

Title of Proposal - Willatook Wind Farm Pty Ltd

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Energy Generation and Supply (renewable)

1.2 Provide a detailed description of the proposed action, including all proposed activities.

Willatook Wind Farm Pty Ltd (the proponent) is developing the proposed Willatook Wind Farm (WWF) (the Project) west of Willatook in South West Victoria with an estimated output capacity of approximately 400 megawatts (MW). Wind Prospect Pty Ltd (Wind Prospect) owns Willatook Wind Farm Pty Ltd and is managing the development of the Project on behalf of the proponent. The location of the proposed wind farm is approximately 32 kilometres (km) north-west of Warrnambool and extends across both sides of the Woolsthorpe- Heywood Road, between Penhurst-Warrnambool Road and Hamilton-Port Fairy Road. It covers approximately 7,600 (ha) of private and public land and is located within the Moyne Shire.

A referral under the Victorian Environmental Effects Act 1978 was submitted by the proponent to the Department of Environment, Land, Water and Planning (DELWP) on the 27th September 2018. On the 27th December 2018, the Minister for Planning decided that an Environment Effects Statement (EES) was required for the Willatook Wind Farm.

The proponent proposes to install up to 86 wind turbines and a battery storage facility within the site boundary (the Site). The wind turbine model being considered for the purposes of this referral is the GE-158 4.8MW. Each wind turbine will comprise a tower, nacelle and blades. The blades will have a maximum and minimum blade tip height of 250 metres (m) and 60m respectively. The towers will be mounted onto a concrete pad footing and there will be an adjacent hardstand area of up to approximately 50m x 60m. The underground cabling and associated trenching would be established within a 3m disturbance area, with the cabling at a depth of at least 800 millimetre (mm).

Turbines will be positioned with a high regard for landscape amenity, existing land use, ecological conservation and cultural heritage values and in accordance with relevant legislation. The Project would also consist of ancillary structures and equipment, which would be positioned in accordance with site constraints.

It is proposed to build approximately 61 kilometres (km) of new access tracks and upgrade 8.2 km of existing tracks within the site to provide for construction and maintenance access to each wind turbine. The tracks would be approximately 6m wide during the operational phase. A 25m disturbance area has been applied to tracks during the construction phase. The arrangement of the tracks has been designed to minimise the removal of native vegetation as well as minimise the length of access track required. Access to the Project area from public roads will be provided by up to seven access points.

Each wind turbine would be connected to an onsite substation through approximately 132km of underground cabling with approximately 71km of trenching. From the onsite substation, a 4km overhead transmission line would connect the wind farm to the existing Tarrone Terminal Station adjoining the southern portion of the site. Of this, approximately 20m crosses Landers Lane, a public road. This overhead transmission line connection has been included in the project footprint that is considered in this Referral.

Five lattice tower wind monitoring masts are proposed, each mast would be up to 141m high, in line with the proposed wind turbine hub height.

The Port of Portland will be the port of entry for turbines and other major imported componentry. On this basis, an over-dimensional (OD) vehicle haulage route and associated swept paths have been identified between the Port of Portland and the Site.

The OD Route is outlined in Attachment 2b.

During construction of the wind farm, temporary infrastructure would include; a construction compound with office facilities; associated parking and toilet facilities; temporary laydown areas for wind turbines and electrical equipment; concrete batching plants; and, an on-site quarry.

The location of the on-site quarry for use during construction is currently being investigated. If an appropriate site can be confirmed, future approvals will be sought. If sufficient basalt resource can be sourced within the wind farm boundary, it is the intention of the proponent that the on-site quarry location would be assessed through the EES process. The planning permit application would also include the on-site quarry.

Operational Activities

Key operational activities will focus on the effective operation of the wind farm. This will include monitoring (on-site or remotely), maintenance and repairs. This would include routine inspections, servicing and repair of wind turbines, maintenance of access tracks and of the electrical system and buildings and plant, including control systems.

The project area is currently used as rural farmland, and this would continue after construction. The proposed development footprint consists of 274hectares (ha), which is 3.6% of the Site. Construction of the wind farm is expected to take approximately two years to complete, followed by an operational phase of at least 25 years.

Decommissioning

Within 12 months of wind turbines permanently ceasing to generate electricity, the wind farm would be decommissioned. This would include removing all above ground equipment; restoration of all areas associated with the Wind Farm, unless otherwise useful to the ongoing management of the land; and, post decommissioning revegetation. Any repowering would require consideration of MNES for that specific action.

Attachment 1 provides a brochure with information on the project.

Attachment 2a shows the location and layout of the project and Attachment 2b shows the OD route to the Site.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Project Area	1	-38.138284133611	142.26371518981
Project Area	2	-38.138081610013	142.26328603637
Project Area	3	-38.138081610013	142.26362935912
Project Area	4	-38.177765492645	142.23358861815
Project Area	5	-38.186266371821	142.22157232177
Project Area	6	-38.191123571721	142.17488042723
Project Area	7	-38.183972581503	142.10089437377
Project Area	8	-38.139431756714	142.06742040526
Project Area	9	-38.130385296813	142.16475240599
Project Area	10	-38.095133918284	142.16475240599
Project Area	11	-38.094863727095	142.20080129515
Project Area	12	-38.123498433905	142.21968404662
Project Area	13	-38.138284133611	142.26371518981

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).

Locally the small rural hamlet of Orford is located approximately 3km to the west of the Site and Hawkesdale is located approximately 7.5km to the north east. The location of the proposed wind farm is approximately 32km north-west of Warrnambool. Road infrastructure is generally well made, with narrow rural roads.

The main land use of the site is agricultural. The project will be constructed on land that has been cleared and farmed for many years. It is currently used for sheep, dairy farming and grazing. Historical widespread clearing of the project area and surrounds has resulted in native vegetation being largely restricted to roadside reserves and degraded wet areas. The site supports a total of around 267.0 hectares of native vegetation much of which is wetland-related.

Remnant native vegetation is generally limited to road reserves, with highly modified, isolated occurrences also present within private property along waterways, gullies and stony knolls, which reflects historic and ongoing land-use practices (ie cropping and grazing). The most extensive remnant native vegetation, Plains Grassy Wetland, is present throughout the project

area, occupying low lying areas between stony knolls and on the flats. The site is flat to gently undulating and largely devoid of trees and shrubs.

Areas not supporting remnant native vegetation have a high cover (>90%) of exotic grass species, many of which have been direct-seeded for use as pasture. Removal of embedded rock has also been undertaken to facilitate the direct seeding of pasture grasses. Vegetation within the majority of the private properties throughout the study area consisted of predominantly introduced pasture species.

In terms of geoscience, the terrain of the site is comprised of two groups of volcanic rocks: a) lavas of Pliocene to early Pleistocene age (two to four million years ago) derived from multiple eruption points between the Hamilton and Warrnambool Road; (b) lava derived from the eruption centre of Mount Rouse near Peshurst some 30km to the north and dated from around 300,000 years ago.

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

The development footprint area is 274 hectares which is 3.6% of the land area within the Site. The OD footprint is 0.28HA

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title.A series of lots as outlined in Attachment 3

1.8 Primary Jurisdiction.

Victoria

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

No

1.10 Is the proposed action subject to local government planning approval?

Yes

1.10.1 Is there a local government area and council contact for the proposal?

Yes

1.10.1.0 Council contact officer details

1.10.1.1 Name of relevant council contact officer.

Michelle Grainger

1.10.1.2 E-mail

mgrainger@moyne.vic.gov.au

1.10.1.3 Telephone Number

0355680555

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 12/2020

End date 12/2049

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

At State level requirements include:

- Planning permits from the Minister for Planning pursuant to the Planning and Environment Act 1987.
- Approval of a Cultural Heritage Management Plan (CHMP) pursuant to the Aboriginal Heritage Act 2006.
- Victorian Flora and Fauna Guarantee Act 1988 (FFG Act) for removal of any protected flora on public land.
- A Work Plan and Work Authority is required for the quarry to carry out an extractive industry through the Earth Resources Division of the Department of Jobs, Precincts and Regions (DJPR).

At local government level the site is affected by the Moyne Planning Scheme.

