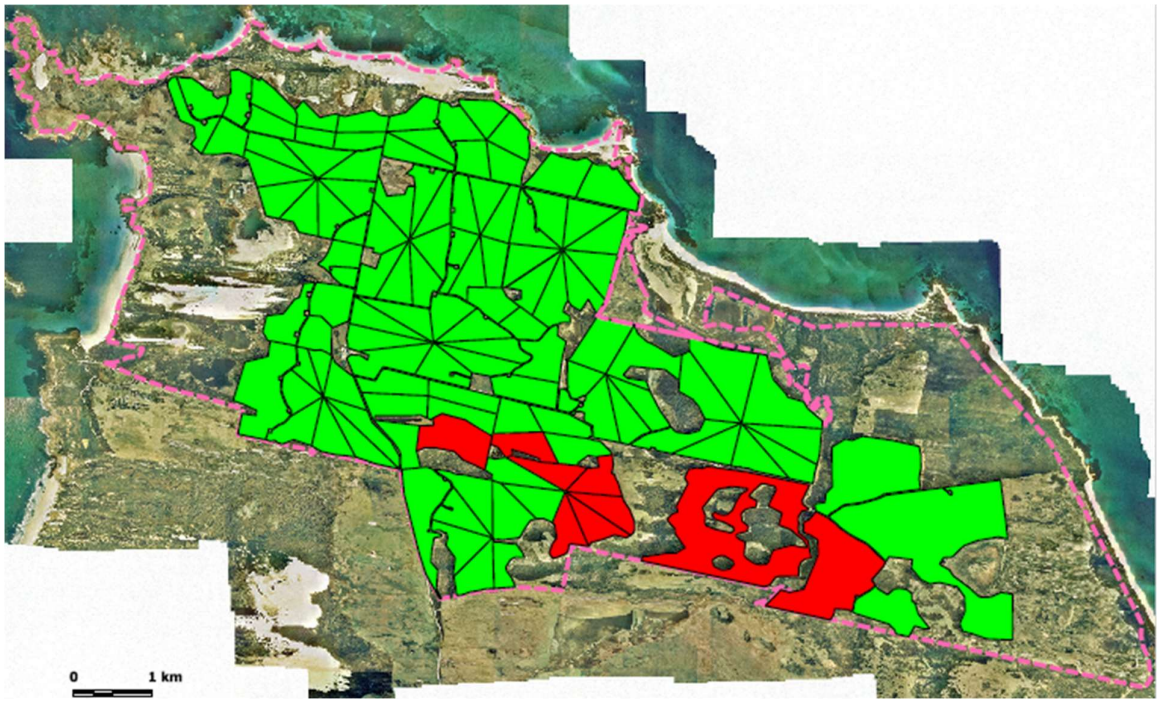


Figure 9. Paddock weed status, where red indicates paddock undergoing weed treatment and green indicates paddocks handed over to the grazing licensee for maintenance.

Weed management works have also been undertaken across areas of the property outside of the paddock areas, however, the priority at this stage is to see all paddocks handed to the licensee. This is expected to be completed within the next few years. Other weed species on the property that have received attention, from time to time, include slender thistle, horehound and Patterson's curse.

8.3 Eagle Impact Offset Plan

All initial actions outlined in this Plan (relating to both WTEs and WBSEs) have been completed. This includes the nest protection program and the study into the effectiveness of nest protection management prescriptions. The objectives and outcomes of these actions are detailed in the MRWF Public Environment Report 2013 (available on request). The plan remains active for the purpose of providing guidelines for offsetting eagle collisions.

Since the commissioning of the wind farm through to the end of the PER reporting period, 33 WTEs and two white-bellied sea eagles (WBSE) have been identified as turbine collision victims. The 'base' offsets that were required in accordance with the initial state and commonwealth WTE Offset Plans were designed to mitigate the impacts of six WTE mortalities. WBSE offsets to mitigate the impacts of three mortalities were also required pursuant to the State permit conditions.

The first revision of the Eagle Impact Offset Plan (revised in 2016) committed to maintaining the offset arrangements (inherent in the original approval) of one offset for each mortality. The revision of the

Plan in 2020 (January 2020) increased MRWF's offset commitment from one offset per mortality to two offsets (equivalent nest protection offsets). The Plan commits to either the nest protection (and surrounding habitat) through a conservation covenant, or an alternative project approved by the Director (EPA).

With respect to the EPBC Approval obligations for WTE mortalities over the 'base' offset of six, these requirements are outlined in the BUBMMP as 'corrective actions'. According to the Plan, the corrective action required for mortalities over the original 'base' (or at a higher rate than anticipated) is the protection of two WTE nest sites (and surrounding habitat) through a conservation covenant, or an alternative project approved by the DCCEEW. This therefore means that the obligations of the EPBC Approval resulting from a WTE mortality up until January 2020 were significantly greater than those specified in the State Environmental Management Plan.

The following projects/actions have been implemented in response to the offset requirements (both State and Commonwealth) over and above the 'base' offset projects.

- Protection of 2 nest sites.
- Financial contribution, equivalent value to 2 nest sites, to UTAS eagle research project.
- Financial contribution, equivalent value to 2 nest sites, to Bookend Trust/Nature Trackers citizen science project 'Where, where, Wedgie?"
- Protection of 1 nest site.
- Financial contribution to UTAS eagle research project – 'Co-ordinating Conservation and Research Priorities'.
- Implementation of project 'Using Robin (MAX) Radar to develop an eagle collision risk reduction Strategy at Musselroe Wind Farm'.
- Financial contribution to UTAS project 'Identifying risk to Tasmanian Wedge-tailed Eagles from wind Energy Development: A state-wide model of collision risk'.

During the PER reporting period, WNR also committed to support a project facilitated by TMAG - *Threatened Birds Project*. In principle agreement from the EPA has been given for this project to be considered as an offset, but no formal application was made during the PER reporting period.

In addition to the projects and activities outlined above, since 2018, WNR has provided a financial contribution to the Raptor Refuge to assist in the operation of the facility. This arrangement will continue until at least 2023.

As there has only been two WBSE mortality recorded, no further offset actions have been required.

8.4 Bird and Bat Mortality Monitoring Plan

During the PER reporting period the monitoring regime for detecting bird and bat collisions with the wind turbines remained unchanged.

During the PER reporting period there were 1092 unique formal turbine surveys undertaken (364 in 22/23, 364 in 23/24, 364 in 24/25). Across all years, most carcasses detected were identified as part of the formal monitoring program, however, some were also identified outside the formal monitoring program by personnel working at the site.

