Mumblin Wind Farm

Application Number: **02626** Commencement Date: **10/10/2024** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Mumblin Wind Farm

1.1.2 Project industry type *

Energy Generation and Supply (renewable)

1.1.3 Project industry sub-type

Wind Farm

1.1.4 Estimated start date *

01/01/2026

1.1.4 Estimated end date *

01/01/2056

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

The Mumblin Wind Farm is located on Curdies – Leichfield Rd at Elingamite North, Victoria, approximately 10 km southwest of Cobden, Victoria. The wind farm will consist of up to eight wind turbine generators together with ancillary civil and electrical infrastructure required to construct and operate the wind farm.

The MWF development footprint, which is the area containing all temporary and permanent works, is equal to approximately 184 ha, and corresponds to approximately 13% of the study area. The MWF development footprint is based on the area of all temporary and permanent works, plus an additional buffer of 50 metres around all temporary and permanent works (except where such a buffer encroaches on an external property boundary) to ensure that it captures all possible areas where works will be carried out on the MWF development footprint. The MWF development footprint also comprises the activity area, or the area within which all construction and operational activities will take place.

The proposed wind farm will consist of up to eight horizontal axis wind turbine generators. For the purposes of assessing the potential impacts associated with the proposed wind farm, a range of turbine dimensions have been considered in order to provide for a degree of flexibility in the contracting phase of the wind farm development process. In particular, two configurations of two separate wind turbine models (Vestas V162 HH150, Vestas V162 HH166, and Vestas V172 HH150 and Vestas 172 HH166) have been considered in order to assess potential impacts associated with the proposed wind farm. Altogether, the overall dimensional envelope encompassing these four wind turbine configurations is as follows:

- A maximum RSA height of 252 metres;
- A maximum RSA of 64 metres;
- A maximum rotor diameter of 172 metres; and
- A maximum tower height of 166 metres.

In addition to the 8 wind turbine generators, the following ancillary infrastructure will also be erected for the construction and operation of the wind farm:

- Access tracks
- Hardstands
- Laydown areas
- Substation
- Electrical cabling
- Static water supply
- Fire breaks
- Site entrances
- Meteorological mast

The environmental impacts of the activity can be broken into those that will occur during construction and those that will occur during operation.

The project is currently projected to impact on 0.412 hectares of native vegetation to be removed. This comprises a total of 0.257 hectares of native vegetation in patches and, 3 large trees, and 2 Large Scattered Trees totaling 0.155 hectares. This vegetation is not EPBC listed or part of a TEC.

These direct impacts to native vegetation will be offset in accordance with relevant Victorian legislation and regulations. A detailed description of these impacts and offset requirements can be found in the Ecology and Heritage Partners Ecological Assessment at Section 3 (Att- 3, EHP Ecological Assessment Report, Section 3.4, pages 30-32).

Indirect impacts that have the potential to occur during construction are sediment pollution, introduction of noxious weeds, noise pollution, and general disturbance due to increased human activity. The Ecology and Heritage Partners Ecological Assessment found that construction of the wind farm is unlikely to result in noise and weed related indirect impacts due to the fact that it is located in a relatively flat landscape which is lacking both vegetation and permanent waterbodies. Meanwhile, sediment pollution and weed control will be managed via the development of a CEMP prior to the commencement of construction, in accordance with standard Victorian wind farm planning permit conditions. A more detailed discussion of indirect construction impacts can be found in the Ecology and Heritage Partners Ecological Assessment in Section 5 of their report (Att-3, EHP Ecological Assessment Report, Section 5 pages 49-54).

The operational impacts of the wind farm are limited to the risk it poses to bats and avifauna. With the exception of potential impacts to Southern Bent-wing Bat (SBWB) and Blue-winged Parrot (BWP), the Ecology and Heritage Partners Ecological Assessment found that the wind farm poses a low risk to bats and avifauna. A more detailed discussion of potential operational impacts can be found in the Ecology and Heritage Partners Ecological Assessment at Section 5 (Att-3, Ecological Assessment Report, Section 5, pages 51-52) and the MNES Report (Att-7, Section 4, page 18-27). Meanwhile, potential impacts to the SBWB and BWP are addressed in separate sections of this referral (Section 4).

A Preliminary Transport Assessment has been carried out for the proposal (Att 5- Preliminary Transport Assessment). The assessment demonstrates that impacts to the road network will be acceptable, with negligible operational impacts and construction impacts that may be suitably managed through development of a traffic management plan via standard permit conditions, in consultation with Corangamite Shire Council, and VicRoads. Swept path assessments have been carried out for the OSOM delivery route and determined that offsite intersection upgrades will be limited to temporary gravel shoulder extensions and removal of street furniture. During all phases of the project lifecycle transportation of all materials, machinery, and personnel, will take place via the Princess Hwy, which runs close to the project site. Detailed swept paths assessments and further information on the transport route can be found in the Preliminary Transport Assessment (Att 5- Preliminary Transport Assessment).

In Victoria, it is standard practice to include decommissioning clauses within the conditions of permit for a new wind energy facility. Accordingly, the development of a Decommissioning Plan via standard permit conditions, will suitably manage the potential impacts of the decommissioning process. This plan will be prepared following the commencement of construction in consultation with DTP and Corangamite Shire Council as appropriate to ensure best practice procedures are adopted in the Decommissioning Plan. It is anticipated that the following management measures will be incorporated into the Decommissioning Plan at a minimum:

- Deconstruction and removal of wind turbine generators from the site;
- Deconstruction and removal of electrical infrastructure from the site;
- Covering of former turbine foundations with topsoil;
- Removal and reinstatement of hardstand areas; and
- Reseeding of all disturbed areas.

It is anticipated that access tracks would remain after decommissioning to serve as farm access tracks.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

Environment Protection and Biodiversity Conservation Act 1999

Under the EPBC Act, assessment and approval is required for actions that are likely to have a significant impact on:

- A matter of national environmental significance;
- The environment of Federal land (even if the action is taken outside Federal land); and
- The environment anywhere in the world (if the action is undertaken by the Federal Government).

An action includes a project, development, undertaking, activity, or series of activities. When a person proposes to take an action they believe may need approval under the EPBC Act, they must refer the proposal to the Australian Government Minister for the Environment and Water Resources by submitting a completed Referral Form to the Department.

Federal agencies are also required to consider advice before authorising certain actions. The Minister may exempt a person from the requirement to undergo an environmental assessment and/or obtain approval, if it is considered in the national interest to do so.

As outlined in the Ecological Assessment and Southern Bent Wing Bat Assessment accompanying the application, the proposal is unlikely to have a significant impact on any matter of National Environmental Significance. Nevertheless, the proposal will be referred to the Commonwealth Environment Minister regarding matters listed under the EPBC Act due to its being located within the range of the nationally significant Southern Bent Wing Bat.

Aboriginal Heritage Act 2006 and Aboriginal Heritage Regulations 2018

According to the Aboriginal Heritage Act 2006 and Aboriginal Heritage Regulations 2018, an application for planning permission must be accompanied by a Cultural Heritage Management Plan (CHMP) if the action proposed is both a high impact activity and is located in an area of cultural heritage sensitivity. If the proposed action does not meet both these criteria, it is not necessary to prepare a CHMP to accompany an application for planning permission; however, project proponents may still prepare a CHMP voluntarily. The study area is located with the boundary of the Eastern Maar Registered Aboriginal Party.

There are numerous areas of cultural heritage sensitivity located in the vicinity of the study area, as well three that either traverse the study area or are located within it. All three of these areas of sensitivity are directly impacted by the development footprint, meaning that the proposed activity triggers the requirement for a Mandatory Cultural Heritage Management Plan (CHMP) which is currently being prepared.