- The land is in the Farming Zone with two Special Use Zones that are affected by Environmental Significance Overlays (ESO). One Special Use Zone is Schedule 5 for the proposed Shaw River Power Station and the other is Schedule 6 for the proposed Tarrone Power Station. The ESO Schedule 4 and ESO Schedule 5 apply to the environs around the Power Station areas respectively. Their purpose is to protect the stations from encroachment by sensitive land uses, such as dwellings. The proposal will not compromise the objectives of the ESO's.
- The Farming Zone triggers the need for a permit for the use and development of a wind farm. A permit is required for the use and development of a wind energy facility and the removal of native vegetation. Clause 52.32 Wind Energy Facility provides Decision Guidelines and requires consideration of the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (DELWP, October 2018). The Guidelines include some example permit

conditions for wind energy facilities.

- A Bushfire Management Overlay (BMO) applies to part of the land. The Wind Farm is not proposed in the areas where the BMO applies. However, the whole of the Site is in a Designated Bush Fire Prone Area.

The high level relevant Clauses of the Moyne Shire Planning Policy Framework include:

- Clause 12 Environment and Landscape Values including consideration such as the protection of biodiversity, native vegetation management, and the protection of significant environments and landscapes.
- Clause 13 Environmental Risks and Amenity seeks to ensure that planning adopts best practice environmental management and risk management to avoid or minimise environmental degradation and hazards. An objective is to minimise the impacts of natural hazards and adopt to the impacts of climate change through risk based planning. The clause includes considerations for the management of natural hazards and climate change, erosion and landslip, noise abatement, and bushfire risk.
- Clause 14 Natural Resource Management where planning is to assist in the conservation and wise use of natural resources including agricultural land, water, land, stone and minerals to support both environmental quality and sustainable development. Considerations include the protection of agricultural land, consideration of catchment planning and management, water conservation and quality.
- Clause 18 Transport including the considerations for integrated transport, and car parking.
- Clause 19 Infrastructure includes the consideration of energy, energy supply and renewable energy with the objective to promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met. Clause 19.01-2R Great South Coast includes a strategy to plan for and sustainably manage the cumulative impacts of alternative energy development.
- Clause 22.2 addresses the policies related to the environment in the Moyne Shire. There are policies relating to rare species; ground water discharge; hilltop and ridgeline protection; flora and fauna; public land; and, management of coastal landscapes. All the relevant planning policy provisions will be addressed in any future approval.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

Wind Prospect are signatories to the Clean Energy Council Best Practice Charter for Renewable Energy Developments. The Charter outlines a commitment by signatories to engage respectfully with the communities in which they plan and operate projects, to be sensitive to environmental and cultural values and to make a positive contribution to the regions in which they operate.

A stakeholder Consultation Plan for the project was established and commenced in 2010. An

important component of the stakeholder management plan is the stakeholder consultation database which is a live document that continues to evolve to the current time.

The Consultation Plan is currently being updated as part of the EES process.

The consultation activities undertaken to date are summarised below:

- **Meetings, phone calls, letters and email communication:** Responded to all feedback in an appropriate form, arranging face to face meetings as deemed appropriate or requested. The proponent's staff are available to mobilise for meetings while on site and at short notice. An estimate of the proponent's engagement activities since the beginning of 2017 is provided in the table below. All communications with stakeholders are recorded with emails filed and summary records of phone calls and meetings noted.

Face to face meetings with neighbouring landowners (not including door knock): 43

Emails to neighbouring landowners: >100

Phone calls to neighbouring landowners (doesn't include voicemails): 95

- **Website:** Established a project website in 2010 to provide easy access to information about a project including the ability to provide anonymous feedback ('Have Your Say') and to contact WP for further engagement. The website for the project can be found at www.willatookwindfarm.com.au.
- **Stakeholder database:** Established a stakeholder consultation database which is a live document that evolves over time. The database is intended to include all relevant stakeholders. This database defines recipients of information about the Project. Staff at the Moyne Shire Council have previously reviewed the database for omissions.
- **Project launch:** Publicly launched the project through a newsletter distributed to the owners of land and residents within 10km of the project. This was facilitated through the Moyne Shire Council and provided that absentee owners of land were sent the newsletters as well as local residents including those that may be renting properties. A copy of the newsletter distributed in August 2017 relaunching the progression of the Project is provided at http://willatookwindfarm.com/cms/actpdf_1353.pdf.
- **Door knock:** Staff of the proponent knock on the doors of all dwellings located within approximately 3km of a proposed wind turbine location. If residents are not home, a 'sorry we missed you' pack is left behind which includes a newsletter and contact details. Door knocks were conducted in September 2010 and August 2017. The door knocks were followed up by further face to face meetings and phone calls as required over the weeks following the initial door knock process.
- **Newsletters:** Newsletters have been prepared and distributed to provide updates as the Project progresses. These newsletters are distributed to the owners of land and residents within 10km of the Project.

- **Community Engagement Committee:** The Moyne Shire established a Community Engagement Committee (CEC) for the Project in October 2010. The CEC comprises three Moyne Shire Councillors, three members of the community and Wind Prospect. The meetings are conducted formally with a Chair, an agenda and with meeting minutes recorded. 17 meetings have been held including seven meetings since the beginning of 2017 and a further meeting scheduled for April 2019.

The stakeholder consultation database includes over 200 stakeholders. A summary of key stakeholder groups and organisations in the stakeholder consultation database is provided here.

- **Business entities** including businesses with interests in the local area around the project;
- **Communication entities** including the owners of communications masts and operators of communications links in the local area around the project;
- **Government agencies** including the Moyne Shire, adjoining Shires, DELWP, VicRoads, Country Fire Authorities, Department of Jobs, Precincts and Regions, Heritage Victoria, Aboriginal Victoria, Environment Protection Authority, Sustainability Victoria, Royal Australian Air Force, Southern Rural Water, Wannon Water, Civil Aviation Authority, Glenelg Hopkins Management Authority, Air Services Australia, State Emergency Services, Parks Victoria, Department of Environment and Energy (Commonwealth), Australian Energy Market Operator as well as local State and federal members;
- **Heritage groups** including the applicant Registered Aboriginal Parties and other groups related to non-Aboriginal heritage; The Framlingham Aboriginal Trust and Gunditj Mirring were applicant Registered Aboriginal Parties (RAPs) at the time of the Notice of Intent to prepare a Cultural Heritage Management Plan (CHMP) was acknowledged by Aboriginal Victoria (AV). Both applicant RAPS have been consulted in relation to the project and been involved all survey work undertaken by the consultants in preparation of a CHMP.
- **Local businesses** including local aviation operators;
- **Local organisations** including recreational aviation clubs;
- **Local residents** including all landowners involved in the project, neighbouring landowners and all landowners and local residents within 10km of the project;
- **Special Interest Groups** such as Rotary Clubs, Lions Clubs, local schools, Landcare groups, committees, associations, environment and 'friends of' groups.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

A referral under the Victorian Environment Effects Act 1978 was submitted by the WWF on 27 September 2018. On the 27th December 2018, the Minister for Planning decided that an

Environment Effects Statement was required for the Willatook Wind Farm – Referral No 2018-R06

Reasons for the decision:

- The proposal has the potential for a range of significant effects including
 - I. Threatened fauna listed under both the Flora and Fauna Guarantee Act 1988 (FFG ACT) and Environment Protection and Biodiversity Act 1999 (EPBC Act), particularly Brolga and Southern Bent-winged Bat.
 - II. Threatened flora listed under both the FFG Act and EPBC Act.
 - III. Geoheritage and geoscience values of the area.
 - IV. Visual amenity values of the area.
- The proposal has the potential for cumulative adverse effects, in particular on biodiversity and amenity values due to the three operating wind farms within 20km (Macarthur Wind Farm is less than 3km) and 3 approved wind farms with 10km.
- Assessment of potentially significant effects is necessary to ensure their extent, significance and related uncertainties are sufficiently investigated. This includes examining the scope for further avoidance and minimisation of effects via feasible siting, design and operational alternatives for key components of the proposal, as well as evaluating their effectiveness and acceptability in the context of residual environmental risk.
- There are other potential effects on the environmental social setting, including for cultural heritage and surface water, although these are unlikely to be significant providing they are addressed and mitigated consistent with existing statutory requirements under the Aboriginal Heritage Act 2006, Water Act 1989 and Planning and Environment Act 1987.
- An EES would enable a single integrated and transparent process for consideration of potentially adverse effects of the proposal, which would inform relevant statutory decision-making, including under the Planning and Environment Act 1987, Aboriginal Heritage Act 2006 and Flora and Fauna Guarantee Act 1988

The proponent is progressing the EES process with the Environmental Impact Assessment Team at the Department for Environment, Land, Water and Planning.