In the last reporting period (24/25), 10 dead birds and 6 feather spots were found in formal surveys, equalling a find at 4.4% of surveys. 348 (out of 364) surveys were conducted where nothing was identified. The number of finds during the 2024/25 reporting period is around half the number found annually during the previous 9 years of survey. No bats were identified during the 2024/25 reporting

period. Over the PER period 37 dead birds and 16 feather spots were identified during formal surveys. See Table 14 below.

Table 14. Summaries of finds (formal surveys) across all survey years.

Year	Bat mortality	Bird mortality	Feather spot
13/14	2	26	4
14/15	1	28	4
15/16	1	33	5
16/17*	0	19	4
17/18#	0	22	5
18/19	0	30	6
19/20	0	18	3
20/21	0	21	6
21/22	0	13	0
22/23	0	16	7
23/24	0	10	3
24/25	0	10	6
Av yr	**0**	**21**	**4**

*Little Penguin identified removed
#Farm fence mortality removed

Over the 2024/25 reporting period 3 dead birds and were identified outside of the formal surveys. Table 15 below includes a summary of informal survey finds. As can be seen all years in this PER period are similar.

Table 15. Summaries of finds from informal surveys across PER reporting period.

Year	Bat mortality	Bird mortality	Feather spot
22/23	**0**	**5**	**0**
23/24	**0**	**5**	**3**
24/25	**0**	**3**	**0**

Regarding the species identified during the bird mortality surveys over the PER period, Table 16 (below) summarises the species identified during formal surveys and Table 17 summarises the species identified outside of formal surveys. Both tables include Featherspot finds.

Table 16. Species identified during formal bird mortality surveys during the PER reporting period.

Common name	2022/23	2023/24	2024/25
Australian Shelduck	-	-	1
Australian Pelican	1	2	1
Brown Falcon	5	7	3
Cape Barren Goose	1	-	-
Cormorant	1	2	-
Forest Raven	2	-	-
Kelp Gull	-	-	1
Pacific Gull	-	-	2
Peregrine Falcon	1	-	-
Short-tailed Shearwater	1	-	-
Wedge-tailed Eagle	3	-	-
Unknown	7	2	8
Currawong sp.	1	-	-
Totals	**23**	**13**	**16**

Table 17. Species identified outside of the formal bird mortality surveys during the PER reporting period.

Common name	2022/23	2023/24	2024/25
Australian Pelican	3	2	-
Wedge-tailed Eagle	1	2	1
Brown falcon	1	1	-
Pacific Gull	-	1	-
White-throated Needletail	-	-	2
Unknown		2	-
Totals	**5**	**8**	**3**

Generally speaking, species identified (detected through formal and informal methods) from year to year across the PER period have similarities. Each year is generally made up of 2 to 3 commonly occurring species, coupled with several records of single finds.

The table below (Table 18) sets out the number of (formal) finds for each species, for each year of survey since they commenced in July 2013. The table is sorted based on the overall number of finds for each species in the collision record. It is apparent that out of the 31 species identified, there are just a few species routinely identified across all or most years or survey. More commonly species are identified on just two or three years. 41% of species only appear in the collision record in one year, 39% of species with a single collision record.

Table 18. Species detected in formal surveys across all years (sorted with most common at top).

Common name	2013/14	2014/ 15	2015/ 16	2016/17	2017/ 18	2018/ 19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Unknown bird	7	6	7	10	5	14	1	6	1	7	2	8
Brown Falcon	6	8	2	3	3	8	4	1	8	5	7	3
Australian Pelican	3	0	5	3	9	3	3	7	2	1	2	1
Cape Barren Goose	5	3	1	1	2	2	1	2	0	1	0	0
Wedge-tailed eagle	2	2	1	0	3	1	3	2	0	3	0	0
Shearwater sp.	1	0	11	0	0	0	0	1	1	1	0	0
White-Faced Storm Petrel	0	0	0	0	4	1	2	1	0	0	0	0
Prion sp.	2	2	1	0	0	2	0	0	0	0	0	0
Skylark	0	3	3	0	0	1	0	0	0	0	0	0
Forest Raven	0	0	0	0	1	1	2	1	0	2	0	0
Swamp Harrier	1	2	0	3	0	0	0	0	0	0	0	0
Grey Fantail	0	3	2	0	0	0	0	0	0	0	0	0
White-throated Needletail	0	0	1	0	0	1	2	0	0	0	0	0
Petrel species	0	0	0	0	0	0	1	2	0	0	0	0
Lapwing sp.	1	0	1	1	0	0	0	0	0	0	0	0
Unknown bat	2	1	0	0	0	0	0	0	0	0	0	0
Currawong sp	0	0	0	0	0	0	2	0	0	1	0	0
Pacific Gull	0	1	0	0	0	0	0	0	0	0	0	2
Cormorant	0	0	0	0	0	0	0	0	0	1	2	0
Welcome Swallow	1	0	1	0	0	0	0	0	0	0	0	0
Common Starling	0	0	0	2	0	0	0	0	0	0	0	0
Silvereye	0	1	1	0	0	0	0	0	0	0	0	0
Kelp Gull	0	0	0	0	0	0	0	1	0	0	0	1
Australian Magpie	0	0	0	0	0	0	0	1	0	0	0	0
Pied Oystercatcher	0	0	0	0	0	0	0	1	0	0	0	0
White-bellied Sea Eagle	0	0	0	0	0	0	0	1	0	0	0	0
Common Bronzewing	0	0	0	0	0	0	0	0	1	0	0	0
Fantail Cuckoo	0	1	0	0	0	0	0	0	0	0	0	0
Grey Butcherbird	0	0	1	0	0	0	0	0	0	0	0	0
Nankeen Kestrel	0	0	1	0	0	0	0	0	0	0	0	0
Australian Hobby	0	0	0	0	0	1	0	0	0	0	0	0
Brush Bronzewing	0	0	0	0	0	1	0	0	0	0	0	0
European Goldfinch	1	0	0	0	0	0	0	0	0	0	0	0
Peregrine Falcon	0	0	0	0	0	0	0	0	0	1	0	0
Australian Shelduck	0	0	0	0	0	0	0	0	0	0	0	1

Previous reports have compared the bird utilisation survey data (BUS) (2014-16) with the bird mortality data (2016-2019). This has not been repeated again, however given the similarities in the collision data/ record from year to year, the previous findings remain relevant. That is:

- Birds with a higher representation in the BUS data are also more commonly observed in the collision record.
- Species with a greater number of movements (BUS data) in the height of the rotor swept area (blade height) feature more strongly in the collision record.