Of the three areas of cultural heritage sensitivity that either traverse or are located within the study area, one pertains to a drainage line while the remaining two pertain to intermittent wetlands. There are no known artefacts or other objects or areas of cultural significance recorded either on the study area or in close proximity to it.

Flora and Fauna Guarantee Act 1988 (FFG Act)

The Victorian Planning Scheme (which sits under the Planning and Environment Act discussed below) requires proponents of wind farms to address the potential impact of proposed wind farms on native flora, fauna and vegetation, including any species listed under the FFG Act 1988. Potential impacts to species listed under the FFG Act are addressed in the Environmental Assessment, which is attached to this referral (Att 3 - EHP Ecological Assessment).

Environmental Protection Act 2017 and Environmental Protection Regulations 2021

From 1 July 2021, the Environment Protection Act (EP Act) introduced changes to position the EPA as the single regulator of operational wind turbine noise. The EP Act introduces a 'general environmental duty' and 'unreasonable noise' provisions that apply to wind turbine noise emissions at wind energy facilities. The Environment Protection Regulations 2021 (Vic) also set specific requirements for compliance.

These requirements address the general environmental duty to minimise harm to human health and the environment, and also stipulate that wind energy facilities must not emit unreasonable noise. Under the regulations, operators of wind energy facilities must make sure they:

- Comply with the relevant standard, namely NZS6808:2010;
- Implement a noise management plan;
- Implement a complaints management plan;

- Provide an annual statement with details of complaints, maintenance activities, and noise remediation actions during the previous 12 months; and
- Undertake noise monitoring procedures every five years to ensure ongoing compliance with the relevant noise limits.

Planning and Environment Act 1987 (P&E Act)
The purpose of the Planning and Environment Act is to establish a framework for planning the use, development and protection of land in Victoria.

The Planning and Environment Act sets out procedures for preparing and amending the Victorian planning provisions and planning schemes. It also sets out the process for obtaining permits under schemes, settling disputes, enforcing compliance with planning schemes and permits, and other administrative procedures.

Under the Victorian planning provisions and planning schemes a permit is required to use and develop land for a wind energy facility. In assessing an application to use and develop land for a wind energy facility, many sections of the planning provisions and planning schemes must be considered, including but not limited to Clause 52.32, which outlines permit application requirements and lists other legislation (outside the Planning and Environment Act) which must also be addressed and the Planning Guidelines for Development of Wind Energy Facilities in Victoria (DCCEEW 2023).

The Corangamite Shire Planning Scheme is a legal document that sets out policies and provisions that determine how land will be used, developed and protected within the Shire.

Wildlife Act 1975

The Wildlife Act provides a framework on how we protect, conserve, sustainably manage and use wildlife in Victoria.

Catchment and Land Protection Act 1994 (CaLP Act).

Under the CaLP Act, all landowners are legally required to manage and declare noxious weeds and pest animals on their land.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Consultation on the project has commenced and discussions are ongoing with the following stakeholders:

- Nearby residents and other interested members of the public
- Department of Transport and Planning (DTP)
- Corangamite Shire Council
- Department of Energy, Environment and Climate Action (DEECA Biodiversity)
- Country Fire Authority (CFA)
- Civil Aviation Safety Authority (CASA)
- Indigenous stakeholders
- VicRoads

Community

A Community Engagement Plan has been prepared for the proposed wind farm and addresses the following themes:

- The identification of stakeholders;
- The consultation methods to be used and a schedule of consultation activities;
- How the results of community engagement activities will be recorded; and

- The details of the community benefit scheme.

A range of consultation activities have been undertaken to date to inform the community of the proposal and to give local residents an opportunity to meet face-to-face with a company representative, including:

- The distribution of detailed information packages to all residents located within 5 km of a proposed wind turbine location;
- The launch of a project website; and
- Face-to-face house visits for all dwellings located within 3 km of a wind turbine location, and anywhere else that a house visit is requested.

Consultation activities will be undertaken to further inform the surrounding community of the proposal, including but not limited to the distribution of additional information pamphlets, updates to the project website, further house visits, and community information sessions. Feedback collected from these activities will be collated in a register, and responded to promptly via email and phone by representatives from REF.

The proposed wind farm will be accompanied by a community benefit scheme. While the details of this scheme will ultimately be determined in consultation with the local community, it will include as a minimum:

- Annual payments to immediate neighbours;
- Subsidies for energy efficiency measures for nearby dwellings;
- An annual fund for support of general community projects; and
- An annual fund for support of local education.

DTP, Council and DEECA Biodiversity

Consultation with the Corangamite Shire Council, DTP and DEECA Biodiversity will continue throughout the planning, operational, and decommissioning phases. Further, as part of the development approval process DTP will refer the proposed wind farm to DEECA and Corangamite Shire for comment.

CASA

An Aviation Impact Assessment (AIA) has been prepared by Landrum & Brown, and reviewed by Aviation Projects Pty Ltd in support of this application. The AIA found that the wind farm will have no impact on any of these aeronautical activities, infrastructure or services. Further, as part of the development approval process DTP will refer the proposed wind farm to CASA for comment.

CFA

A Fire Risk Assessment has been prepared by Fire Risk Consultants in support of this application. This risk assessment follows the guidance provided by the CFA in their *Design Guidelines and Model Requirements: Renewable Energy Facilities 2022*, as well as relevant local planning policies. The assessment of fire risk within the wind energy facility including the nacelle, substation and office compound identified that these types of developments represent a low risk in terms of bushfire.

The development of an emergency management plan via standard permit conditions, in consultation with the CFA, will suitably manage any residual fire risks posed by the project. This plan will be prepared prior to the commencement of construction in consultation with the CFA to ensure best practice operational procedures both during and after construction.

Further, as part of the development approval process DTP will refer the proposed wind farm to CFA for comment.

Indigenous Stakeholders

The study area is located with the boundary of the Eastern Maar Registered Aboriginal Party.

There are numerous areas of cultural heritage sensitivity located in the vicinity of the study area, as well three that either traverse the study area or are located within it. All three of these areas of sensitivity are directly impacted by the development footprint, meaning that the proposed activity triggers a Mandatory

Cultural Heritage Management Plan (CHMP).

Of the three areas of cultural heritage sensitivity that either traverse or are located within the study area, one pertains to a drainage line while the remaining two pertain to intermittent wetlands. There are no known artefacts or other objects or areas of cultural significance recorded either on the study area or in close proximity to it.

A Cultural Heritage Management Plan is currently being prepared for the proposal by Tardis Archaeology Pty Ltd, as stated in the attached letter obtained from Tardis Archaeology (Att. 8- Mandatory CHMP Preparation Letter). All testing has been completed, with no artefacts found. Through this process, the relevant indigenous stakeholders were engaged.

VicRoads

A Preliminary Transport Assessment has been carried out for the proposal (Att 5- Preliminary Transport Assessment). The assessment demonstrates that impacts to the road network will be acceptable, with negligible operational impacts and construction impacts that may be suitably managed through development of a traffic management plan via standard permit conditions, in consultation with VicRoads. Further, as part of the development approval process DTP will refer the proposed wind farm to VicRoads for comment.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at privacy@awe.gov.au.