Since this Referral decision and having regard to the reasons the project has been required to undergo a state EES assessment process, the proponent has revisited the layout and revised it to minimise impacts on biodiversity. The current proposal in particular has reduced impacts on Matters of National Environmental Significance listed on the EPBC Act (see later).

1.15 Is this action part of a staged development (or a component of a larger project)?

No

1.16 Is the proposed action related to other actions or proposals in the region?

No

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The [interactive map tool](#) can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

- [Profiles of relevant species/communities](#) (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- [Significant Impact Guidelines 1.1 – Matters of National Environmental Significance](#);
- [Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#).

2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
Growling Grass Frog: Lead to a long-term decrease in the size of an important population of a species. Reduce the area of occupancy of	One Growling Grass Frog was detected inside the wind farm boundary, heard along Back Creek at Willatook Wind Farm on 23rd October

Species	Impact
<p>an important population. Fragment an existing important population into two or more populations. Adversely affect habitat critical to the survival of a species. Disrupt the breeding cycle of a population. Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat. Introduce disease that may cause the species to decline. Interfere substantially with the recovery of the species.</p>	<p>2018 (BL&A 2019d) and one call was heard in an area adjacent to the site near the Moyne River (EHP 2018). It is possible GGF may use the Shaw River and Moyne River as movement corridors during and after heavy rainfall events to access other wetlands, but on current information they are unlikely to reside in the wind farm other than along the Back Creek. Several other wetlands were considered to have the potential to support GGF but may be unsuitable due to their relative isolation from other possible waterway and wetland habitats. To ensure protection and enable connectivity between populations, a buffer is to be applied along each waterway and its associated terrestrial habitats of at least 100 metres, wherever possible. Proposed mitigation measures, set out in a Construction Environmental Management Plan (CEMP) will preclude short-term, temporary impacts from having any enduring consequences for the local Growling Grass Frog population. Provided there are no impacts on flows or water quality on aquatic habitats from construction and operation of the proposed wind farm, significant impacts on this species are not expected. Criteria for significant impacts on the Growling Grass Frog are set out in EPBC Act Policy Statement 3.14 (DEWHA 2009). The following table provides an assessment of Growling Grass Frog against MNES Impact Criteria for Vulnerable species. The proposed wind farm construction will not lead to a long-term decrease in the size of an important population of Growling Grass Frog as most infrastructure is set back 100 metres from potential waterway habitat. Part of the development within 10m of potential waterway dispersal habitat is one creek crossing. Any other cable crossing GGF habitat will be designed to avoid impacts to habitat (i.e. directional drilling or overhead lines). No impacts on flows or water quality in aquatic habitats are expected from construction and operation of the proposed wind farm given the very limited extent of works in and within 100 m of waterways. For this reason, significant impacts on this species are not expected. The proposed works associated with the wind farm</p>

Species**Impact**

will not reduce the area of occupancy of an important population as most infrastructure is set back 100 metres from the potential habitat and the upgrading of the creek crossing will be completed in a sensitive manner. There will be no impacts on flows or water quality on aquatic habitats from construction and operation of the proposed wind farm so significant impacts on this species are not expected. The proposed works associate with the wind farm and its operation will not fragment important populations as the mapped habitat is mainly contiguous along creeks and streams and infrastructure is set back 100 metres from such potential habitat. The upgrading of the creek crossing will be completed without impacts on connectivity as construction impacts will be temporary and the final track will be only six metres wide. Any cable crossing GGF habitat would be designed to avoid impacts to habitat (i.e. directional drilling or overhead lines). The proposed works will not adversely affect habitat critical to the survival of the species. Suitable and important habitat is available along all waterways and will not be impacted significantly by the proposed development due to the separation distance from waterways for almost all project elements. The proposed works will not disrupt the breeding cycle of an important population as infrastructure is set back 100 metres from the potential habitat and any upgrading of the creek crossing will be completed without impacts on connectivity. Any cable crossing GGF habitat would be designed to avoid impacts to habitat (i.e. directional drilling or overhead lines). The proposed works will not modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, as infrastructure is set back 100 metres from the potential habitat and any upgrading of the creek crossing will be completed without impacts on connectivity. Invasive species which are a threat to Growling Grass Frog include species such as Gambusia (Mosquito Fish) which predate on tadpoles. The proposed development does not pose the threat of introducing a new invasive species that would

Species	Impact
<p>Southern Bent-wing Bat (SBWB): Lead to a long-term decrease in the size of a population Reduce the area of occupancy of the species Fragment an existing population into two or more populations Adversely affect habitat critical to the survival of a species Disrupt the breeding cycle of a population Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline Result in invasive species that are harmful to an endangered species becoming established in the endangered species' habitat Introduce disease that may cause the species to decline Interfere with the recovery of the species</p>	<p>affect GGF, as mitigation measures during construction will be implemented and monitored as stated in the CEMP. The Growling Grass Frog is susceptible to a highly infectious disease caused by the amphibian chytrid fungus <i>Batrachochytrium dendrobatidi</i>. Management measures will be enforced to prevent such harmful diseases being introduced. Actions will be undertaken during the construction phase to control the spread of disease between waterbodies and adjacent waterways. The proposed Project will not interfere substantially with the recovery of the species as infrastructure is set back 100 metres from the potential habitat and any upgrading of the creek crossing will be completed without impacts on connectivity.</p> <p>SBWB activity was recorded associated with a eucalypt plantation where it meets the Shaw River to the west of the WWF and along the Moyne River to the east of the site, indicating these are the main foraging habitats for this species within the study area. These habitats are not characteristic of the wider wind farm site, which is cleared for agricultural purposes. The locations of records are respectively 500 metres north-east and 1.5 kilometres west of the nearest turbines, beyond the distance foraging bats normally fly regularly from favoured habitat (i.e. 120 metres based on gradient studies by BL&A at a number of sites). A few other locations yielded one or two confirmed and/or species complex calls (i.e. many fewer than the preceding sites) indicating that SBWB may occasionally utilise roadside and wind break vegetation and farm dams on the site. This would be infrequent, given the low-quality and limited extent of habitat in these areas. Thirty-one of the 36 sites surveyed by BL&A across the site and its surrounds did not record any calls that were attributable to the SBWB or the species complex. More details are provided in Attachment 6. Based on this, it is unlikely that the SBWB would frequently use the proposed wind farm site. The proposed turbine blade lower tip height is to be a minimum of 60 metres above the ground, which is higher than most wind turbine RSAs currently</p>

Species	Impact
	<p>installed in Australia, reflecting evolution in wind turbine technology and operation. This higher minimum RSA height will reduce the risks of collisions for the SBWB which is not known to fly at height in open areas, with few calls of this species being recorded 25 metres or higher above the ground (BL&A, unpubl. data). The impacts of the proposed Willatook Wind Farm on the SBWB are considered below against the EPBC Act Significant Impact Guidelines for critically endangered and endangered species. The population of SBWB migrating to and from the Warrnambool maternity cave is estimated to be approximately 10,000-15,000 individuals. The total species' population is estimated to be approximately 40,870 overall (DoEE 2019). While electronic bat recordings cannot give an accurate representation of numbers of individuals in an area, the low numbers of confirmed SBWB calls recorded in the surveys (see Attachment 5) indicates that it is unlikely that a significant number of SBWB individuals migrate through or utilise the area regularly. No preferred habitats (permanent wetlands/waterways and treed areas) occur on the proposed wind farm site, as it has mostly been cleared for agricultural purposes. At almost all of the bat survey sites where turbines will be located SBWBs were not detected and where they were, very few calls were recorded. Therefore, SBWB are not likely to use the wind farm site frequently. The low number of SBWB calls detected over four migration seasons across two separate years, and the lack of suitable habitat on the proposed wind farm site, indicate that the chance of regular collisions with turbines by SBWB is likely to be very low. No impact on the population of a scale that would lead to a long-term decrease in numbers is expected from the Willatook Wind Farm. The proposed wind farm site supports mostly highly modified habitat that surveys show SBWB use very infrequently or mostly not at all. The proposed turbine locations and associated infrastructure do not affect the areas with the highest numbers of calls; namely 'Wild Dog Swamp' and the treed area adjacent the Shaw River, which lie 1.5 and 0.5 kilometres</p>