No formal assessment of the spatial patterns of the mortalities was undertaken. Turbines in A, B, C and D circuits had similar numbers of collisions over the PER period. The spread of mortalities across the year, during the PER period, shows an increase in mortalities during the warmer months (e.g. around 61% from October to March inclusive). This finding has been reported in previous reports.

Two species listed under the TSPA or the EPBC detected during the PER period:

- 7 WTE (see Section 7.6). Three were found during formal turbine monitoring and the others by site personnel
- 2 White-throated Needletail

8.4.1 Reporting

All birds and bats detected in the monitoring (formal and informal finds) were reported as required in the Plan. This includes:

- Any birds and bats listed under the Threated Species Protection Act were reported to the Director of the EPA by telephone within 24 hours of their discovery, and to the EPA Project Officer by email or telephone within 24 hours of their discovery.
- A Bird/Bat Strike Report Form[1] was submitted to the Director within three days of discovery of a dead or injured threatened species.
- Any dead or injured EPBC listed bird species listed were reported to the Commonwealth DCCEEW within seven days of discovery.

8.5 Wind Farm Vegetation Management Plan

Beyond the initial clearing of the site for construction of the wind farm no additional clearing has been necessary. From time to time, some vegetation slashing for the purposes of property level fire management is undertaken. The rehabilitation of disturbed areas has been successful.

8.6 Transmission Line Vegetation Management Plan

Like the wind farm, no further clearing of vegetation has been required in the transmission line easement during the PER reporting period.

[1] Bird/bat strike forms were provided to the EPA for every bird mortality identified on the 'land'.

9. Commonwealth Environmental Management Plans

Development approval was granted from the Commonwealth for the MRWF (EPBC Approval 2002/683) with a suite of conditions. The following Plans were developed to satisfy some of these conditions. All Plans have been approved by the Commonwealth (now the Department of Climate Change, Energy , the Environment and Water), and they must be complied with by MRWF. The following sections summarise and report on the obligations of relevant EMPs for the post-construction and operation of the wind farm and associated transmission line. This section compliments the report provided to the Department pursuant to Condition 7 of the Approval ("*On 1 July of each year after the date of this approval, the person taking the action must provide a certificate stating that the conditions of this Approval have been complied with*").

9.1 Wind Farm Listed Species Impact Mitigation Plan

This Plan covers requirements relating to mitigating impacts on the habitats of listed migratory birds and listed threatened species during construction and operation of the wind farm (condition CEM3). There are no specific reporting requirements for the Plan beyond the requirements of Condition 7 of the EPBC Approval. The only relevant information to report is included below:

- Bird and Bat collisions with turbines, identified during the reporting period, are summarised in Section 8.4 of this report.
- Discussion of activities relating to soil, vegetation and weed management are reported in Section 8.2, 8.5 and 8.6 above.

9.2 Bird Utilisation Behaviour and Mortality Monitoring Plan

This Plan covers requirements relating to the monitoring of utilisation, behaviour and mortality of Commonwealth listed threatened and migratory bird species at the MRWF site (condition CEM4). The sections of the Plan that require reporting (beyond the requirements of Condition 7 of the EPBC Approval), are detailed below.

9.2.1 Bird utilisation and behaviour surveys

The post-commissioning bird utilisation surveys were completed in 2016 and have been reported on in the previous PER (2016-2019) and the 2016/17 AER.

9.2.2 Mortality surveys for listed birds

A general summary of the mortality surveys conducted during the reporting period is included in Section 8.4 of this report.

9.2.3 Management Response and mitigation

A component of this plan is to outline the corrective action (offset) obligations associated with any wind turbine related mortality impacts on Commonwealth listed species. Only two EPBC listed species have been identified through the mortality monitoring program (both formal and informal), the white-throated needletail and the WTE. No corrective actions have been implemented for the seven white-throated needletail incidents (2013-2025)

For the 2024-25 reporting period one WTE mortality was recorded at MRWF. As outlined in other sections of this reporting, during the PER period (2022/23 to 2024/25), seven WTE mortalities were

identified and reported to DCCEEW. Over the operating life of the wind farm (to the end of the 2025 reporting period), 33 WTE mortalities had been recorded. These numbers are consistent with the modelled estimates for a 90% avoidance rate presented in the assessment documentation (and later the Plan) but exceed the modelled estimates for the 99% avoidance rate on which corrective action benchmarks are based. During the reporting period, the benchmark requiring an Adaptive Management Protocol (AMP), as an additional corrective action was reached. On this basis an AMP was developed and provided to the DCCEEW in November 2019. The AMP is discussed in Section 10. Regarding corrective actions in response to WTE mortalities, see Sections 7.17 and 10. See Section 8.3 includes a summary of the offset projects/actions.

9.2.4 Benchmarks

As stated above the number of collisions of WTEs has exceeded the base threshold described in the Plan. The threshold was exceeded on the basis that the rate of mortality exceeded the expected rate as well as the total number. The final level outlined in the Plan has been reached.

9.2.5 Adaptive Management Protocol

As outlined above, an AMP was developed in response to reaching the final corrective action benchmark described in the BUBMMP. The AMP is described in Section 10.

9.3 Transmission Line Listed Species Impact Mitigation Plan

This Plan covers requirements relating to mitigating impacts on the habitats of listed migratory birds and listed threatened species during construction and maintenance of the Transmission Line (condition CEM5). There are no specific reporting requirements for the Plan beyond the requirements of Condition 7 of the EPBC Approval. The following information is provided to summarise activities and actions, relevant to the plan, undertaken during the reporting period.

9.3.1 Management of listed threatened fauna

The construction of the transmission line was completed in 2013 including installation of the avian collision mitigation (see the MRWF Public Environment Report 2010-13).

No spotted-tailed quoll or Tasmanian devil den sites, or new active WTE nests have been located. Therefore no action has been required.

9.3.2 Avian collision and electrocution mitigation

All avian collision mitigation has been installed as outlined in the MRWF Public Environment Report 2010-13.

9.4 Wedge-tailed Eagle Impact Offset Plan

This Plan satisfies the requirements of condition CEM6, which requires that a Plan be prepared to offset the impacts of the proposal on WTEs. The sections of the Plan that require reporting (beyond the requirements of Condition 7 of the EPBC approval) are detailed below.

All the actions in this Plan (nest protection, aerial searches and the study into the effectiveness of nest protection management prescriptions) have been completed. Details of these studies were reported in the MRWF PER 2010-13.