☑ **Confirm that you have read and understand this Privacy Notice ***

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	652614705
Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	38 Pier One Drive, Patterson Lakes, VIC, 3197

Referring party details

Name	Sophie Gluyas
Job title	Environmental Planner
Phone	0477935052
Email	sophie.gluyas@refuture.com.au
Address	PO BOX 175, Warrnambool, VIC 3280

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	81652614705

Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	3197

Person proposing to take the action details

Name	Severin Staalesen
Job title	Project Director
Phone	0438017272
Email	severin.staalesen@refuture.com.au
Address	PO Box 175, Warrnambool, Vic 3280

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

Mumblin Wind Farm Pty Ltd is a special purpose vehicle owned by the directors of REF Developments Pty Ltd. REF is an Australian owned and funded enterprise operated by a partnership of seasoned wind industry professionals with over 60 years of combined experience in the development, financing, construction, and operation of wind farm facilities. The REF directors have been directly involved with the development of over 800 MW of operating wind farms and are currently actively developing over 1500 MW of wind farms in Victoria

REF is an Australian owned and funded company which is based out of Geelong Victoria. REF nor any of its directors have ever been the subject of an investigation, complaint or fine in relation to environmental management practices. Mumblin Wind Farm Pty Ltd nor any of its directors have also never been the subject of an investigation, complaint or fine in relation to environmental management practices.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

Mumblin Wind Farm Pty Ltd does not have an environmental policy and planning framework at present. However, should the wind farm be granted a permit by DTP it would be a condition of development approval that a Construction Environment Management Plan is prepared to the satisfaction of DTP, DEECA, and the local Catchment Management Authority prior to the commencement of construction.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	81652614705
Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	3197

Proposed designated proponent details

Name	Severin Staalesen
Job title	Project Director
Phone	0438017272
Email	severin.staalesen@refuture.com.au

Address	PO Box 175, Warrnambool, Vic 3280

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	652614705
Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	38 Pier One Drive, Patterson Lakes, VIC, 3197
Representative's name	Sophie Gluyas
Representative's job title	Environmental Planner
Phone	0477935052
Email	sophie.gluyas@refuture.com.au
Address	PO BOX 175, Warrnambool, VIC 3280

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	81652614705
Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	3197
Representative's name	Severin Staalesen
Representative's job title	Project Director
Phone	0438017272
Email	severin.staalesen@refuture.com.au
Address	PO Box 175, Warrnambool, Vic 3280

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)?

Yes

1.4.2 Select reason for exemption

Small Business

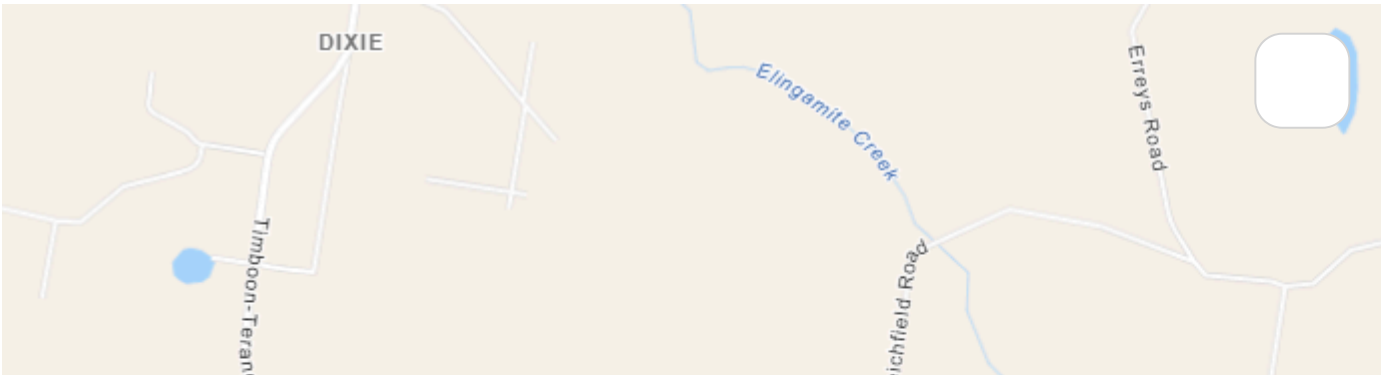
1.4 Payment details: Payment allocation

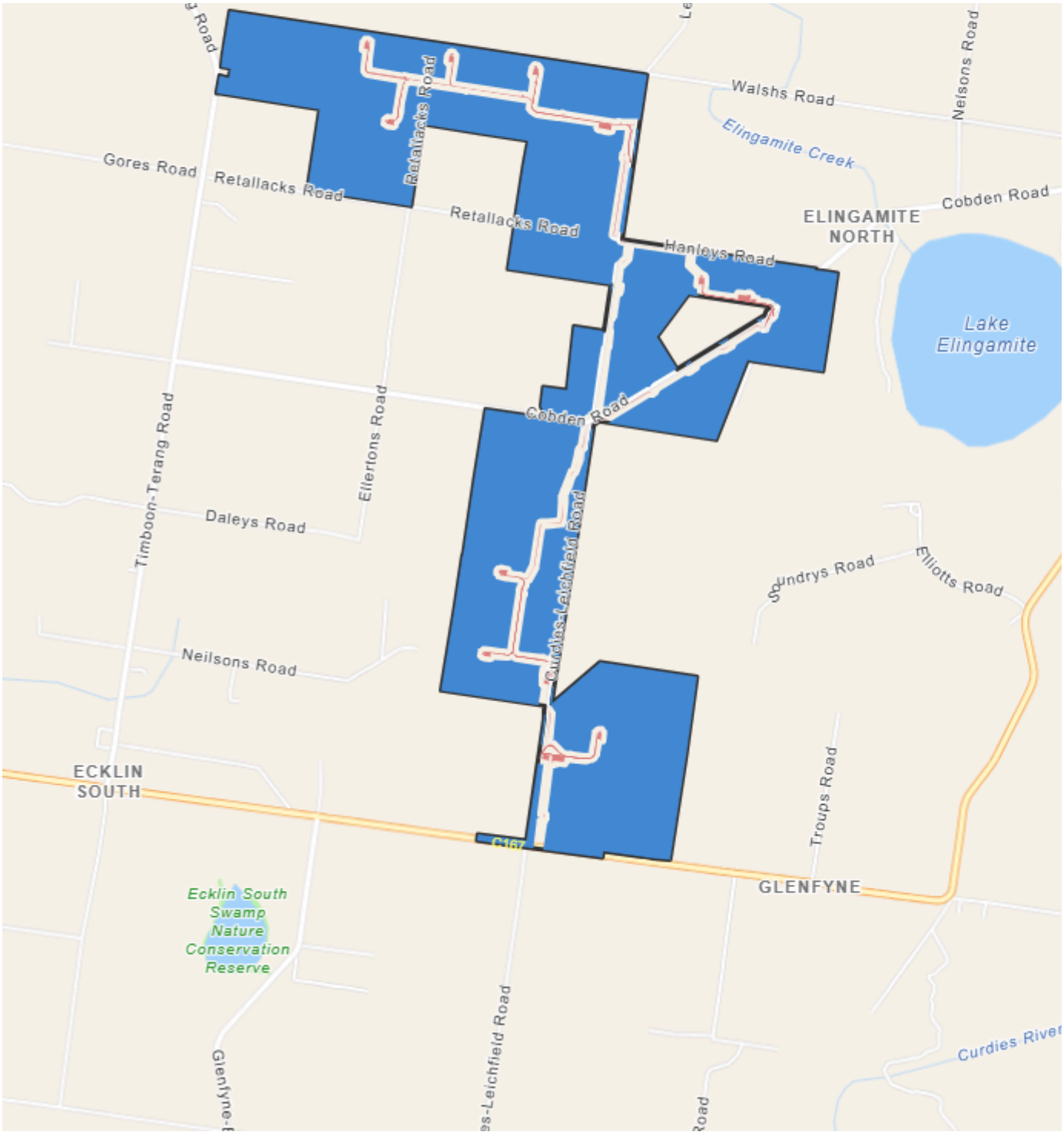
1.4.11 Who would you like to allocate as the entity responsible for payment?