Species	Impact
	<p>respectively from the nearest turbines. Any habitat being removed during construction is unlikely to be key habitat for SBWB and therefore the project will not reduce the area of occupancy of the species. The project will not fragment the population. Even if flying across the site, bats will be able to pass between turbines. Habitat critical to the survival of the species is primarily the breeding caves locations in South Australia and Warrnambool, both a considerable distance from the site. Other habitat critical to the species are over-winter roosting caves, the closest known of these are at Byaduk approximately 25-30 kilometres from the site and Yambuk, approximately 15-20 kilometres from the site. There are no other known roosting caves closer to the site based on information from the Victorian Speliological Society and DELWP. No caves are to be impacted by the construction of the wind farm. Foraging habitat in proximity to the above-mentioned caves is also critical habitat to the species. The two most likely areas of important foraging habitat close to the proposed wind farm site are the two areas with the highest numbers of recorded calls, which will not be impacted by the project. Therefore, no critical habitat for the SBWB will be adversely affected. The wind farm lies 45 km from the nearest maternity cave (near Warrnambool), which is well beyond the nightly flying distance (c. 35 km) of breeding adults and juvenile bats using these caves. The project will therefore not disrupt the breeding cycle of this species. For the reasons outlined above, the site does not support habitat of importance to the species. For this reason, the advent of the proposed wind farm 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</p>

Species	Impact
<p>Seasonal Herbaceous Wetland of the Temperate Lowland Plain (SHWTLP): Reduce the extent of an ecological community. Fragment or increase fragmentation of an ecological community. Adversely affect habitat critical to the survival of an ecological community. Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns. Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting. Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: – assisting invasive species, that are harmful to the listed ecological community, to become established, or – causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community. Interfere with the recovery of an ecological community</p>	<p>recovery of this species. It will continue to be used for intensive grazing and will not be available for revegetation that might increase the area of habitat within the species' range.</p> <p>Small patches of this SHWTLP totaling less than 0.15 hectares will be impacted by the development, but overall this will not reduce the broad extent of the community throughout the wind farm and will have no impact on its extent beyond the wind farm boundaries.</p>

2.4.2 Do you consider this impact to be significant?

No

2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?

Yes

2.5.1 Impact table

Species	Impact
Latham's Snipe: Loss of habitat	Degradation of It is unlikely that the project represents a

Species	Impact
<p>habitat leading to a substantial reduction in migratory shorebird numbers</p> <p>Increased disturbance leading to a substantial reduction in migratory shorebird numbers</p> <p>Direct mortality of birds leading to a substantial reduction in migratory shorebird numbers</p>	<p>significant risk to these species' populations as none of the species are listed as threatened and all are considered to have stable populations (DoEE 2019). Table 1 below assesses project impacts on the Latham's Snipe against the EPBC Act significant impact criteria for migratory species. As other species occurred in even lower numbers, it is not expected that significant impacts will occur. Migratory shorebirds were only detected at one site on the wind farm and this wetland was not considered too small to support an important population of this species. In addition, all wetlands are to be buffered by 100m, where possible, to exclude construction and operations from affecting these areas. All construction works will also be subject to CEMPs which will have water run-off and sediment controls which should prevent impacts from these sources occurring in any wetlands. Given this, there is expected to be no loss of migratory shorebird habitat. All wetlands are to be buffered by 100m, where possible, to exclude construction from affecting these areas. All construction works will also be subject to CEMPs which will have water run-off and sediment controls which should prevent impacts from these sources occurring in any wetlands. Given this, there is expected to be no loss of snipe habitat and no related reduction in its numbers. In addition, it is unlikely that there are significant population levels, defined as 0.1% of the population, of the species given the very low number detected or absence of each species on the site, so a significant reduction in numbers is additionally unlikely. Temporary disturbance would occur to snipe habitat during the construction phase of the project, during which members of this species would be able to move to alternative suitable habitat further away. Therefore, impacts would be minor and temporary, and would not involve modification of available habitat. Disturbance during operation of the windfarm is also unlikely given the low numbers of snipe present and additional and higher quality habitat available in the surrounding region. Direct mortality of snipe during construction is highly unlikely given the</p>

Species	Impact
<p>White-throated Needletail and Fork-tailed Swift: Potential Risks- Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species. Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species. Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.</p>	<p>mobility of avian species. During operation there will be a chance of direct mortality through collision with wind turbines. This is likely to be a very uncommon occurrence given the low numbers of snipe present and low numbers of records in the immediate region. The wind farm will also be subject to a bird and bat management plan during operation which will involve monitoring and mitigation procedures aimed at reducing any residual risk posed to migratory, and other bird species. Given the above it is not expected that there will be a substantial reduction in Latham's Snipe numbers from the wind farm.</p> <p>White-throated Needletail and Fork-tailed Swift are aerial foragers, spending most of their time flying in search of aerial insect prey and rarely roosting (Higgins 1999). They usually occur in Victoria in summer or early autumn in largest numbers over extensive forested areas. It is expected to forage over the study area on several days each year. They move large distances in a short time and their use of the site is transitory and brief when moving these long distances. These migratory species were found to have the potential to occur over the proposed wind farm and the Fork-tailed Swift (EPBC-Migratory) was recorded during the 2019 survey. There are few regional records to date. This low level of historical occurrence, coupled with the suboptimal habitat on the site (primarily farmland with few forested areas), suggests the frequency of occurrence of these species over the site is likely to be low. Observations at operating wind farms in south eastern Australia indicate that these species may occasionally collide with wind turbines (BL&A, Unpubl. records). Collisions at Willatook Wind Farm are expected to be low in number (one or two per year), based on experience at wind farms elsewhere in its range. Both species remain common and widespread throughout eastern Australia during summer and early autumn according to DoEE (2018a). The population of White-throated Needletail numbers 10,000 or more (Higgins 1999), so the loss of the occasional individual is expected to have negligible consequences for the species'</p>

Species	Impact
	<p>population. While the population of Fork-tailed Swift is unknown in Australia, it is believed to be stable and the species is listed as least concern by the IUCN (DoEE 2018a). The proposed works will not impact important habitat for these species given the lack of forested habitat and that they are predominantly aerial and rarely roost. They are an international migrant from the Northern Hemisphere and their breeding habitat is not in Australia. As these species are almost exclusively aerial (Higgins 1999), the proposed works will not result in any invasive species that is harmful to these species becoming established in an area of important habitat. The temporary and short-term nature of the species' occurrence on the site means any infestations of invasive species would have a negligible impact on them. That said, the adoption of best practice construction environmental management measures will ensure monitoring and adaptive control of any infestation of an invasive plant or animal species. These species don't breed in Australia and the wind farm site does not represent important non-breeding habitat as it lacks forested habitat. Therefore, the proposed works will not seriously disrupt the life-cycle of the White-throated Needletail or Fork-tailed Swift.</p>

2.5.2 Do you consider this impact to be significant?

No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

No

2.7 Is the proposed action to be taken on or near Commonwealth land?

No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

No

2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

2.10 Is the proposed action a nuclear action?

No

2.11 Is the proposed action to be taken by the Commonwealth agency?

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

2.13 Is the proposed action likely to have ANY direct or indirect impact on any part of the environment in the Commonwealth marine area?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

The Site has been used for sheep and cattle farming for over 100 years. It comprises a number of properties owned by individuals and companies. The site has been subject to extensive removal of native vegetation in the past and much of the site comprises rocky knoll country with lower depressions in the landscape that remain saturated after periods of heavy rain. Fertiliser has been extensively applied for many years on the site and in places, the site has been cultivated for pasture improvement and cropping.