10. State and Commonwealth Approved

10.1 Adaptive Management Protocol

An Adaptive Management Protocol (AMP) was developed in response to:

- Reaching the final corrective action benchmark for WTEs described in the Bird Utilisation, Behaviour and Mortality Monitoring Plan, and
- A request from the Director of the EPA to submit a document according to EPN condition FF6 Mitigation Measures.

The AMP is summarised below. The AMP was approved by both the EPA and DCCEEW.

The AMP is implemented in addition to site-based corrective actions/offsets. The objective of the AMP is to:

- Develop an understanding of why there are higher than expected levels of collisions, and
- Use this understanding to formulate, test and refine management responses aimed at reducing these levels.

Adaptive management is a process of identifying an environmental impact, obtaining relevant information and data, evaluating this for evidence of effects or the requirement for modifications to monitoring, preparation of trials and tests of potential mitigation strategies and the review and implementation of successful findings or other potential strategies for testing. The framework is illustrated in Figure 10.

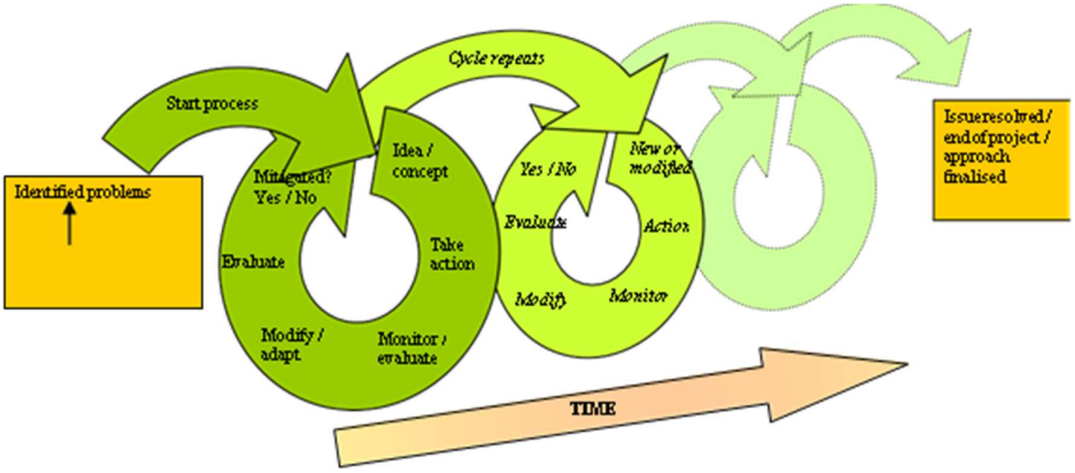


Figure 10. Schematic of the adaptive management approach used by WNR

The application of the adaptive management framework to address WTE impacts commenced two decades ago at the two other wind farm sites owned and operated by WNR: Bluff Point and Studland Bay Wind Farms. The application of the process has led to numerous observational studies, implementation of practical control measures and field trials of various technologies. At various stages, consultation exercises have also been conducted with

species experts and general environmental managers about mitigation measures and options to trial.

Based on the work conducted to date, a number of summary points can be made:

- Observational studies indicate that eagle collisions are not easily predictable events. There appears to be no one variable (or collection of variables) that will always result in an increased level of risk.
- The effects of practical measures to reduce the overall attractiveness of our wind farm sites to eagles has been implemented based on general logic.
- Noise deterrent trials have proved the technique is ineffective.
- Observer based and rule orientated turbine shutdown programs have resulted in mixed degrees of success.
- Nest activity and success studies and genetic studies have provided small insights but provided little to assist in providing a tangible solution to the issue.

The AMP also outlines several recent studies, actions and trials conducted at MRWF and some of these are reported in earlier Sections of this Report.

The primary area of focus of the AMP is a technological solution designed specifically for bird detection, understanding utilisation, flight path monitoring and finally integration with the wind turbine control system to implement turbine shutdowns. This solution is discussed in detail in Section 7.17.4.

11. Review of the Activity over the next 12 months

The MRWF will continue to operate in the manner it currently is. The required monitoring actions will continue to be undertaken. There are no anticipated changes to the operation of the wind farm or transmission line in the next 12 months.

12. Glossary and Definitions

12.1 Glossary

Driscoll, D., Koronkiewicz, T. 2016. Estimating the Minimum Number of Eagles Utilizing a Site in Northern Arizona Using Trail Cameras Deployed on Bait Stations. SWCA Environmental Consultants.

Environment Australia. 2000. Revision of the Interim Biogeographic Regionalisation for Australia (IBRA) and Development of Version 5.1, Department of Environment, Canberra.

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Lang F. 2021. Smart Camera System Saves Eagles from Wind Turbine Deaths. InterestingEngineering.com

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McClure C, Martinson L & Allison T. 2018. Automated monitoring for birds in flight: Proof of concept with eagles at a wind power facility. Biological Conservation. 224.

McClure C, Rolek B, Dunn L, McCabe J, Martinson L and Katzner T. 2021. Eagle fatalities are reduced by automated curtailment of wind turbines. Journal of Applied Ecology.

Roger D. 2022. Assessment and Effectiveness of IdentiFlight Avian Detection system. Cattlehillwindfarm.com

12.2 Definitions

WNR	Woolnorth Wind Farm Holding, the controlling entity and owner/operator of BPWF, person responsible for the activity
MRWF	Musselroe Wind Farm (Pty Ltd is some contexts)
DPIPWE	Tasmanian Department of Primary Industry Parks Water and Environment. Now Department of Natural Resources and Environment Tasmania
DAFF	Department of Agriculture Fisheries and Forestry
DAWE	Commonwealth Department of Agriculture, Water and the Environment
DCCEEW	Department of Climate Change, Energy, the Environment and Water
EMP	Environmental Management Plan
EPA	Tasmanian Environment Protection Authority
THSESPA	Tasmanian *Threatened Species Protection Act 1995*
EPBC	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
EPN	Environment Protection Notice
HSE	Health Safety and Environment (system)

WBSE	white-bellied sea-eagle (*Haliaeetus leucogaster)*
WTE	Tasmanian wedge-tailed eagle (*Aquila audax fleayi)*
BUBMMP	Bird Utilisation, Behaviour and Mortality Monitoring Plan
BUS	Bird Utilisation Surveys
PER	Public Environmental Report
BPWF	Bluff Point Wind Farm
SBWF	Studland Bay Wind Farm
MTWAC	Melaythenner Teeackana Warrana (Heart of Country) Aboriginal Corporation (MTWAC)