Proposed designated proponent

2. Location

2.1 Project footprint





Project area (1366.26 Ha) Disturbance footprint (13.91 Ha) Avoidance area (1182.91 Ha)

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Site Entrance 1 Address: Curdies - Leichfield Rd, Elingamite North, VIC 3266

2.2.2 Where is the primary jurisdiction of the proposed action? *

Victoria

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The subject site of the proposed action consists of twenty-six land parcels and parts of ten road reserves. One of the twenty-six parcels constituting the subject site is encumbered by an easement for a gas pipeline, however said easement is located over 500 m from the development footprint and as such will be in no way affected by the proposed wind farm. All of these areas of land are freehold land.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Mumblin Wind Farm study area is predominantly highly modified due to agricultural activity, with patches of native vegetation, scattered dams, rural dwellings and sheds. Areas that do not support native vegetation had a high cover of exotic grasses. Scattered native grasses or herbs were occasionally present. Noxious weeds were present in the area including Spear Thistle *Cirsium vulgare* and Weed of National Significance, Blackberry *Rubus fruticosus* spp.

Most of the study area is flat to gently undulating. The elevation of the area defined as the study area ranges from 138 metres at its highest point to 125 metres at its lowest.

With the exception of a small area of public road reserve in the south of the site, the subject site and its immediate surrounds are entirely located within the farming zone of Victoria's planning framework. No changes to zoning or boundaries will be required to facilitate the development.

As the subject site is located in a region dominated by dairy farming, both local and state managed roads in the vicinity of the project already accommodate heavy B-Double traffic and as such they will accommodate

the conventional heavy and light vehicle traffic associated with the wind farm construction process.

The transport route for oversize and overmass loads (OSOM) was assessed as part of the transport assessment, with truck turning movements modelled using industry standard software and intersections assessed for the presence of native vegetation values. Oversize and overmass loads associated with the wind farm will approach the site from Portland via the Princes Hwy and Cobden – Warrnambool Rd. With the exception of an area of temporary hardstand required at the intersection of Cobden – Warrnambool Rd and Curdies – Leichfield Rd, it is anticipated that the existing road network will be able to accommodate the OSOM traffic movements associated with the wind farm with only minor shoulder extensions and temporary removal of traffic furniture. The total vegetation clearance numbers listed above include clearance required for shoulder extensions and the hardstand required at the intersection of Cobden – Warrnambool Rd and Curdies – Leichfield Rd.

A more detailed discussion of the transport considerations can be found in the Preliminary Transport Assessment (Att-5, Preliminary Transport Assessment).

3.1.2 Describe any existing or proposed uses for the project area.

The land defined by the subject site is used for grazing and dairy farming. There are five occupied dwellings located on the parcels which comprise the study area, all of which belong to participating landowners. Existing access to the site (for its current use) is via a combination of well-constructed and poorly constructed farm tracks which feed a network of smaller unformed farm tracks that traverse the study area. There are a number of small farm dams scattered throughout the area, as well as a range of farm buildings including dairies, haystacks, grain silos and storage sheds, the majority of which are located in clusters throughout the study area.

The proposed wind farm will consist of up to 8 wind turbine generators and associated works, buildings and infrastructure required for their construction and operation, as well as native vegetation removal, business identification signage, and carparking spaces sufficient for the ongoing operation of the wind farm.

There are no outstanding natural features that apply to the Project area. The land is intensively farmed, primarily for dairy production. The broader landscape surrounding the study area is characterised by the cleared uplands of Staughton Hill to the northwest of the study area, Lake Elingamite to the east, and the Curdies River and environs to the south.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

There are no outstanding natural features that apply to the Project area. The land is intensively farmed, primarily for dairy production. The broader landscape surrounding the study area is characterised by the cleared uplands of Staughton Hill to the northwest of the study area, Lake Elingamite to the east, and the Curdies River and environs to the south.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The study area is generally flat.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

The ecological field assessment program detailed in EHP report commenced in August 2021 and was completed in August 2024. The details below are from EHP report 2024

(Att- 3, EHP Ecological assessment report, Att-4 Nature Advisory SBWB & YBSB assessment report).

Flora (Att-3, Section 3.2 , page 26- 30)

The study area is predominantly agricultural land with patches of native vegetation. The study area is comprised of 3 EVCs in patches and road reserves including:

- Herb-rich Foothill Forest (EVC 23)- present as relatively intact patches located within the road reserves, as well as discrete patches located in agricultural land. Overstorey components mostly comprised Manna Gum *Eucalyptus viminalis* subsp. *viminalis*, and/or Swamp Gum *Eucalyptus ovata*. Road reserves supported a mid-story layer of shrubs such as Blackwood *Acacia melanoxylon*, Black Wattle *Acacia mearnsii*, and Prickly Tea-tree *Leptospermum continentale*, and a ground layer of Austral Bracken *Pteridium esculentum*, Variable Sword-wedge *Lepidosperma laterale*, and Spiny-headed Mat-rush *Lomandra longifolia*.
- Plains Grassy Wetland (EVC 125) was mainly recorded around artificial waterbodies (farm dams) or within shallow, low-lying depressions which consequently formed ephemeral wetlands. Species observed included a high level of Small Spike-sedge (*Elocharis acuta)*, Tall Spike-sedge *Eleocharis spathulate*, and Common Swamp Wallaby-grass (*Amphibromus nervosus)*.
- Aquatic Herbland (EVC 653)- this EVC was occasionally recorded in farm dams where water was at least semi-permanent. Vegetation was usually comprised of Water Ribbons *Triglochin procerum*, Tall

Spike-sedge, Duckweed *Lemna disperma*, and Floating Pondweed *Potamogeton natans*.

Fauna (Att-3, Section 3.3, page 30)

Fauna surveys included:

Bird Utilisations Surveys (Att-3, Section 3.7, page 38-44)

BUS surveys were undertaken on three separate occasions between August 2021 and February 2022. A total of 77 species were recorded, consisting of 2,863 individuals. The most frequently recorded species were Australian Magpie *Gymnorhina tibicen,* Little Rave *Corvus mellori*, and Eurasian Skylark *Alauda arvensis*.

A total of 93% of bird observations made during the point counts were of individuals that were either on the ground or flying below the RSA. A further 5.8% did not have their height recorded as they were obscured from vision, while 1.1% of birds were recorded flying in or above the RSA.

The predicted species richness estimate for the point count surveys was 85 species, which converts to a completeness of over 90% and means that an additional 7-8 species are predicted to occupy the Project Area but were not recorded.

Although an additional year of bird utilisation surveys would provide further information relating to flight height, flight behaviour and site utilisation, they are unlikely to result in the identification of any additional nationally significant avifauna that may occur within the locality. As such, an additional year of bird surveys is not required. Along with the desktop and database interrogation, the field and desktop studies are considered to inform an accurate assessment of the likely presence or absence of significant avifauna within the locality.

The proposed Mumblin Wind Farm site is characteristic of the highly modified landscapes of South-western Victoria. There is a good understanding of the bird that inhabit and utilise this highly modified landscape. Additional surveys for an eight-turbine wind farm are unlikely to identify additional listed and threatened species to be considered under this EPBC referral. However, additional surveys for one full year prior to construction will allow for the development of baseline with potential to establish a Before-After-Control-Impact (BACI) survey design when combined with initial survey data.