The Site is relatively flat, supporting soils of volcanic origin on a dissected landscape featuring many rocky outcrops and wet depressions. The Moyne River is to the south east and there is a Eucalyptus plantation to the west of the Site. Little, in any, of the site remains in a pristine condition.

The Site has small patches of native vegetation and associated fauna habitat. Much of this is associated with degraded stony knolls and ephemeral wetlands. Some of the higher quality vegetation is associated with roadsides. Efforts have been made to avoid native vegetation in the project design and it is anticipated that less than 5 hectares of native vegetation will be impacted by the development.

The land use of the Site and surrounds is agricultural (primarily livestock grazing), and widespread clearing of the study area and surrounds has resulted in native vegetation being largely restricted to roadside reserves. Vegetation within the majority of private properties around the Site consisted of predominantly introduced vegetation. This included areas of improved and unimproved pasture dominated by common pasture weeds such as Onion Grass, Cape Weed, Burr Medic *Medicago polymorpha*, Squirrel-tail Fescue *Vulpia bromoides*, Silvery Hair-grass *Aira caryophyllea*, and Cocksfoot *Dactylis glomerata*. These areas often comprised a higher cover/abundance of noxious weeds such as Spear Thistle, Slender Thistle *Carduus pycnocephalus* and Perennial Thistle *Cirsium arvense*.

Field surveys has been conducted at the site between 2009 and 2018. In the following reports:

- Brett Lane & Associates (BL&A) 2019A, Assessment of Matters of National Environmental Significance - Willatook Wind Farm: Report No. 16087 (4.7), prepared for Willatook Wind Farm Pty Ltd. – See Attachment 6.
- Ecology and Heritage Partners (EHP) Pty Ltd 2018, Biodiversity Assessment, Willatook Wind Farm, Willatook, Victoria, prepared for Willatook Wind Farm Pty Ltd. – See Attachment 7.
- Brett Lane & Associates (BL&A) 2019B, Willatook Wind Farm: Flora and Fauna Assessment,

Report No. 16087 (3.2), prepared for Willatook Wind Farm Pty Ltd. – See Attachment 8.

Threatened ecological communities

BL&A (2019B) assessed four ecological communities listed under the EPBC Act that had the potential to occur in the Wind Farm site.

Two of these communities were not recorded during the field survey namely:

- Natural Temperate Grassland of the Victorian Volcanic Plain– listed as Critically Endangered under the EPBC Act; and
- White Box-Yellow-Box-Blakeley's Red Gum Grassy Woodland and Derived Native Grassland– listed as Critically Endangered under the EPBC Act.

The other two communities were recorded or may occur, as indicated below.

- Grassy Eucalypt Woodland of the Victorian Volcanic Plain is listed as Critically Endangered under the EPBC Act. A single patch of Heavier-soils Plains Grassy Woodland was found to meet the condition thresholds for this community (BL&A 2018A). Impacts on this patch will be avoided (See Attachments 6 and 8).
- Seasonal Herbaceous Wetland of the Temperate Lowland Plain is listed as Critically Endangered under the EPBC Act. This community has been recorded on-site.

One EVC (Plains Grassy Wetland (EVC 125)) that is associated with this community (TSSC 2012) was recorded within the study area. EHP (2018) determined that due to the modified condition of Plains Grassy Wetland patches it was unlikely that these would meet the thresholds for the community; however, they also recognised that the field assessments were not conducted during the optimal season to assess this ecological community (i.e. October – December) (TSSC 2012a).

Patches of Plains Grassy Wetland that intersected with the targeted flora survey area were therefore assessed in October 2018 to determine whether they met the key diagnostic criteria and condition thresholds for this community (TSSC 2012a). Patches of Plains Grassy Wetland that intersected with the targeted survey area and met these criteria (TSSC 2012a), namely they were patches in which 50% or more of the total cover of plants in the ground layer of the wetland was dominated by native species characteristic of the Seasonal Herbaceous Wetlands ecological community, and the wetland was 0.5 ha or larger in size.

Areas of Plains Grassy Wetland (EVC 125) beyond the targeted flora survey area have not been checked against the condition thresholds for the community, and are therefore considered to be potential SHWTLP.

The current impact footprint has minimised impacts on this community through careful design and alignment of infrastructure. The current footprint will impact on less than 0.15 hectares of this community. (See Attachments 6 and 8).

In relation to the OD Route, the area of the OD Route was surveyed for the presence of listed

communities. There were no listed communities recorded in the proposed impact area on the OD route.

Listed Flora species

Targeted surveying for the 10 flora species with potential to occur in the Wind Farm study area was undertaken across two separate site surveys (October 2018 and December 2018) to coincide with the published flowering times for the target species (see BL&A 2019B). Targeted surveying for threatened flora was undertaken only where native vegetation supporting suitable habitat for those species within the targeted survey area which was based on a provisional footprint provided by Wind Prospect. As such, the targeted survey areas were small/linear/narrow bands of habitat, allowing very thorough visual searching of these areas to be undertaken (See Attachment 8- BL&A 2019B).

This method, combined with the timing of the surveys (within the published flowering times for all species) was considered appropriate to determine whether the targeted species were present or absent in the impact areas. These targeted surveys for threatened flora were conducted as described below (See Attachment 8- BL&A 2019B for a full description):

- **October targeted flora survey** (targeting spring flowering species namely Button Wrinklewort, Clover Glycine, Dense Leek-orchid and Western Water-starwort): 22nd to 24th October 2018.
- **December targeted flora survey** (targeting summer flowering species namely Basalt Peppercross, Gorae Leek-orchid, Maroon Leek-orchid, Matted Flax-lily, Swamp Everlasting and Swamp Fireweed): 10th to the 12th December 2018.

The result of the survey was identification of:

- One flora species listed under the EPBC Act was recorded in the targeted survey area: Swamp Everlasting (*Xerochrysum palustre*). This patch is now avoided by microsting impact area: and
- No additional threatened flora species listed under the EPBC Act were recorded in the October or December 2018 targeted flora surveys, and they are therefore now considered unlikely to occur in the impact area.

It is noted that targeted surveys for EPBC listed flora species were undertaken based on a layout provided in October 2018 and refined in December 2018. Since the surveys were undertaken the layout has been modified slightly in response ongoing design requirements and to avoid impacts on the listed TEC - Seasonal Herbaceous Wetlands. Seasonally appropriate surveys of the modified layout will be undertaken where the layout impacts on native vegetation for EPBC listed species yet to be surveyed. It is considered that EPBC listed species are unlikely to occur as they were not recorded in the 2018 targeted surveys described above. However, should an EPBC listed species be recorded in the remaining footprint yet to be surveyed the relocation of infrastructure will occur to eliminate the potential for impact on these species (as demonstrated by the relocation of infrastructure away from the Swamp Everlasting described above).

Fauna species (non avian)

The species identified in the MNES Assessment (See Attachment 6) is based on previous surveys (Attachment 6,7 and 8) and searches of relevant databases including the Victorian Biodiversity Atlas (VBA) (DELWP 2019) and Protected Matters Search Tool (PMST) (DoEE 2015a).

This analysis indicated that 6 non-avian listed fauna species are likely to occur or have the potential to occur in the study area. These species are listed below.

Striped Legless Lizard

Targeted investigations within the proposed development zone were undertaken in 2018 in the small areas of suitable habitat within the WWF to determine whether the species is present on and near the proposed development footprint. These surveys, undertaken in accordance with the EPBC Act survey guidelines failed to detect the species, reflecting the limited area and highly fragmented nature of remaining habitats in the area. These surveys are detailed in Attachment 6 and Attachment 8.

Impacts on the Striped Legless Lizard resulting from the proposed wind farm are therefore considered to be negligible and a further, more detailed impact assessment is unwarranted.

Dwarf Galaxias and Yarra Pygmy Perch

Suitable aquatic habitat exists within the study area, particularly in tributaries of the Moyne River. These two listed fish species were detected along the Moyne River and Kangaroo Creek during surveys conducted in 2009 – See Attachment 7.

As no impacts are expected from the project on flows or water quality on these two watercourses from construction and operation of the proposed wind farm, impacts are not expected on these species. A buffer of at least 100 metres will be provided between wind farm infrastructure and these waterways. Together with best practice sediment and erosion control measures during construction and operation of the project, this separation will prevent significant impacts on these waterways and these fish species.