12.3 Species names referred to in the text

Plants

Boxthorn (African) *Lycium ferocissimum*
Eucalypt trees *Eucalyptus sp.*
Gorse Ulex europeaus
Horehound *Marrubium vulgare*

Birds

Australian Hobby
Australian Magpie
Australian Pelican Pelecanus conspicillatus
Australian Shelduck *Tadorna tadornoides*
Brown Falcon Falco berigora
Brush Bronzewing Phaps elegans
Cape Barren Goose Cereopsis novaehollandiae
Common Starling Sturnus vulgaris
Currawong sp. Strepera sp.
European Goldfinch Carduelis carduelis
Fan-tailed Cuckoo Cacomantis flabelliformis
Forest Raven Corvus tasmanicus
Grey Butcherbird Cracticus torquatus
Grey Fantail Rhipidura albiscapa
Kelp Gull Larus dominicanus
Lapwing sp. *Vanellus sp.*
Little Penguin *Eudyptula minor*
Nankeen Kestrel Falco cenchroides
Pacific Gull Larus pacificus
Petrel sp. Macronectes sp.
Pied Oystercatcher Haematopus longirostris
Prion sp. Pachyptila sp.
Shearwater sp. Ardenna sp.
Silvereye Zosterops lateralis
Skylark Alauda arvensis
Swamp Harrier Circus approximans
Wedge-tailed Eagle Aquila audax fleayi
Welcome Swallow Hirundo neoxena
White-bellied Sea-Eagle Haliaeetus leucogaster
White-faced Heron Egretta novaehollandiae
White-throated Needletail Hirundapus caudacutus

Mammals

Forester kangaroo Macropus giganteus
New Holland Mouse (Pookila) *Pseudomys novaehollandiae*
Tasmanian devil *Sarcophilus harrisii*
Spotted-tail quoll *Dasyurus maculatus*
Wombat Vombatus ursinus tasmaniensis

Other

Schayer's Grasshopper *Schayera baiulus*

Appendix 1 Musselroe Wind Farm (EPN 8657/2)

ENVIRONMENT PROTECTION NOTICE No. 8657/2

Issued under the *Environmental Management and Pollution Control Act 1994*

Issued to: **MUSSELROE WINDFARM PTY LTD**
ACN 113 161 247
LEVEL 1, 59 CAMERON ST
LAUNCESTON TAS 7250

Environmentally Relevant Activity: **The operation of a wind farm and transmission line (ACTIVITY TYPE: Wind Energy Facilities)**
MUSSELROE WIND FARM & TRANSMISSION LINE, 2205 CAPE PORTLAND RD
CAPE PORTLAND TAS 7264

GROUNDS

I, Wes Ford, Director, Environment Protection Authority, (the Director), being satisfied in accordance with section 44(1)(d) of the *Environmental Management and Pollution Control Act 1994* (EMPCA) that in relation to the above-mentioned environmentally relevant activity that it is desirable to vary the conditions of a permit (see table below) hereby issue this environment protection notice to the above-mentioned person as the person responsible for the activity.

Permit No.	Date Granted	Granted By
PLN 03161	20 December 2004	Dorset Council

PARTICULARS

The particulars of the grounds upon which this notice is issued are:

1 It is necessary to remove conditions GG5, GM1, GZ1, GZ2, GC1, GP1, GE1, GE2, GE3, GE4, GE5, GA2, GK2, GX1, WQ1, WR1, WF1, WN2, WN3, TR1, TR2, and TB1 of the Permit because they detail requirements that have been fulfilled and/or are no longer required.

2 A regulatory limit which sets the maximum scale or throughput of the activity is needed because any increase in scale or throughput may result in additional environmental impacts or emissions that were not considered at the time of granting the permit.

3 The permit conditions need to be varied to reflect current regulatory practice.

4 It is desirable to add a condition to require the development, submission and implementation of an Environmental Management Plan to ensure best practice environmental management is applied to the activity.

5 It is necessary to add conditions ensuring that decommissioning and rehabilitation is undertaken, and is done in a timely, planned and approved manner to minimise environmental harm.

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6 The permit does not have a condition requiring the provision of spill kits. It is desirable to add a condition requiring the provision, in suitable locations, of spill skits appropriate for the environmental hazardous substances held on The Land for the use in an incident to minimise the emissions of a pollutant into the environment.

7 It is desirable to add conditions to allow the Director to require a noise survey to be undertaken should noise complaints be received.

8 It is desirable to add a condition that restricts the location of new infrastructure to ensure sensitive areas and species are protected.

9 It is desirable to add a condition that requires compliance with a wader monitoring plan.

10 It is desirable to add a condition that requires compliance with a bird and bat mortality monitoring plan.

11 It is desirable to add a condition that requires the submission of an avifauna assessment report to ensure the impact on avian species is not greater than predicted.

12 It is desirable to add a condition that requires the development, submission and implementation of mitigation measures should the Director be of the opinion that the activity is having a significant impact on an avian species.

13 It is desirable to add a condition that requires notification of bird and bat strikes to ensure the Director is aware of the impact of the activity upon bird and bat species.

14 It is desirable to add a condition that requires compliance with eagle impact offset management plans.

15 It is desirable to add a condition that requires compliance with a vegetation management plan.

16 It is desirable to add a condition that requires compliance with a transline vegetation management plan.

17 It is desirable to add a condition that requires compliance with a weed and disease management plan.

18 It is desirable to add a condition that requires compliance with a hazardous materials management plan.

19 The permit conditions need to be varied to reflect current or updated terminology and/or to clarify the meaning of the conditions.

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DEFINITIONS

Unless the contrary appears, words and expressions used in this Notice have the meaning given to them in Schedule 1 of this Notice and in the EMPCA. If there is any inconsistency between a definition in the EMPCA and a definition in this Notice, the EMPCA prevails to the extent of the inconsistency.

REQUIREMENTS

The person responsible for the activity must comply with the varied permit conditions as set out in Schedule 2 of this Notice.

INFORMATION

Attention is drawn to **Schedule 3**, which contains important additional information.

PENALTIES

If a person bound by an environment protection notice contravenes a requirement of the notice, that person is guilty of an offence and is liable on summary conviction to a penalty not exceeding 1000 penalty units in the case of a body corporate or 500 penalty units in any other case (at the time of issuance of this Notice one penalty unit is equal to $154.00).

NOTICE TAKES EFFECT

This notice takes effect on the date on which it is served upon you.