Level 1 Brolga *Antigone rubicunda* Assessment to address the potential risk posed to the species by the proposed Wind Farm (Att-3, Section 3.7, page 41- 42)

Based on the paucity of recent Brolga records within the locality and the absence of potential Brolga breeding and flocking habitat within the locality as determined through a detailed desktop database interrogation, on ground assessments and liaison with local landowners, it was determined that a Level Two Assessment is not required as the risk of impact to Brolga due to the proposed wind farm is low to negligible.

Microbat surveys using Songmeter units (Att-4, Section 2.4.4., page 19-21)

Southern Bent-Wing Bat was recorded at a total of 16 sites as part of the targeted bat surveys for Mumblin Wind Farm. These were conducted during four periods over two years: 1) late September to December 2021, 2) January to March 2022 (EHP 2022), 3) late December 2022 to early February 2023, and 4) late

February to early April 2023). The survey effort totaled 2,414 bat-detector nights, with 332 SBWB calls recorded at 16 sites (Att-4, Section 7, page 40-60).

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

There were 11 habitat zones with differing vegetation quality mainly due to presence/absence of large trees and/or canopy cover, and the diversity of understory species.

A total of 228 large trees in patches of Herb-rich Foothills Forest were present. Most of these species were Manna Gum, Swamp Gum, and the occasional Brown Stringybark *Eucalyptus baxteri*. A total of 276 scattered trees were recorded in the study area. This comprised 197 large and 79 small scattered trees. These individuals would have once comprised a part of the Herb-rich Foothills Forest (EVC 23). The understorey , however, contained predominantly introduced species (mainly exotic pasture grasses), and the trees no longer formed a patch of native vegetation.

Plains Grassy Wetland and Aquatic Herbland within the MWF development footprint provided low to moderate quality habitat to native fauna. The sedgy and grassy vegetation are likely to provide suitable foraging and nesting habitat for a variety of waterbirds and frogs.

The scattered trees, patches of Herb-rich Foothills Forest, and windrows are of low to moderate habitat value and they likely act as stepping stones for more mobile species. Trees (native and non-native) are also likely to facilitate fauna movement throughout the otherwise cleared landscape, and provides habitat for diurnal raptors, which use trees for perching, roosting and foraging activities.

The remainder of the MWF study area is comprised of exotic grassland, dominated by a range of introduced pasture grasses, herbaceous weeds and high threat woody weeds. This vegetation is likely to be used as a foraging resource by common generalist bird species that are tolerant of modified open areas.

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

The study area is located with the boundary of the Eastern Maar Registered Aboriginal Party.

There are numerous areas of cultural heritage sensitivity located in the vicinity of the study area, as well three that either traverse the study area or are located within it. All three of these areas of sensitivity are directly impacted by the development footprint, meaning that the proposed activity triggers a Mandatory Cultural Heritage Management Plan (CHMP).

Of the three areas of cultural heritage sensitivity that either traverse or are located within the study area, one pertains to a drainage line while the remaining two pertain to intermittent wetlands. There are no known artefacts or other objects or areas of cultural significance recorded either on or in close proximity to the study area.

A CHMP for this project is currently being prepared by Tardis Archaeology in consultation with the Eastern Maar Registered Aboriginal Party (Att 8– Tardis letter). Preparation of the CHMP is underway, with fieldwork well-progressed at the time of writing. To date no artefacts were found during archaeological testing.

There are no known historical heritage sites on the study area or in its near vicinity.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

A CHMP for this project is currently being prepared by Tardis Archaeology in consultation with the Eastern Maar Registered Aboriginal Party. Preparation of the CHMP is underway (Att 8 – Tardis letter), with fieldwork complete at the time of writing. To date no Aboriginal cultural heritage has been found.

There are no known historical heritage sites on the study area or in its near vicinity.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

As reported in the Ecology and Heritage Partners Assessment (Att 3- Section 3, pages 26-29), there are no lakes, ponds, slow-flowing rivers or freshwater streams located on the project site. Moreover, the subject site is relatively flat. Accordingly, there are no sensitive hydrological features located on or near the site that would warrant a standalone hydrological assessment.

However, it is important to note that, should a permit be issued for the proposed wind farm by DTP, it would be a condition of development approval that a Sediment and Erosion Management Plan which includes measures to avoid offsite impacts to waterways and water bodies is prepared to the satisfaction of DEECA and the local Catchment Management Authority prior to the commencement of construction. Moreover, it is an independent requirement of the Environment Protection Act that all earthworks are carried out in accordance with relevant Environment Protection Authority guidelines, including but not limited to EPA Guideline ‘Construction Techniques for Sediment Pollution Control’.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No World Heritage properties recorded within 10km of the proposed wind farm site.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No National heritage place has been recorded within 10km of the study area.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The nearest Ramsar site recorded was the Western District Lakes which is approximately 23km from the site. Due to the distance that the proposed action is from the Ramsar site, the number of turbines (8), and the type of works required to construct the action, the proposed action is highly unlikley to impact the ecological character of any Ramsar wetland, or other downstream waterbodies.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Antechinus minimus maritimus	Swamp Antechinus (mainland)
No	No	Anthochaera phrygia	Regent Honeyeater

Direct impact	Indirect impact	Species	Common name
No	No	Arenaria interpres	Ruddy Turnstone
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Delma impar	Striped Legless Lizard, Striped Snake-lizard
No	No	Dianella amoena	Matted Flax-lily
No	No	Eulamprus tympanum marnieae	Corangamite Water Skink, Dreeite Water Skink
No	No	Falco hypoleucos	Grey Falcon
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Glycine latrobeana	Clover Glycine, Purple Clover
No	No	Grantiella picta	Painted Honeyeater
No	No	Haloragis exalata subsp. exalata	Wingless Raspwort, Square Raspwort
Yes	No	Hirundapus caudacutus	White-throated Needletail
No	No	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
No	No	Lathamus discolor	Swift Parrot
No	No	Lepidium aschersonii	Spiny Peppercress
No	No	Lepidium hyssopifolium	Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed
No	No	Lissolepis coventryi	Swamp Skink, Eastern Mourning Skink
No	No	Litoria raniformis	Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog

Direct impact	Indirect impact	Species	Common name
No	No	Mastacomys fuscus mordicus	Broad-toothed Rat (mainland), Tooarrana
Yes	No	Miniopterus orianae bassanii	Southern Bent-wing Bat
No	No	Nannoperca obscura	Yarra Pygmy Perch
Yes	No	Neophema chrysostoma	Blue-winged Parrot
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pedionomus torquatus	Plains-wanderer
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
No	No	Potorous tridactylus trisulcatus	Long-nosed Potoroo (southern mainland)
No	No	Prasophyllum spicatum	Dense Leek-orchid
No	No	Prasophyllum suaveolens	Fragrant Leek-orchid
No	No	Prototroctes maraena	Australian Grayling
No	No	Pseudomys novaehollandiae	New Holland Mouse, Pookila
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Pterostylis chlorogramma	Green-striped Greenhood
No	No	Pterostylis cucullata	Leafy Greenhood
No	No	Pterostylis tenuissima	Swamp Greenhood, Dainty Swamp Orchid
No	No	Rostratula australis	Australian Painted Snipe
No	No	Rutidosis leptorhynchoides	Button Wrinklewort
No	No	Senecio psilocarpus	Swamp Fireweed, Smooth-fruited Groundsel
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Thelymitra epipactoides	Metallic Sun-orchid
No	No	Thelymitra matthewsii	Spiral Sun-orchid
No	No	Thelymitra orientalis	Hoary Sun-orchid
No	No	Tringa nebularia	Common Greenshank, Greenshank
No	No	Xerochrysum palustre	Swamp Everlasting, Swamp Paper Daisy

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Grassy Eucalypt Woodland of the Victorian Volcanic Plain
No	No	Natural Temperate Grassland of the Victorian Volcanic Plain
No	No	Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Relative activity refers to the number of bat calls per night per site. As passively collected echolocation data cannot be used to quantify numbers of bats present in a given area (Hayes, 2000), a measure of relative activity is used instead.