Golden Sun Moth

There are no previous records of Golden Sun Moth from database searches undertaken within the wind farm site search region (i.e. on or within 10 km of the site). Suitable habitat of Plains Grassland and Stony Knoll Shrubland were highly fragmented and limited in extent across the wind farm site. EHP (2018) considered that this species has a moderate likelihood of occurrence within the wind farm site. BLA undertook assessments in 2019 and it was considered that due to the lack of recent or regular records and the lack of availability of suitable habitat found in the wind farm site it was unlikely that Golden Sun Moth occurs on the site. Therefore, any impacts the proposed development may have on this species are considered to be negligible (see Attachment 6 and Attachment 8).

This proposed wind farm site lies on flat land which has been almost entirely cleared of its original vegetation for agricultural development.

The survey periods to collect information on these species is outlined below:

Targeted Striped Legless Lizard and Fat-tailed Dunnart surveys --- 4th November 2009 - 19th February 2010

Targeted Striped Legless Lizard survey --- July - September 2019

Targeted Growling Grass Frog surveys --- 16 - 20 November 2009

Growling Grass Frog habitat and Swamp Skink habitat assesment --- 4 - 7 November 2018

Aquatic surveys (fish) --- 15 - 18 December 2009

Targeted Brown and Southern Toadlet survey --- 18 March 2009 - 22 May 2009

Targeted Swamp Skink surveys (Trapping) --- 15 - 19 February 2010

Bat surveys - general and targeted Southern Bent-wing bat --- 4 November 2009 - 27 January 2010 / 20 October - 25 November 2010 / 31 January - 28 March 2011 / 25 October - 14 December 2018

The results of these surveys are outlined in Attachments 7 and 8. They are summarised in Attachment 6.

Intact native fauna habitat was limited in extent on the site as it was dominated by improved pasture and cropland. Fauna habitat largely coincided with waterways to the east and west of the site. A small ephemeral creek runs north-south through the site.

Fauna species (Avian)

An initial desktop review was undertaken to determine the likelihood of listed species occurring in the wind farm site (EHP 2018). Databases searched included the Atlas of Victorian Wildlife (AVW) and Birds Australia Atlas data.

This analysis indicated that the following avian fauna EPBC listed species are likely to occur or have the potential to occur in the study area. These species are listed below.

- Glossy Ibis
- Latham's Snipe
- Sharp-tailed Sandpiper
- White-throated Needletail.
- Based on analysis of VBA records, the following species of migratory shorebirds could be expected to occur in the search region: Curlew Sandpiper, Common Greenshank, Latham's Snipe, Red-necked Stint and Sharp-tailed Sandpiper (BL&A 2019B). The Black-eared Cuckoo,

Magpie Goose and Fork-tailed Swift were identified in the MNES Search dated March 2019.

It is noted that White-bellied Sea Eagle, Rainbow Bee-eater, Great Egret and Cattle Egret are listed in the latest PMST (DoEE 2019). However, upon review amendments were made to the listed species (EPBC Act (209(3)(b)) 2015 and EPBC Act (209(3)(b)) 2016) and that the aforementioned species had been removed from the "Listed Migratory Species" list and are therefore not considered further in this report.

Additional investigations were commissioned to provide updated information on EPBC Act listed bird species, including listed migratory shorebird species. These surveys are described in the report in Attachment 8 (BL&A 2019B) and are summarised here.

Bird utilisation surveys --- 4 - 6 & 16 - 20 November 2009 / 15 - 20 October 2018 / 25 February - 1 March 2019

Migratory water bird habitat assessment and targets surveys --- 4 - 7 November 2018 / 11 - 13 December 2018 / 11 - 12 & 23 - 24 January 2019 / 28 February 2019

The results of these surveys are outlined in Attachments 7 and 8. They are summarised in Attachment 6.

3.2 Describe the hydrology relevant to the project area (including water flows).

The majority of rivers, creeks and drainage lines within the study area are surrounded by agricultural land. Most waterways currently support varying extents of native aquatic and terrestrial vegetation cover. A number of unnamed ephemeral watercourses occur within the Site, as well as many small, wet depressions among the stony rise country across the majority of the site. These areas tend to fill seasonally (during winter and spring) and dry out over summer or in years of lower rainfall.

There is a general tendency for a southerly flow within the proposed Site. The Shaw River flows to the west and south-west of the Site and the Moyne River flows to the east and south-east. Two small seasonal creeks flow through the site from north to south. This includes Back Creek. The proposed Project would not encroach on the rivers and other watercourses of the region. One creek crossing will be upgraded.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

The Site supports soils of newer volcanic origin on a varied landscape featuring many rocky outcrops and wet depressions.

Vegetation in the Site was confined mainly to rocky outcrops, seasonally inundated areas and roadsides. Vegetation in the study area consisted of seven EVCs: Aquatic Herbland (EVC 653), Basalt Shrubby Woodland (EVC 642), Heavier-soils Plains Grassland (EVC 132_61), Plains Grassy Wetland (EVC 125), Higher-rainfall Plains Grassy Woodland (EVC 55_63), Stony Knoll Shrubland (EVC 649), and Tall Marsh (EVC 821).

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

The site of the proposed wind farm is generally flat, has been altered by agriculture for a long period and a number of the wetlands have been drained. A large proportion of the area becomes wet and swampy during extended rainy periods. The proposed Site holds no outstanding natural features or other important or unique values.

3.5 Describe the status of native vegetation relevant to the project area.

The land use of the Site and surrounds is agricultural (primarily livestock grazing), and widespread clearing of the Site and surrounds has resulted in the limited areas of remaining native vegetation being largely restricted to rocky outcrops, seasonally inundated areas and roadside reserves.

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

The gradient of the Site does not vary greatly. There are mountains or large hills on the site. The micro-relief of the Site is pronounced, with a contrast between some rocky outcrops and lower-lying, seasonally inundated areas.

3.7 Describe the current condition of the environment relevant to the project area.

The Site has been subject to extensive agricultural use for over 100 years. It is dominated by introduced pasture and crops. The Site supports soils of newer volcanic origin on a varied landscape featuring many rocky outcrops and wet depressions.

The environment is modified and there are few, if any, patches of pristine vegetation. Native grassland vegetation is typically confined to stony knolls and roadsides where it is subject to heavy weed invasion. Road access to the wind farm will seek to avoid native vegetation.

The fauna of the site is dominated by a combination of introduced and farmland-adapted native species, predominantly birds. The waterways to the east and west of the Site are intact. Within

the wind farm site many of the wetlands have been drained in the last 100 years to facilitate agriculture.

In conclusion, the site is highly altered from its original pre-European settlement condition and its biodiversity is relatively poor. However, being flat and well vegetated in an often boggy setting, there are no signs of serious land degradation, such as erosion.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

The background historical research indicated that there have been no historical sites previously recorded that are within the activity area. Field surveys were undertaken and no historical places suitable for listing on the Victorian Heritage Inventory or other lists (e.g. Heritage Overlay, Heritage Register or any National Lists) or areas of historical archaeological sensitivity were identified. Some sections of dry-stone wall were noted in places, however they are in such poor conditions that they may not meet the significance criteria to be listed on the Victorian Heritage Inventory

3.9 Describe any Indigenous heritage values relevant to the project area.

Seven Aboriginal Heritage Places were identified within the Site. Field representatives from the Framlingham Aboriginal Trust and the Gunditj Mirring Traditional Owners Aboriginal Corporation agreed with this assessment.

- Glen Stirling (7321-0031 [VAHR])
- Willatook AS 1 (7321-0473 [VAHR]);
- Willatook AS 2 (7321-0474 [VAHR]);
- Willatook IA 1 (7321-0475 [VAHR]);
- Willatook IA 2 (7321-0476 [VAHR]);
- Willatook IA 3 (7321-0477 [VAHR]); and
- Willatook LDAD (7321-#### [VAHR]) (awaiting reference number from Aboriginal Victoria)

Of the seven places, Glen Stirling (7321-0031 [VAHR]), a mound site that was recorded decades previously, was unable to be located despite extensive efforts. Despite this, the location of the original site is still being treated as an Aboriginal heritage place and has been avoided.