APPEAL RIGHTS

You may appeal to the Appeal Tribunal against this notice, or against any requirement contained in the notice, within 14 days from the date on which the notice is served, by writing to:

The Chairperson
Resource Management and Planning Appeal Tribunal
GPO Box 2036
Hobart TAS 7001

Signed: _____

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY

Date: 22/12/15

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Schedule 1: Definitions

Activity means any environmentally relevant activity (as defined in Section 3 of EMPCA) to which this document relates, and includes more than one such activity.

Bird And Bat Mortality Monitoring Plan means the Bird and Bat Mortality Plan approved on 24 March 2011 and any amendment to or substitution of this document approved in writing by the Director.

Controlled Waste has the meaning described in Section 3(1) of EMPCA.

Director means the Director, Environment Protection Authority holding office under Section 18 of EMPCA and includes a person authorised in writing by the Director to exercise a power or function on the Director's behalf.

DPEMP means the document entitled "Musselroe Wind Farm Development Proposal and Environmental Management Plan - March 2003, Hydro Tasmania" received by the Board on 3 April 2003, together with the document entitled "Musselroe Wind Farm Development Proposal and Environmental Management Plan 2003 Supplementary Information" (DPEMP Supplement) received by the Board on 3 October 2003. and "Musselroe Wind Farm Development Proposal and Environmental Management Plan August 2004 Supplementary information Two" (DPEMP Second Supplement received by the Board on 31 August 2004).

DRP means Decommissioning and Rehabilitation Plan

EMPCA means the *Environmental Management and Pollution Control Act 1994*.

Environmental Harm and **Material Environmental Harm** and **Serious Environmental Harm** each have the meanings ascribed to them in Section 5 of EMPCA.

Environmental Nuisance and **Pollutant** each have the meanings ascribed to them in Section 3 of EMPCA.

Environmentally Hazardous Material means any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals but excludes sewage.

Final Wind Farm Design Report means the Final Wind Farm Design Report approved on 26 July 2012 and any amendment to or substitution of this document approved in writing by the Director.

Hazardous Materials Management Plan means the Hazardous Materials Management Plan approved on 29 March 2009 and any amendment to or substitution of this document approved in writing by the Director.

Heavy Disturbance Activities means any activity associated with the maintenance of the wind farm, transmission line and ancillary activities that generates local noise above background levels but excludes activities associated with the initial response to an emergency event.

Noise Sensitive Premises means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

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Person Responsible is any person who is or was responsible for the environmentally relevant activity to which this document relates and includes the officers, employees, contractors, joint venture partners and agents of that person, and includes a body corporate.

Reporting Period means the 12 months ending on 30 June of each year.

Tasmanian Noise Measurement Procedures Manual means the Noise Measurement Procedures Manual referred to in regulation 4 of the *Environmental Management and Pollution Control (Miscellaneous Noise) Regulations 2014*.

The Board means the Board of the Environment Protection Authority, previously known as the Board of Environmental Management and Pollution Control.

The Land means the land on which the activity to which this document relates may be carried out, and includes: buildings and other structures permanently fixed to the land, any part of the land covered with water, and any water covering the land. The Land falls within the area defined by:

1 Certificates of title 102360/1, 102366/1,102368/1, 104138/1,107071/1, 111234/1, 111245/1, 118234/1, 133771/1, 133771/2, 196819/1, 202520/1, 237938/1, 241372/1, 243023/1, 9513/1, 9513/2, 9513/3 and Property ID: 3338170

Transmission Line means the 110 kV electricity transmission line from the electrical substation located on the wind farm site to the Derby Electricity Substation, and related infrastructure.

Transmission Line Vegetation Management Plan means the Transmission Line Vegetation Management Plan approved on 11 December 2008 and any amendment to or substitution of this document approved in writing by the Director.

Vegetation Management Plan means the Vegetation Management Plan approved on 3 December 2007 and any amendment to or substitution of this document approved in writing by the Director.

Wader Monitoring Management Plan means the Wader Monitoring Management Plan approved on 18 December 2013 and any amendment to or substitution of this document approved in writing by the Director.

Waste has the meaning ascribed to it in Section 3 of EMPCA.

Wedge-Tailed Eagle means *Aquila audax fleayi*.

Wedge-Tailed Eagle Impact Offset Management Plan means the Wedge-Tailed Eagle Impact Offset Management Plan approved on 11 December 2008 and any amendment to or substitution of this document approved in writing by the Director.

Weed And Disease Management Plan means the Weed and Disease Management Plan approved on 15 December 2008 and any amendment to or substitution of this document approved in writing by the Director.

White-Bellied Sea-Eagle means *Haliaeetus leucogaster*.

White-Bellied Sea-Eagle Impact Offset Management Plan means the White Bellied Sea Eagle Impact Offset Management Plan approved on 11 December 2008 and any amendment to or substitution of this document approved in writing by the Director.

Wind Farm means the electrical generating wind turbines and related infrastructure located on the wind farm site.

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Schedule 2: Conditions

Maximum Quantities

Q1 Regulatory limits

1 The activity must not exceed the following limits (annual fees are derived from these figures):

1.1 168 megawatts of generating capacity

General

G1 Access to and awareness of conditions and associated documents

A copy of these conditions and any associated documents referred to in these conditions must be held in a location that is known to and accessible to the person responsible for the activity. The person responsible for the activity must ensure that all persons who are responsible for undertaking work on The Land, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

G2 Incident response

If an incident causing or threatening environmental nuisance, serious environmental harm or material environmental harm from pollution occurs in the course of the activity, then the person responsible for the activity must immediately take all reasonable and practicable action to minimise any adverse environmental effects from the incident.

G3 No changes without approval

1 The following changes, if they may cause or increase the emission of a pollutant which may cause material or serious environmental harm or environmental nuisance, must only take place in relation to the activity if such changes have been approved in writing by the EPA Board following its assessment of an application for a permit under the *Land Use Planning and Approvals Act 1993*, or approved in writing by the Director:

1.1 a change to a process used in the course of carrying out the activity; or

1.2 the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or

1.3 a change in the quantity or characteristics of materials used in the course of carrying out the activity.

G4 Change of ownership

If the owner of The Land upon which the activity is carried out changes or is to change, then, as soon as reasonably practicable but no later than 30 days after becoming aware of the change or intended change in the ownership of The Land, the person responsible must notify the Director in writing of the change or intended change of ownership.

G5 Annual Environmental Review

1 Unless otherwise specified in writing by the Director, a publicly available Annual Environmental Review for the activity must be submitted to the Director each year within three months of the end of the reporting period. Without limitation, each Annual Environmental Review must include the following information:

1.1 a statement by the General Manager, Chief Executive Officer or equivalent for the activity acknowledging the contents of the Annual Environmental Review;

1.2 subject to the *Personal Information Protection Act 2004*, a list of all complaints received from the public during the reporting period concerning actual or potential environmental harm or environmental nuisance caused by the activity and a description of any actions taken as a result of those complaints;

1.3 details of environment-related procedural or process changes that have been implemented during the reporting period;

1.4 a summary of the amounts (tonnes or litres) of both solid and liquid wastes produced and treatment methods implemented during the reporting period. Initiatives or programs planned to avoid, minimise, re-use, or recycle such wastes over the next reporting period should be detailed;

1.5 details of all non-trivial environmental incidents and/or incidents of non compliance with permit or environment protection notice conditions that occurred during the reporting period, and any mitigative or preventative actions that have resulted from such incidents;

1.6 a summary of the monitoring data and record keeping required by these conditions. This information should be presented in graphical form where possible, including comparison with the results of at least the preceding reporting period. Special causes and system changes that have impacted on the parameters monitored must be noted. Explanation of significant deviations between actual results and any predictions made in previous reports must be provided;

1.7 identification of breaches of limits specified in these conditions and significant variations from predicted results contained in any relevant DPEMP or EMP, an explanation of why each identified breach of specified limits or variation from predictions occurred and details of the actions taken in response to each identified breach of limits or variance from predictions;

1.8 a list of any issues, not discussed elsewhere in the report, that must be addressed to improve compliance with these conditions, and the actions that are proposed to address any such issues;

1.9 a summary of fulfilment of environmental commitments made for the reporting period. This summary must include indication of results of the actions implemented and explanation of any failures to achieve such commitments; and

1.10 a summary of any community consultation and communication undertaken during the reporting period.

G6 Environmental Management Plan and review thereof

1 Unless otherwise approved in writing by the Director, an Environmental Management Plan (EMP) for the activity must be submitted for approval to the Director by 30 November 2016 and at five yearly intervals thereafter:

1.1 The EMP must include a statement by the General Manager, Chief Executive Officer or equivalent for the activity acknowledging the contents of the EMP Operations.

1.2 The EMP must detail the potential environmental impacts arising from the ongoing operation of the activity over the next 5 years, including a strategic consideration of potential changes to the activity during that period and consideration of opportunities to implement continuous improvement.

1.3 The EMP must separately identify specific commitments, with actions and timeframes, to mitigate or prevent the identified potential environmental impacts. In preparing the EMP the person responsible must take into account the contents of any previous annual environmental reviews including complaints, incidents and monitoring data.

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2 If the Director issues guidelines for preparation of the EMP, the EMP must address the matters listed in those guidelines.

3 Unless otherwise specified in writing by the Director, the activity on The Land must be carried out and monitored in accordance with the environmental management measures set down in the EMP most recently approved by the Director and in accordance with best practice environmental management.

Atmospheric

A1 Control of dust emissions

Dust emissions from The Land must be controlled to the extent necessary to prevent environmental nuisance beyond the boundary of The Land.

Decommissioning And Rehabilitation

DC1 Notification of cessation

Within 30 days of becoming aware of any event or decision which is likely to give rise to the permanent cessation of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to cease or has ceased.

DC2 DRP requirements

Unless otherwise approved in writing by the Director, a Decommissioning and Rehabilitation Plan (DRP) for the activity must be submitted for approval to the Director within 30 days of the Director being notified of the planned cessation of the activity or by a date specified in writing by the Director. The DRP must be prepared in accordance with any guidelines provided by the Director.

DC3 Rehabilitation following cessation

1 Following permanent cessation of the activity, and unless otherwise approved in writing by the Director, The Land must be rehabilitated including:

1.1 stabilisation of any land surfaces that may be subject to erosion;

1.2 removal or mitigation of all environmental hazards or land contamination, that might pose an on-going risk of causing environmental harm; and

1.3 decommissioning of any equipment that has not been removed.

2 Where a Decommissioning and Rehabilitation Plan (DRP) has been approved by the Director, decommissioning and rehabilitation must be carried out in accordance with that plan, as may be amended from time to time with written approval of the Director.

DC4 Temporary suspension of activity

1 Within 30 days of becoming aware of any event or decision which is likely to give rise to the temporary suspension of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to suspend or has suspended.

2 During temporary suspension of the activity:

2.1 The Land must be managed and monitored by the person responsible for the activity to ensure that emissions from The Land do not cause serious environmental harm, material environmental harm or environmental nuisance; and

2.2 If required by the Director a Care and Maintenance Plan for the activity must be submitted, by a date specified in writing by the Director, for approval. The person responsible must implement the approved Care and Maintenance Plan, as may be amended from time to time with written approval of the Director.

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3 Unless otherwise approved in writing by the Director, if the activity on The Land has substantially ceased for 2 years or more, rehabilitation of The Land must be carried out in accordance with the requirements of these conditions as if the activity has permanently ceased.

Flora And Fauna

FF1 Infrastructure location

1 Unless otherwise approved in writing by the Director:

1.1 Infrastructure must not be located within the original DPEMP zones and additional environmental management zones as shown in Figure 1 of the approved Final Wind Farm Design Report.

1.2 Infrastructure must not be located within 500 metres of any known Wedge-tailed eagle nest or known White-bellied Sea-eagle nest.

1.3 Heavy disturbance activities which last for a continuous period of greater than 30 minutes, or maintenance activities which last for more than a total period of 60 minutes within a 24 hour period, must not occur during the period from 1 August to 1 February within:

1.3.1 1,000 metres of a Wedge-tailed eagle nest or White-bellied Sea-eagle nest if the heavy disturbance activities are in line-of-sight of the nest; or

1.3.2 500 metres of a Wedge-tailed eagle nest or White-bellied Sea eagle nest if the heavy disturbance activities are not in line-of-sight of the nest.

FF2 Wader Monitoring Management Plan

Unless otherwise approved in writing by the Director, the activity must be undertaken in accordance with the approved Wader Monitoring Management Plan and any amendment to the plan approved in writing by the Director.

FF3 Bird and Bat Mortality Monitoring Plan

Unless otherwise approved in writing by the Director, the activity must be undertaken in accordance with the approved Bird and Bat Mortality Monitoring Plan and any amendment to the plan approved in writing by the Director.

FF4 Avifauna Assessment Review Report

1 Unless otherwise approved in writing by the Director, an Avifauna Assessment Review Report must be submitted to the Director by 30 November 2016. The report must be prepared in accordance with any reasonable guidelines provided by the Director. The report must include, but is not necessarily limited to, details of the following:

1.1 a review of the avifauna risk assessment contained in the DPEMP based on available information on collision mortality, site utilisation, species behaviour, species population and other relevant matters;

1.2 details of any proposed changes to the Bird and Bat Mortality Monitoring Plan.

FF5 Notification of Bird and Bat Strikes

1 The Director must be notified in writing of any evidence of dead or injured native birds or bats listed under the *Threatened Species Protection Act 1995* found on the land within 24 hours of their discovery.

2 Within three days of notification, an incident report must be submitted to the Director. The report must include, but is not necessarily to be limited to, the following:

2.1 unique identification number;

2.2 general description of evidence;

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2.3 species identification;
2.4 sex and estimated age (if known);
2.5 discovery date and time;
2.6 estimated date of collision;
2.7 estimate of general weather conditions at time of incident;
2.8 position of evidence relative to infrastructure;
2.9 photographic evidence; and
2.10 any other relevant information.

FF6 Mitigation Measures

1 Mitigation measures must be implemented as required by the Director if the Director forms the view on the basis of available evidence that:
- **1.1** avian mortality rates as a result of the activity are in excess of that predicted in the DPEMP; or
- **1.2** avian mortality rates have had, or are likely to have, a significant impact on any avian species; or
- **1.3** the activity has resulted in significant avian behavioural changes that have had, or are likely to have, a significant impact on avian species.

2 Within three months of receiving written notification that the Director has formed one or more of the above opinions, a report documenting proposed mitigation measures to address the identified issue(s) must be submitted to the Director for approval.

3 The approved mitigation measures must implemented.

FF7 Eagle Impact Offset Management Plans

1 Unless otherwise specified in writing by the Director, the approved Wedge-tailed Eagle Impact Offset Management Plan, must be implemented. If requested in writing by the Director, the Wedge-tailed Eagle Impact Offset Plan must be reviewed in accordance with any reasonable guidelines to be provided by the Director, and by such date as the Director may specify. The guidelines may include the requirement for further offset measures if monitoring indicates more than six Wedge-tailed Eagle mortalities are likely to occur over the life of the activity as a result of the activity.

2 Unless otherwise specified in writing by the Director, the approved White-bellied Sea-eagle Impact Offset Management Plan, must be implemented. If requested in writing by the Director, the White-bellied Sea-eagle Impact Offset Plan must be reviewed in accordance with any reasonable guidelines to be provided by the Director, and by such date as the Director may specify. The guidelines may include the requirement for further offset measures if monitoring indicates more than three White-bellied Sea-eagle mortalities are likely to occur over the life of the activity as a result of the activity.

FF8 Vegetation Management Plan

Unless otherwise approved in writing by the Director, the activity must be undertaken in accordance with the approved Vegetation Management Plan, and any amendment to the plan approved in writing by the Director.

FF9 Transmission Line Vegetation Management Plan

Unless otherwise approved in writing by the Director, the activity must be undertaken in accordance with the approved Transmission Line Vegetation Management Plan, and any amendment to the plan approved in writing by the Director.

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FF10 Weed and Disease Management Plan
Unless otherwise approved in writing by the Director, the activity must be undertaken in accordance with the approved Weed and Disease Management Plan, and any amendment to the plan approved in writing by the Director.

Hazardous Substances

H1 Storage and handling of hazardous materials
Unless otherwise approved in writing by the Director, environmentally hazardous material held on The Land, including chemicals, fuels and oils, must be located within impervious bunded areas or spill trays which are designed to contain at least 110% of the total volume of material.

H2 Hazardous Materials Management Plan
Unless otherwise approved in writing by the Director, the activity must be undertaken in accordance with the approved Hazardous Materials Management Plan, and any amendment to the plan approved in writing by the Director.

H3 Spill kits
Spill kits appropriate for the types and volumes of materials handled on The Land must be kept in appropriate locations to assist with the containment of spilt environmentally hazardous materials.

Noise Control

N1 Noise emission limits

1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent L_{A90} sound pressure level must not exceed the greater of:

1.1 5 dB(A) above the L_{A90} of all other noise; or

1.2 40dB(A)

2 L_{A90} is the A-weighted sound pressure level that is exceeded for 90% of the time.

3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.

4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.

5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

N2 Noise survey requirements

1 If requested in writing by the Director a noise survey must be conducted to demonstrate compliance with the noise emission limits at such times as may reasonably be specified by the Director.

2 Noise surveys must be undertaken in accordance with a survey method approved in writing by the Director.

Waste Management

WM1 Controlled waste transport
Transport of controlled wastes to and from The Land must be undertaken only by persons authorised to do so under EMPCA or subordinate legislation.

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Schedule 3: Information

Legal Obligations

LO1 EMPCA

The activity must be conducted in accordance with the requirements of the *Environmental Management and Pollution Control Act 1994* and Regulations thereunder. The conditions of this document must not be construed as an exemption from any of those requirements.

LO2 Storage and handling of Dangerous Goods, Explosives and dangerous substances

1 The storage, handling and transport of dangerous goods, explosives and dangerous substances must comply with the requirements of relevant State Acts and any regulations thereunder, including:

1.1 *Work Health and Safety Act 2012* and subordinate regulations;

1.2 *Explosives Act 2012* and subordinate regulations; and

1.3 *Dangerous Goods (Road and Rail Transport) Act 2010* and subordinate regulations.

LO3 Change of responsibility

If the person responsible for the activity ceases to be responsible for the activity, they must notify the Director in accordance with Section 45 of the EMPCA.

Other Information

OI1 Waste management hierarchy

1 Wastes should be managed in accordance with the following hierarchy of waste management:

1.1 waste should be minimised, that is, the generation of waste must be reduced to the maximum extent that is reasonable and practicable, having regard to best practice environmental management;

1.2 waste should be re-used or recycled to the maximum extent that is practicable; and

1.3 waste that cannot be re-used or recycled must be disposed of at a waste depot site or treatment facility that has been approved in writing by the relevant planning authority or the Director to receive such waste, or otherwise in a manner approved in writing by the Director.

OI2 Notification of incidents under section 32 of EMPCA

Where a person is required by section 32 of EMPCA to notify the Director of the release of a pollutant, the Director can be notified by telephoning 1800 005 171 (a 24-hour emergency telephone number).

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