White-throated Needletail and Fork-tailed Swift (Att-7, Section 4.2, page 21-26 *and* Att 2- Protected Matter- MNES Layers)

The WTNT is listed as *vulnerable*, *marine* and *migratory* under the EPBC Act. The species is common throughout eastern Australia from summer to early autumn, with population recently estimated as 41,000 (Garnett and Baker 2021).

According to the report by Ecology and Heritage Partners (EHP 2024), the Victorian Biodiversity Atlas (VBA) contains 0 records of the FTS and 7 records of WTNTs, with the latest being recorded in 2019. Bird utilisation surveys conducted at MWF in August 2021 and November 2022 reported no FTS's or WTNTs (EHP 2024).

The Ecology and Heritage Partners (2024) assessment considers FTS and WTNT presence to be 'low' at this site, while their turbine collision risk is 'low'. Observations at operating wind farms in south-eastern Australia indicate that the species occasionally collide with wind turbines (Maloney et al. 2019, Symbolix 2020). Only 8 turbines are planned for the MWF, presenting a relatively low FTS and WTNT collision risk. As the FTS and WTNT population is robust (41,000; Garnett and Baker 2021 and 100,000; DoE 2015), an occasional mortality is unlikely to have significant population impacts.

Southern Bent-wing Bat (Att-7, Section 4.2, page 21-26 *and* Att 2- Protected Matter- MNES Layers, Att-9, Cave Roost Survey Assessment)

One EBBC Act listed mammal, the SBWB, was recorded in the search region, the Southern Bent-wing Bat (SBWB), which is listed as *Critically Endangered* (TSSC 2021). An assessment of this species at the study site was undertaken from 2021-2023 using roost cave assessment and bat detector surveys.

Bat-detector surveys of the study area were undertaken to detect SBWB presence based on their echolocation calls. These were conducted during four periods over two years: 1) late September to December 2021, 2) January to March 2022 (EHP 2024), 3) late December 2022 to early February 2023, and 4) late February to early April 2023). The survey effort totalled 2,414 bat-detector nights, with 332 SBWB calls recorded at 16 sites.

During Survey 1 (spring 2021), SBWB was recorded at 3 sites (2, 6, and 7) on 5 separate occasions, at a relative activity level of 0.01 calls per night[1]. Survey 2 (summer/autumn 2022) recorded SBWB at 3 sites (1, 5, and 7) on 8 separate occasions, at a relative activity level of 0.01 calls per night. Survey 3 (spring/summer 2022) recorded SBWB at 6 sites, on 65 separate occasions, at a relative activity level of 0.13 calls per night. During Survey 4 (autumn 2023). SBWB was recorded at 12 sites, on 254 separate occasions, at a relative activity level of 0.3 calls per night.

As of 2019, eight SBWB mortalities due to collisions with operational wind turbines have been reported based on carcass searches (Moloney et al. 2019; Symbolix 2020). These were recorded at two wind farms in south-western Victoria (Att 6- Section 4.2.2- page 22).

Blue-winged Parrot (Att 2- Protected Matter- MNES Layers)

A partial migrant, Blue-winged Parrot was recently listed as Vulnerable under the EPBC Act (effective date 31 March 2023), due in part to a significant decline in reporting rates across their core range in Tasmania and Victoria (DCCEEW 2023).

Blue-winged Parrot occupy a range of coastal, sub-coastal, and inland environments, through to semi-arid zones. They favour grasslands and grassy woodlands and are often found near wetlands, but may occupy modified landscapes such as paddocks and golf-courses (Higgins 1999; Holdsworth et al. 2021: cited in EHP 2024). Blue-winged Parrot use tree hollows or stumps to nest and lay eggs. This species primarily forage on/near the ground for seeds from a range of native and introduced grasses, herbs, and shrubs (Higgins 1999; DCCEEW 2023).

Recent fieldwork undertaken by EHP (2023-2024) supports that such foraging behaviour is evident by way of 100% of Blue-winged Parrot observations (2 of 2) was recorded below the RSA at bird survey location 2. The Blue-winged Parrot may opportunistically utilise habitat within the Project Area on occasion when conditions are optimal (EHP 2024).

A review of bird and bat mortality across 15 Victorian wind farms between 2003 and 2018 (Maloney et al. 2019) did not identify Blue-winged Parrot collisions, with parrot species in general only making up 0.88% of all bird collisions. Based on this, Blue-winged Parrot is considered unlikely to be significantly impacted by the proposed wind farm (EHP 2024).

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

White-throated Needletail & Fork-tailed Swift

Through the MNES assessment it was determined that the White-throated Needletail and Fork-tailed Swift are unlikely to be significantly impacted from the proposed action (Att-7, Table 3 and Table 4, pages 19-20).

The population of White-throated Needletail numbers 41,000 or more (Garnett and Baker 2021) and Fork-tailed swift is estimated to have a population of 100,00 in Australia (DoE 2015). The loss of the occasional individual due to collision is expected to have negligible consequences for the species' population.

The proposed Project site supports highly modified habitat that is not the preferred habitat for the species and it is expected to visit the Project site infrequently. The Project will therefore not reduce the extent of the species range.

The Project will not fragment the population. Even if flying across the site, birds will be able to pass over or between turbines.

Habitat critical to the survival of the species are breeding grounds in Asia and some forested habitats with high reporting rates. These will not be impacted by the Project.

Breeding grounds are located in Asia. The Project will not disrupt the breeding cycle.

For the reasons outlined above, the site does not support habitat of importance to the species. For this reason, the Project will not decrease the availability or quality of any suitable habitat. The species will therefore not decline as a result.

The Project will be constructed and operated in accordance with a detailed environmental management plan that will include monitoring and adaptive control of weed and pest animal infestations and agricultural and plant diseases. It will therefore not result in an outbreak of any invasive species or diseases on the site.

The site is not considered prime habitat for the recovery of this species. It will continue to be used for intensive grazing.

Southern Bent-wing Bat

Through the MNES assessment it was determined that the Southern Bent-wing Bat are unlikely to be significantly impacted from the proposed action (Att-7, Table 6, pages 23-25).

In the 2020/21 breeding season, 28,800–35,200 individuals were estimated to be roosting at Bat Cave in Naracoorte, SA (Southern Bent-wing Bat National Recovery Team, 2022).

While the overall level of SBWB activity was much lower than that recorded for other high-frequency calling species, SBWB were recorded, with a notable increase in activity during the year 2 surveys in line with a significantly increased survey effort. This suggested the SBWBs do move through or utilise the MWF study area during Spring and Autumn.

No key habitat for SBWB will be removed during construction and therefore the project will not reduce the overall area of occupancy of the species within its geographic range across south-western Victoria.

Evidence from multiple met mast surveys conducted within the geographic range of SBWB in Victoria suggest that when flying across the site, SBWBs are likely to fly below the minimum RSH of the proposed turbines (85m AGL). Therefore, the proposed MWF is unlikely to present any barrier to SBWB movements between caves, or from caves to foraging sites, and will not fragment the population.

Habitat critical to the survival of the species includes the three known breeding caves, located in South Australia, Warrnambool and Portland. The closest of these (Starlight Cave) is approximately 34 km away from the MWF site.

Non-breeding caves are also critical habitat for the SBWB, the closest of these are Timboon, (approximately 13 km from the MWF site). There are no other known non-maternity caves closer to the site, no new caves were discovered during cave assessments conducted during this investigation. No known maternity or non-maternity caves would be directly impacted by the construction or operation of the MWF.