The other six site types listed above consist of three sub surface Isolated Artefacts (IA), a Low Density Artefact Distribution (LDAD) and two low density sub surface Artefact Scatters (AS).

The assessment undertaken for the Cultural Heritage Management Plan determined that the

proposed activity would have caused harm to the six new sites and one previously recorded site located within the activity area.

The proponent has altered the design layout, adjusting the location of turbines, tracks, cabling and associated infrastructure in order to avoid all the Aboriginal places identified within the activity area.

In addition to this, protective measures including the erection of temporary fencing/flagging tape will be used around each of the sites prior to, and throughout the construction process. To further reinforce the protection of sites within the area, all construction crews will undergo a cultural heritage induction to ensure they are aware of the boundaries of each site so that they can be correctly avoided as required.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

The project area is almost exclusively confined to privately-owned, freehold land. The exceptions are a number of public road access points where tracks for accessing the wind farm would be constructed. These crossings would be constructed on public road reserves owned and managed by Moyne Shire. Also, a number of paper roads (Crown Land) are crossed by site tracks within the site.

3.11 Describe any existing or any proposed uses relevant to the project area.

The existing use of the area is farming, predominantly grazing of cattle and sheep. Following construction of the proposed wind farm, the overwhelming balance of the Site would continue to be used for farming.

Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

Mitigation measures will be undertaken and detailed in the Construction Environmental Management Plan (CEMP) and operational Environmental Management Plan (OEMP). These include:

- The CEMP will outline specific management actions to mitigate against potential impacts to areas of ecological value;
- Development of a Weed Management Plan;
- Preparation of a Bat and Avifauna Management Plan to the satisfaction of the responsible authority.
- Minimise impacts to native vegetation and habitats through construction and micro-siting techniques, including fencing retained areas of native vegetation. If indeed necessary, trees should be lopped or trimmed rather than removed. Similarly, soil disturbance and sedimentation within wetlands should be avoided or kept to a minimum, to avoid, or minimise impacts to fauna habitats;
- All contractors should be aware of ecologically sensitive areas to minimise the likelihood of inadvertent disturbance to areas marked for retention. Habitat Zones (areas of sensitivity) should be included as a mapping overlay on any construction plans;
- Tree Retention Zones (TRZs) should be implemented to prevent indirect losses of native vegetation during construction activities. A TRZ applies to a tree and is a specific area above and below the ground, with a radius 12 x the Diameter at Breast Height (DBH). At a minimum standard a TRZ should consider the following:
 - A TRZ of trees should be a radius no less than two metres or greater than 15 metres;
 - Construction, related activities and encroachment (i.e. earthworks such as trenching that disturb the root zone) should be excluded from the TRZ;
 - Where encroachment exceeds 10% of the total area of the TRZ, the tree should be

considered as lost and offset accordingly;

- Directional drilling may be used for works within the TRZ without being considered encroachment. The directional bore should be at least 600 millimetres deep;
- The above guidelines may be varied if a qualified arborist confirms the works will not significantly damage the tree (including stags / dead trees). In this case the tree would be retained and no offset would be required; and,
 - Where the minimum standard for a TRZ has not been met an offset may be required.
 - Removal of any habitat trees or shrubs (particularly hollow-bearing trees) should be undertaken under the supervision of an appropriately qualified zoologist to salvage and translocate any displaced fauna.
- Development of a Fauna Management Plan may be required to guide the salvage and translocation process (if required);
- Where possible, construction stockpiles, machinery, roads, and other infrastructure should be placed away from areas supporting native vegetation, Large Old Trees (LOTs) and/or wetlands;
- Wind turbines should be constructed no less than 100 metres (as per standard construction practice) from Moyne River, Kangaroo Creek and Shaw River and infrastructure that crosses these waterways should be designed to minimise impact across the waterways and tributaries that support native aquatic vegetation;
- Construction should have an environmental audit process in place for the construction works to be audited on a regular basis;
- All chemicals on site should be correctly banded and stored following EPA Banding Guidelines (EPA 1992).
- Ensure that best practice sedimentation and pollution control measures are undertaken at all times, in accordance with Environment Protection Authority guidelines (EPA 1991; EPA 1996; Victorian Stormwater Committee 1999) to prevent offsite impacts to waterways and wetlands; and,
- As indigenous flora provides valuable habitat for indigenous fauna, it is recommended that any landscape plantings that are undertaken as part of the proposed works are conducted using indigenous species sourced from a local provenance, rather than exotic deciduous trees and shrubs.
- In addition to these measures, the following documents should be prepared and implemented prior to any construction activities:
 - The CEMP should include specific species/vegetation conservation strategies, daily monitoring, sedimentation management, site specific rehabilitation plans, weed and pathogen management measures, etc.;

- Weed Management Plan. This plan should follow the guidelines set out in the CaLP Act, and clearly outline any obligations of the project team in relation to minimising the spread of weeds as a result of this project. This may include a pre-clearance weed survey undertaken prior to any construction activities to record and map the locations of all noxious and environmental weeds; and
- Significant Species Conservation Management Plan (CMP). A CMP will be required if significant species or their habitats are proposed to be impacted, and may include a salvage and translocation plan.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

The proposed outcome for the project in relation to Matters of National Environmental Significance is that there will be no significant impacts on any such matter.

In relation to listed aquatic species, where possible, buffers of 100 metres would be provided from rivers and streams. Any development within 100 metres of waterways would be carefully planned with local authorities to avoid any impacts on habitats and migration routes of aquatic species.

A Bat and Avifauna Management Plan (BAM Plan) will be developed and implemented and the annual results will be provided to the Victorian Minister of Planning each year for the first five years of operation. This approach would provide for monitoring and adaptive management to ensure that this environmental outcome is met.

The BAM Plan will describe a rigorous bird and bat collision monitoring regime and specific procedures for reporting and responding to a find of any bird or bat species listed under the EPBC Act found to have collided with a wind turbine. It will also identify impact triggers, which include finding the carcass of an EPBC Act listed threatened or migratory species under a turbine (whether during formal monitoring or incidentally).

Annual reporting will include the species, number, age and sex (if possible) and date of any bird or bat strike recorded; information on any seasonal and yearly variation in the number of bird and bat strikes; whether further detailed investigations of any potential impacts on birds and bats from turbine collision are warranted based on the significance of impacts monitored in the first five years; and, any impact mitigation and management measures implemented in response to impact triggers.

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

No

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

Willatook Wind Farm will not have a significant impact on a matter protected because:

There are no World Heritage properties / areas within or near the wind farm site, thus the project will not have an impact on World Heritage properties or values. There will be no impacts to any Registered or Indicative Places listed on the Register of National Estate, nor any other National Heritage Places identified within close proximity to the project areas. There are no Wetlands of International Significance (Ramsar Sites) within or near the wind farm site, thus the project will not have an impact on the ecological character of any Ramsar wetland.

One Threatened Ecological Community that occurs in the project area "Seasonal Herbaceous Wetland of the Temperate Lowland Plain" is listed as Critically Endangered under the EPBC Act. Small patches of this TEC totalling less than 0.15 hectares will be impacted by the development, but overall this will not reduce the broad extent of the community throughout the wind farm and will have no impact on its extent beyond the wind farm boundaries.

The Listed Southern Bent-winged Bat was primarily recorded around the Shaw River to the west of the WWF and along the Moyne River to the east of the site. These habitats are not characteristic of the wider wind farm site, which is mostly cleared for agricultural purposes. There were few records from other sites where turbines are proposed. Given the low number of the Southern Bent-wing Bat calls recorded over all surveys conducted so far and the lack of suitable habitat, the implications of the proposed Willatook Wind Farm for the population of this species are considered to be negligible. The minimum RSA of turbines of 60 meters above the ground will reduce substantially the collision risk for this species to a level where it is considered as highly unlikely.

Small numbers of Latham's Snipe and even fewer other listed migratory species of birds were found during surveys of the site. Impacts on these listed migratory species are considered negligible and certainly not significant.

Two other listed migratory species, the White-throated Needletail and Fork-tailed Swift are wide-ranging aerial foragers, spending most of their time flying in search of aerial insect prey and rarely roosting (Higgins 1999). They usually occur in Victoria in summer or early autumn and may be expected to forage over the study area on several days each year. Based on experience at wind farms elsewhere in south eastern Australia, a wind farm the size of WWF may result in a very small number (less than five) collisions by these species each year. Both

species remain common and widespread throughout eastern Australia during summer and early autumn. The population of White-throated Needletail numbers 10,000 or more (Higgins 1999), so the loss of the occasional individual is expected to have negligible consequences for the species' population. While the population of Fork-tailed Swift is unknown in Australia, it is believed to be stable and the species is listed as least concern by the IUCN (DoEE 2018a).

The proposed action will not involve any nuclear actions. There are no Commonwealth marine areas within or near the wind farm site, thus the project will not have an impact on Commonwealth marine environments. The proposed action will not impact upon the Great Barrier Reef Marine Park.

No Commonwealth agencies are partners or participants in this project. The proposed action does not involve Commonwealth Heritage places overseas.

This assessment concludes that the proposed action will not have a significant impact on EPBC Act listed values. Thus, the proposed action will not need the approval of the Commonwealth Minister for the Environment and therefore is considered to be 'not a controlled action'.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

Yes.

Wind Prospect is a leading renewable energy developer in Australia having achieved planning approval for 22 wind farms and 2 solar farms totalling over 2,900 MW of electricity of which 1,850 MW is operational or under construction.

Wind Prospect is committed to renewable energy projects that respect the environment and benefit communities. All of the proponent's projects are designed to avoid significant environmental areas and minimise environmental impacts

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

None

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.

The action will be completed in accordance with the Environmental Policy provided in Attachment 9.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

Yes

6.4.1 EPBC Act No and/or Name of Proposal.

Yes. Wind Prospect has previously referred;

Wind Prospect Pty Ltd/Dandaragan Wind Farm WA

Date Received: 09 Sep 2011

Reference No: 2011/6006

Wind Prospect Pty Ltd/Energy generation and supply/Green Point Wind Farm/SA/

Date Recieved: 14 Dec 2001

Reference No: 2001/529

Wind Prospect Pty Ltd/Energy generation and supply/Construction and Operation of electrical connection line for Barunga Gap Wind Farm/SA

Date Recieved: 28 Sep 2004

Reference No: 2004/1803

Wind Prospect Pty Ltd/Energy generation and supply/Barunga Gap Wind Farm/SA

Date Recieved: 03 Feb 2004

Reference No: 2004/1357

Wind Prospect Pty Ltd/Energy generation and supply/North Brown Hill Wind Farm/SA

Date Recieved: 22 Dec 2008

Reference No: 2008/4666

Wind Prospect Pty Ltd/Energy generation and supply/Distribution line including connection to Lake Bonney Central Wind Farm and Snuggery Substation/SA

Date Recieved: 25 Jun 2003

Reference No: 2003/1108

Wind Prospect Pty Ltd/Energy generation and supply/Lake Bonney Central Farm/SA

Date Recieved: 17 June 2002

Reference No: 2002/691

Wind Prospect Pty Ltd/Energy generation and supply/Yabmana Wind Farm/SA

Date Recieved: 17 Dec 2001

Reference No: 2001/530

Wind Prospect Pty Ltd/Energy generation and supply/Transmission Line servicing Yabmana Wind Farm/SA

Date Recieved: 19 Mar 2003

Reference No: 2003/981

Wind Prospect Pty Ltd/Energy generation and supply/Troubridge Point/SA

Date Recieved: 7 Feb 2003

Reference No: 2003/952

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Attachment 1: Willatook Wind Farm Brochure Attachment 2a: Location and Layout of project Attachment 2b: Over Dimensional Route Description Attachment 2c: GIS compliant SHP file Attachment 3: The lot description for the proposed development Attachment 4: Consultation Report Attachment 5: EES Referral decision Attachment 6: MNES ASSESSMENT (BL&A 2019 A) Attachment 7: EHP (2018) 4 parts Attachment 8: Flora and Fauna Report related to MNES – BL&A (BL&A 2019 B) 3 parts Attachment 9: Wind Prospect Environmental Policy	Initial surveys were undertaken at Willatook Wind Farm site in 2009. Extensive surveys have been undertaken on MNES since initial surveys. All surveys were undertaken by qualified ecologists. The data collected and subsequent analysis is considered to be reliable.	Any uncertainties and limitations are addressed in the various attached reports. There is sufficient information for comprehensive assessment of potential impacts on MNES in these attached reports.

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

No feasible alternatives are available for the development of the Project.

The location of the site was selected following an extensive project site selection process across the entire state of Victoria. The Site was selected as a highly suitable location for further feasibility assessment primarily due to the wind resource, proximity to a point of connection to the electricity network, very good road access, relatively low density of dwellings and relatively low risk of significant impacts. The Wind Farm was initially based on 190 wind turbines, each with a maximum blade tip height of 152m and an associated site capacity of up to 350 MW. Following engagement with landowners; environmental considerations; and, advances in wind turbine technology, the proposal has evolved to the current proposed design.

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Development Manager

9.2.2 First Name

Rory

9.2.3 Last Name

McManus

9.2.4 E-mail

rory.mcmanus@windprospect.com.au

9.2.5 Postal Address

Suite 10, 19-35 Gertrude Street,

Fitzroy
Melbourne VIC 3065
Australia

9.2.6 ABN/ACN

ABN

27150810978 - Willatook Wind Farm Pty Ltd

9.2.7 Organisation Telephone

03 9005 9075

9.2.8 Organisation E-mail

melbourne@windprospect.com.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:..... Date:

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, RORY McMANUS, 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 of or for the benefit of any other person or entity.

Signature:  Date: 08/04/2019

I, RORY McMANUS, the person proposing the action, consent to the designation of WILLATOOK WINDFARM PTY LTD as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:  Date: 08/04/2019

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Development Manager

9.5.2 First Name

Rory

9.5.3 Last Name

McManus

9.5.4 E-mail

rory.mcmanus@windprospect.com.au

9.5.5 Postal Address

Suite 10, 19-35 Gertrude Street

Fitzroy
Melbourne VIC 3065
Australia

9.5.6 ABN/ACN

ABN

27150810978 - Willatook Wind Farm Pty Ltd

9.5.7 Organisation Telephone

03 9005 9075

9.5.8 Organisation E-mail

melbourne@windprospect.com.au

Proposed designated proponent - Declaration

I, RORY McMANUS, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:  Date: 08/04/2019

9.6 Is the Referring Party an Organisation or Individual?

Individual

9.7 Individual

9.7.1 Job Title

Development Manager

9.7.2 First Name

Rory

9.7.3 Last Name

McManus

9.7.4 E-mail

rory.mcmanus@windprospect.com.au

Referring Party - Declaration

I, RORY McMANUS, I 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.

Signature:  Date: 30/04/19

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. Attachment 1 Willatook Wind Farm Brochure.pdf
2. Attachment 2a Location and Project LayoutRED.pdf
3. Attachment 2b OD Route Description updated.pdf
4. Attachment 3 WIL_LandParcels_EPBC.pdf
5. Attachment 5 WIL_EES_Reasons-for-Decision.pdf
6. Attachment 6- Report 16087 (4.7) MNES Assessment final v2.pdf
7. Attachment 7 F&F Report (2009-2017) Willatook WF PART 1.pdf
8. Attachment 7 F&F Report (2009-2017) Willatook WF PART 2.pdf
9. Attachment 7 F&F Report (2009-2017) Willatook WF PART 3.pdf
10. Attachment 7 F&F Report (2009-2017) Willatook WF PART 4.pdf
11. Attachment 8 - Report 16087 (3.2) Willatook WF FF Final Part 1 - v4.pdf
12. Attachment 8 - Report 16087 (3.2) Willatook WF FF Final Part 2 - v4.pdf
13. Attachment 8 - Report 16087 (3.2) Willatook WF FF Final Part 3 - v4.pdf
14. Attachment 9 _Environmental_Policy.pdf
15. Attachment_4_WIL_EPBC_Consultation_Report_v01.pdf
16. BOU_WIL_v028_prj.zip