Foraging habitat (e.g., woodland, wetlands with emergent vegetation) in proximity to the above-mentioned caves is also critical habitat to SBWB. None of this critical habitat occurs on the proposed MWF site.

The proposed MWF site is located approximately 34 km from the nearest maternity cave (Starlight Cave, near Warrnambool), and about 116 km from the Portland maternity cave. The construction and operation of the proposed MWF would not have any direct impact on maternity caves, or on the bats roosting in the caves during the breeding season.

The proposed MWF site does not support any known SBWB roosting habitat. There are several patches of remnant eucalypt woodland and two large farm dams where SBWB activity was relatively consistently recorded, but there are no permanently inundated or ephemeral wetlands with emergent vegetation that

could be used for foraging.

The Project will be constructed and operated in accordance with a detailed environmental management plan, therefore not result in an outbreak of any invasive species or diseases on the site.

Furthermore, the site does not constitute important habitat that could contribute to the recovery of this species.

Blue-winged Parrot

Through the MNES assessment it was determined that the Blue-winged Parrot are unlikely to be significantly impacted from the proposed action (Att-7, Table 7, pages 26-27).

The study area is not considered to support an 'important population' as it is not a key source for breeding or dispersal, is not necessary for maintaining genetic diversity and is not at the limit of these species known range.

The project is unlikely to result in a significant disturbance to areas of suitable habitat for the species, as all native grasslands and wetlands have been avoided, while the majority of woodland habitat is avoided.

Blue-winged Parrot is known to forage at the ground or canopy level, and as such, the risk of collision for the species is considered to be low.

It is considered highly unlikely that the proposed activity will result in a long-term decrease to any important populations within, and immediate surrounds of the Project Area, as minimal impact to suitable habitat within and adjoining the Project Area is proposed to occur.

The study area is not considered to support an important population, and any individuals occurring within the project footprint would not be classified as an important population.

Given the highly mobile nature of these species it is considered unlikely that the project would result in the fragmentation of any populations present within the study area.

No critical habitat for these species is listed under the EPBC Act, nor is the project footprint critical to the survival of these species.

The project will remove small areas of potential habitat for the species, including potential foraging, roosting and breeding resources. Given the availability of higher quality habitat in the project locality and region, it is considered unlikely that the species would decline as a result of the proposed activity.

The Project will be constructed and operated in accordance with a detailed environmental management plan, therefore not result in an outbreak of any invasive species or diseases on the site.

The site does not constitute important habitat that is likely to play a key role in the recovery of this species. Breeding pairs are likely to occupy eucalypt forests and woodlands (Higgins 1999). As the MWF supports little of these habitats, it is unlikely that breeding pairs will utilise the area en masse, and therefore should not interfere with the recovery of the species.

4.1.4.7 Do you think your proposed action is a controlled action? *

No

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

As the significant impact assessment has resulted in the proposed action not resulting in a significant impact the proposed action not likely to result in a controlled action.

- No EPBC Act-listed flora species have been recorded in the MWF development footprint and therefore will not be impacted by the proposed project.
- No EPBC Act listed ecological communities have been recorded in the development footprint and therefore will not be impacted by the proposed project.
- Collision risk for White-throated Needletail, SBWB, and BWP is possible, though due to low activity levels in the study area collisions are expected to be low and significant impacts unlikely.

The SBWB has been recorded in the search region. Within the proposed MWF development footprint there will not be any impacts on known caves or wetlands, or direct removal of vegetation that comprises important foraging habitat for SBWB. Therefore, the primary potential impact to the sub-species from the proposed project is likely to be collision with operating turbines. Intensive bat detectors surveys have recorded a low level of SBWB activity within the study area. Given the low activity level recorded to date, plus the height of the minimum turbine RSA of 85 metres AGL, a height at which SBWB calls have rarely been recorded, collisions are expected to occur infrequently, and significant impacts are therefore considered to be unlikely.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

From the available evidence, Southern Bent-winged Bat mortalities due to collision are unlikely to occur regularly, but nevertheless are a possibility (Att-6, Section 2.3.1, pages 2-3,11-12, and 28-29). Therefore, mitigation measures to reduce the likelihood of impacts are described below.

- Turbines will have a minimum turbine rotor swept area of 64m AGL, a height at and above which SBWB is unlikely to fly on a regular basis.
- Where possible, turbines have been positioned at least 200 metres away from potential Southern Bent-winged Bat foraging habitat, including patches of treed vegetation and permanent wetlands and waterways.

A Bird and Avifauna management (BAM) Plan will be prepared for the Mumblin wind farm prior to the commencement of construction in consultation with DEECA. This plan will outline monitoring responsibilities, trigger responses in the event that a listed species is impacted by the windfarm, and reporting requirements. As part of the BAM Plan, the project will propose a collision mitigation strategy to be developed in consultation with DEECA. This strategy will involve low speed wind curtailment to a minimum cut-in wind speed of 4.5m/s, applied to all turbines during September – November and March – May (spring and autumn) at a minimum. Adaptive management measures to reduce impacts would also be considered as part of such a plan, if required

Furthermore, impacts to avifauna will be managed through an adaptive management framework as per the Onshore Wind Farm Guidance (DCCEEW 2024).

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

There are no proposed offsets currently.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	No	Actitis hypoleucos	Common Sandpiper
Yes	No	Apus pacificus	Fork-tailed Swift
No	No	Arenaria interpres	Ruddy Turnstone
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Calidris ruficollis	Red-necked Stint
No	No	Charadrius bicinctus	Double-banded Plover
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes	No	Hirundapus caudacutus	White-throated Needletail
No	No	Motacilla flava	Yellow Wagtail
No	No	Myiagra cyanoleuca	Satin Flycatcher
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pandion haliaetus	Osprey
No	No	Pluvialis fulva	Pacific Golden Plover

Direct impact	Indirect impact	Species	Common name
No	No	Tringa glareola	Wood Sandpiper
No	No	Tringa nebularia	Common Greenshank, Greenshank

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The Protected Matters Search Tool (PMST) indicated that within the study area there were records of, or there occurred potential suitable habitat for 19 fauna species listed as Migratory under the Commonwealth EPBC Act. The likelihood of occurrence of these species in the investigation area was assessed and presented in Appendix 3 of Nature Advisory's MNES report (Att-7, Appendix 3, page 36-39).

Migratory species listed under the EPBC Act that have been assessed as having the potential to occur are listed below; including:

- White-throated Needletail (WTNT)
- Fork-tailed Swift (FTS)

These species were found to have the potential to occur over the study area. There are few regional records to date from the Victorian Biodiversity Atlas and eBird. This low level of historical occurrence, coupled with the sub-optimal habitat on the study area (primarily farmland with few treed areas), suggests the frequency of occurrence of these species over the study area is likely to be low. The direct impact from collision risk was assessed and based on collision with turbine observations at operating wind farms in south-eastern Australia indicate that these species may occasionally collide with wind turbines (Att-6, Section 2.3.2, pages 2 and 36-39). Collisions at MWF are expected to be low in number (average one or two per year), based on experience at wind farms elsewhere in its range. Only eight turbines are planned for the Mumblin Wind Farm, presenting a low collision risk to WTNT and FTS.

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

It was determined that the White-throated Needletail and Fork-tailed Swift would not be significantly impacted with the assessment (Att-7, Appendix 3, page 36-39).

Furthermore, the population of Fork-tailed Swift is estimated at 100,000 in Australia (DoE 2015) and is considered stable, and the species is listed as least concern by the IUCN (DCCEEW 2022).

4.1.5.7 Do you think your proposed action is a controlled action? *

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

As the outcome of the significant impact assessment for this species was that the proposal will not have a significant impact, the proposed action should not be a controlled action.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

A Bird and Avifauna Management Plan (BAM Plan) will be prepared for the MWF prior to commencement of construction in consultation with DEECA. This will outline monitoring responsibilities, trigger responses in the event that a listed bird or bat species is impacted by the wind farm, and reporting requirements. As part of the BAM Plan, the project will propose a collision mitigation strategy to be developed in consultation with DEECA. This strategy will involve low speed wind curtailment to a minimum cut-in wind speed of 4.5m/s, applied to all turbines during September – November and March – May (spring and autumn) at a minimum. Adaptive management measures to reduce impacts would also be considered as part of such a plan, if required

Furthermore, impacts to avifauna will be managed through an adaptive management framework as per the Onshore Wind Farm Guidance (DCCEW 2024).

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

There are no proposed offsets currently.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no nuclear proposals in relation to the Mumblin Wind Farm project.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The wind farm is an on-land project, and no Commonwealth Marine Areas are within 10km of the study area.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The wind farm is an on-land project located in Victoria.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposal does not include seam gas or coal mining activities.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed development is located on primarily private land and some public road reserves. No Commonwealth land will be affected.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposal is located in Victoria and will not impact Commonwealth heritage areas.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

None

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

The design of the proposed wind farm has been informed by the context of the site and its surrounds. In particular, the wind farm design has been through three iterations, each of which has resulted in a reduction of known or potential impacts to environmental and/or amenity values.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	20250114 MUM EPBC SHP Files.zip New package of shapefiles as per response in resubmission requirements table.	14/01/2025	No	High
#2.	Document	Att 3-EHP Ecological Assessment.pdf Key ecological assessment report for Mumblin Wind Farm	21/08/2024	Yes	High
#3.	Document	Att 5 - Preliminary Transport Assessment.pdf Att 5 - Preliminary Transport Assessment		No	High
#4.	Document	Att 7-Mumblin WF- MNES Report 2024.pdf MNES Report for Mumblin Wind Farm	10/10/2024	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3-EHP Ecological Assessment.pdf Key ecological assessment report for Mumblin Wind Farm	20/08/2024	Yes	High
#2.	Link	Planning guidelines for development of wind energy facilities https://www.planning.vic.gov.au/__data/assets/pd..			High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 5 - Preliminary Transport Assessment.pdf Att 5 - Preliminary Transport Assessment		No	High
#2.	Document				

Att. 8- Mandatory CHMP Preparation Letter.pdf Mandatory Cultural Heritage Management Plan Preparation Letter			No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 5 - Preliminary Transport Assessment.pdf Att 5 - Preliminary Transport Assessment		No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	20250115 MUM Ecological Assessment Final Redacted.pdf Redacted version of the EHP Ecological Assessment	15/01/2025	No	High
#2.	Document	Att 3-EHP Ecological Assessment.pdf Key ecological assessment report for Mumblin Wind Farm	20/08/2024	Yes	High
#3.	Document	Att-4 Nature Advisory SBWB & YBSB assessment report.pdf Southern Bent-wing Bat and Yellow-bellied Sheath-tailed Bat Assessment - 2024		No	High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att. 8- Mandatory CHMP Preparation Letter.pdf Mandatory Cultural Heritage Management Plan Preparation Letter		No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att. 8- Mandatory CHMP Preparation Letter.pdf Mandatory Cultural Heritage Management Plan Preparation Letter		No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3-EHP Ecological Assessment.pdf Key ecological assessment report for Mumblin Wind Farm	20/08/2024	Yes	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Att 2-Protected Matters - MNES layers - 2024.pdf Protected Matters Search Tool Matters of National Environmental Significance output	25/07/2024	No High
#2.	Document	Att 6-Symbolix Report.pdf Post construction bird and bat monitoring at wind farms in Victoria	No	High
#3.	Document	Att 7-Mumblin WF- MNES Report 2024.pdf MNES Report for Mumblin Wind Farm	09/10/2024	High
#4.	Link	Action Plan for Australian Birds https://www.publish.csiro.au/book/7905/#preview	01/12/2021	High
#5.	Link	Approved Conservation Advice for Miniopterus orianae bassanii Southern Bent-wing Bat https://www.environment.gov.au/biodiversity/thre..		High
#6.	Link	Assumptions and practical considerations in the design and interpretation of echolocation-monitoring https://www.researchgate.net/publication/2813355..	01/01/2000	High
#7.	Link	Blue-winged Parrot Neophema chrysostoma https://researchers.cdu.edu.au/en/publications/b..		High
#8.	Link	Conservation Advice for Neophema chrysostoma (Blue-winged Parrot) https://www.environment.gov.au/biodiversity/thre..		High
#9.	Link	Draft Referral Guidelines for 14 Birds listed as migratory species under the EPBC Act https://www.dcceew.gov.au/environment/biodiversi..		High
#10.	Link	Handbook of Australian, New Zealand, and Antarctic Birds. Volume 4 https://hanzab.birdlife.org.au/wp-content/upload..		High
#11.	Link	Investigation of existing post-construction mortality monitoring at Victorian wind farms to assess https://www.ari.vic.gov.au/__data/assets/pdf_fil..	01/01/2019	High
#12.	Link	Post construction bird and bat monitoring at wind farms in Victoria https://static1.squarespace.com/static/521edeb1e..		High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 7-Mumblin WF- MNES Report 2024.pdf MNES Report for Mumblin Wind Farm	09/10/2024		High
#2.	Link	Action Plan for Australian Birds https://www.publish.csiro.au/book/7905/#preview			High
#3.	Link	Draft Referral Guidelines for 14 Birds listed as migratory species under the EPBC Act https://www.dcceew.gov.au/environment/biodiversi..			High
#4.	Link	Handbook of Australian, New Zealand, and Antarctic Birds. Volume 4 https://hanzab.birdlife.org.au/wp-content/upload..			High
#5.	Link	Southern Bent-wing Bat National Recovery Team Annual Progress Report https://www.swifft.net.au/resources/Southern%20B..			High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 6-Symbolix Report.pdf Post construction bird and bat monitoring at wind farms in Victoria			High
#2.	Link	Onshore Wind Farm Guidance https://consult.dcceew.gov.au/onshore-wind-farm-..			High

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 6-Symbolix Report.pdf Post construction bird and bat monitoring at wind farms in Victoria		No	High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 7-Mumblin WF- MNES Report 2024.pdf MNES Report for Mumblin Wind Farm	09/10/2024		High
#2.	Link	Draft Referral Guidelines for 14 Birds listed as migratory species under the EPBC Act			High

	https://www.dcceew.gov.au/environment/biodiversi..		
#3.	Link	Species Profile and Threats Database https://www.environment.gov.au/cgi-bin/sprat/pub..	High

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Onshore Wind Farm Guidance https://consult.dcceew.gov.au/onshore-wind-farm-..			High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	652614705
Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	38 Pier One Drive, Patterson Lakes, VIC, 3197
Representative's name	Sophie Gluyas
Representative's job title	Environmental Planner
Phone	0477935052
Email	sophie.gluyas@refuture.com.au
Address	PO BOX 175, Warrnambool, VIC 3280

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Sophie Gluyas of MUMBLIN WIND FARM PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	81652614705
Organisation name	MUMBLIN WIND FARM PTY LTD
Organisation address	3197
Representative's name	Severin Staalesen
Representative's job title	Project Director
Phone	0438017272
Email	severin.staalesen@refuture.com.au
Address	PO Box 175, Warrnambool, Vic 3280

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Severin Staalesen of MUMBLIN WIND FARM PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Severin Staalesen of MUMBLIN WIND FARM PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *