

# Scoping Requirements for Willatook Wind Farm Environment Effects Statement

*Environment Effects Act 1978*

**AUGUST 2019**

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# List of Abbreviations

DELWP	Department of Environment, Land, Water and Planning
EE Act	<i>Environment Effects Act 1978</i>
EES	Environment effects statement
EMF	Environmental management framework
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
km	kilometre
MNES	Matters of national environmental significance
TRG	Technical reference group

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# 1. Introduction

In light of the potential for significant environmental effects, on 27 December 2018 the Minister for Planning (the Minister) determined under the *Environment Effects Act 1978* (EE Act) that Willatook Wind Farm Pty Ltd (the proponent) is to prepare an environment effects statement (EES) for the proposed Willatook Wind Farm (the project). The purpose of the EES is to provide a detailed description of the project, assess its potential effects on the environment<sup>1</sup> and assess alternative project layouts, designs and approaches to avoid and mitigate effects. The EES will inform and seek feedback from the public and stakeholders and enable the Minister to issue an assessment of the project's environmental effects under the EE Act at the conclusion of the EES process. The Minister's assessment will inform statutory decision-makers responsible for the project's approvals.

Draft scoping requirements for the Willatook Wind Farm were exhibited for public comment for three weeks in July and August 2019. All public comments received were considered during the finalisation of the scoping requirements. The final scoping requirements (this document) set out the specific matters to be investigated and documented in the EES.

While the scoping requirements are intended to cover all relevant matters, the EES will need to address other issues that emerge during the EES investigations, especially those relevant to statutory decisions that will be informed by the assessment.

## 1.1 The project and setting

The project is located in southwest Victoria, approximately 250 km west of Melbourne, within the Moyne Shire Council. The project is approximately 45 km south of Hamilton and 22 km to the north of Port Fairy. The small rural hamlet of Orford is approximately 3 km to the south-southwest, and the township of Hawkesdale is approximately 7.5 km to the east-northeast of the closest proposed wind turbines (Figure 1). The main land use is agricultural; native vegetation is largely restricted to roadside reserves.

The project proposes a total capacity of approximately 400 MW and annual production of approximately 1,400 GWh of electricity. The operational life of the project is anticipated to be 25 years. The operational Macarthur Wind Farm is located to the north of the project, which links to the 500kV powerline running through the southern portion of the project area via another overhead powerline.

The project proposes up to 86 wind turbines (nominally identified as GE-158 4.8 MW) with a maximum blade tip height of 250 m, each of which would connect to the on-site substation through a combination of approximately 109 km of underground cabling and 4.5 km of overhead powerlines. The overhead powerline is proposed to connect the on-site substation to the existing Tarrone Terminal Station, which adjoins the southern portion of the site. A battery storage facility would be established on the site. The project also proposes approximately 60 km of new access tracks, five lattice tower wind monitoring masts (also known as anemometers) and upgrades to approximately 9 km of existing tracks.

Temporary infrastructure associated with construction of the project would include a construction compound (with office facilities, parking and toilet facilities), laydown areas, concrete batching plants and an on-site quarry.

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<sup>1</sup> For assessment of environmental effects under the EE Act, the meaning of 'environment' includes physical, biological, heritage, cultural, social, health, safety and economic aspects (Ministerial Guidelines, p. 2).

## 1.2 Minister's requirements for this EES

The Minister's decision to require an EES included the procedures and requirements applicable to its preparation, in accordance with section 8B(5) of the EE Act (see Appendix A). These requirements included the following key matters for the EES to examine:

- effects on biodiversity and ecological values within and near the site including native vegetation, listed communities and species (flora and fauna) under the *Flora and Fauna Guarantee Act 1988* and *Environment Protection and Biodiversity Conservation Act 1999*;
- effects on water environments and related beneficial uses, including as a result of changes to stream flows, discharge of sediment and acid formation from disturbance of wetlands;
- effects on the geoheritage values within the proposal area, including for the potential on-site quarry;
- effects on the local visual amenity values, including for non-neighbouring landholders;
- effects on the socio-economic environment, at local and regional scales, including increased traffic movement and indirect effects of construction on the capacity of local community infrastructure; and
- effects from a cumulative perspective, including on threatened flora and fauna, social and amenity values, with particular consideration of the currently operating and already approved wind farm projects in the region.

These scoping requirements provide further detail on the specific matters to be investigated in the EES in the context of the *Ministerial Guidelines for Assessment of Environmental Effects under the EE Act* (Ministerial Guidelines).

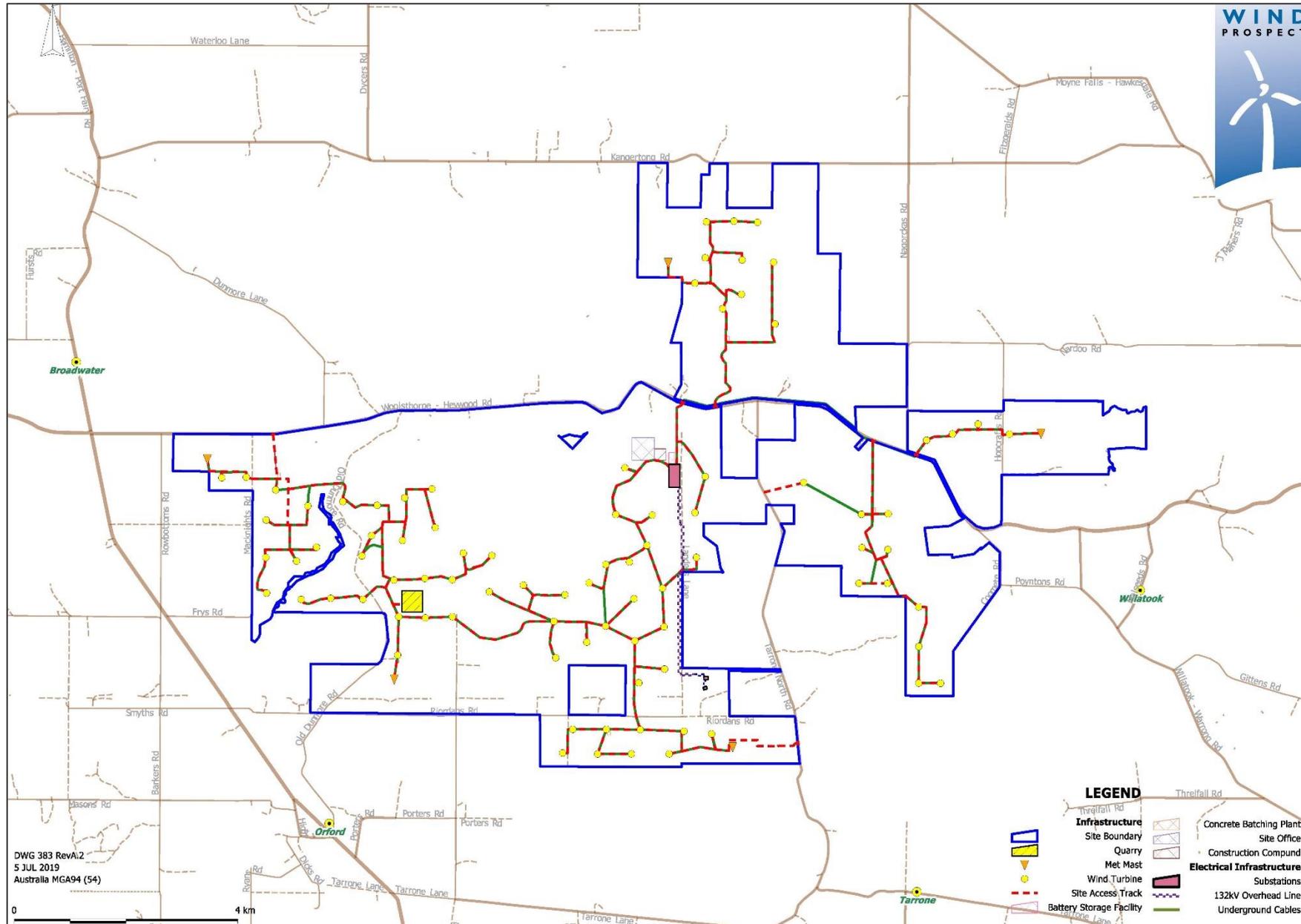


Figure 1: Location of the project (source: Wind Prospect)

## 2. Assessment process and required approvals

### 2.1 What is an EES?

An EES describes a project and its potential environmental effects. It should enable stakeholders and decision-makers to understand how the project is proposed to be implemented and the likely environmental effects of doing so. An EES has two main components.

1. The EES main report – an integrated, plain English document that assesses the potential impacts of the project and offers mitigation or other measures to reduce the environmental effects. The main report draws on technical studies, data and statutory requirements such as specific limits for surface water and groundwater quality and waste discharge to the environment and should clearly identify which components of the scope are being addressed throughout.
2. The EES technical reports – specialist studies, investigations and analyses that provide the basis for the EES main report. These reports will be exhibited in full, as appendices to the main report.

### 2.2 The EES process

The proponent is responsible for preparing the EES, including conducting technical studies and undertaking stakeholder consultation. The Department of Environment, Land, Water and Planning (DELWP) is responsible for managing the EES process. The EES process has the following steps:

- preparation of a draft study program and draft schedule by the proponent (completed);
- establishment of an inter-agency technical reference group (TRG) convened by DELWP (completed);
- preparation and exhibition of draft scoping requirements by DELWP on behalf of the Minister (completed);
- finalisation of the scoping requirements after considering public comments received during the advertised exhibition period, for issue by the Minister (this document);
- review of the proponent's EES studies and draft documentation by DELWP and the TRG<sup>2</sup>;
- completion of the EES by the proponent;
- review of the complete EES by DELWP to establish its adequacy for public exhibition;
- exhibition of the proponent's EES and invitation for public comment by DELWP on behalf of the Minister;
- appointment of an inquiry by the Minister to review the EES and public submissions received, conduct public hearings and provide a report to the Minister; and finally
- following receipt of the inquiry report, an assessment of the project's environmental effects by the Minister for the consideration of statutory decision-makers.

Further information on the EES process can be found on the department's website<sup>3</sup>. Figure 2 outlines the steps of the EES process.

#### Technical reference group

DELWP has convened an agency-based TRG, comprised of representatives of relevant state government agencies and departments as well as the Moyne Shire Council. The TRG will advise DELWP and the proponent on:

- applicable policies, strategies and statutory provisions;
- the scoping requirements for the EES;
- the design and adequacy of technical studies for the EES;
- the proponent's public information and stakeholder consultation program for the EES;
- responses to issues arising from the EES investigations;
- the technical adequacy of draft EES documentation; and
- coordination of statutory processes.

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<sup>2</sup> For critical components of the EES studies, peer review by an external, independent expert may be appropriate.

<sup>3</sup> [planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria](http://planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria).

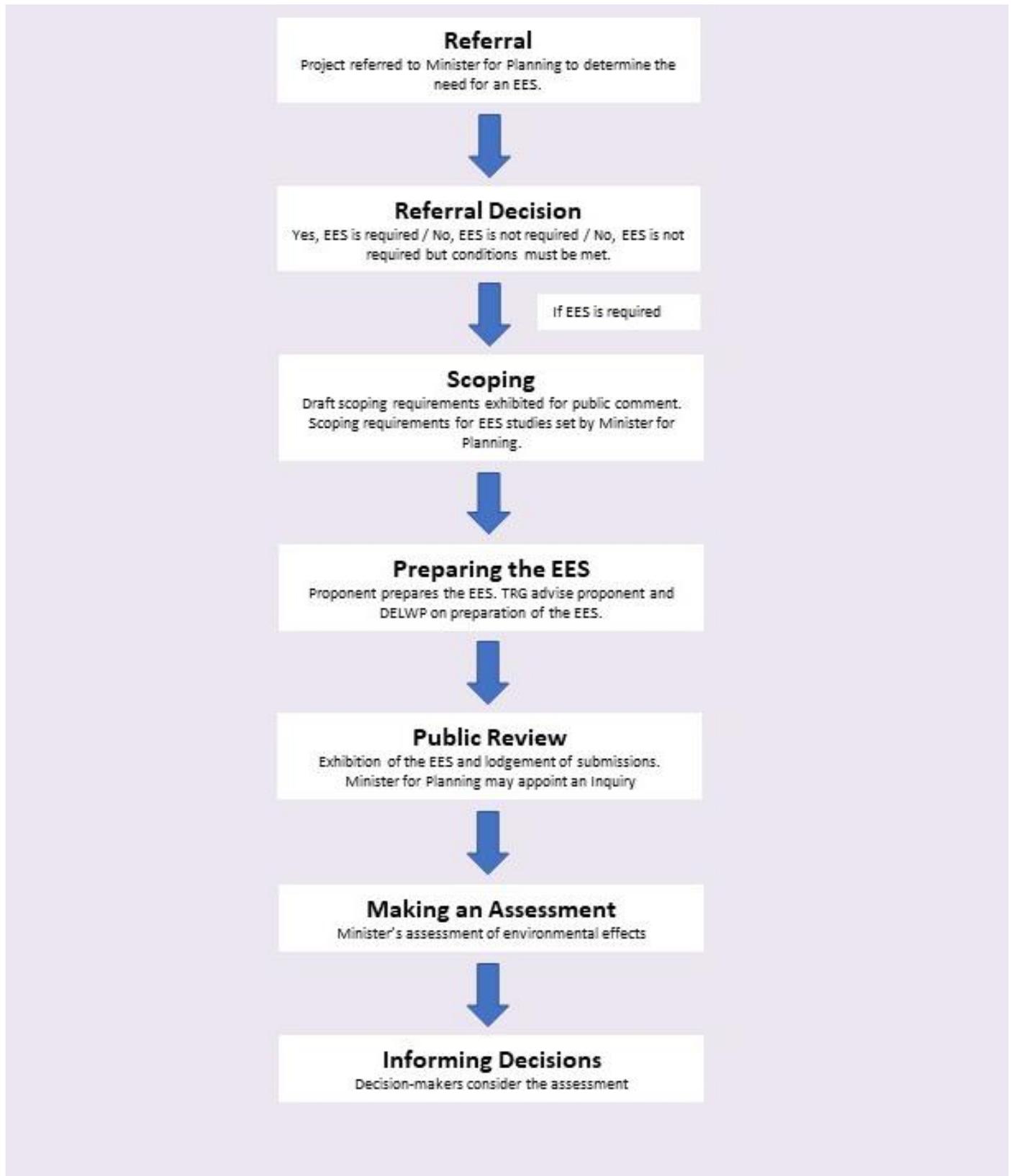


Figure 2: The EES process

### Consultation plan

The proponent is responsible for informing and engaging the public and stakeholders to identify and respond to their issues in conjunction with the EES studies. Stakeholders include potentially affected parties, the local community and interested organisations and individuals, as well as government bodies. Under its EES consultation plan the proponent will inform the public and stakeholders about the EES process and associated investigations and will provide opportunities for input and engagement during the EES investigations. The EES consultation plan is reviewed by DELWP and the TRG before it is finalised and published on the DELWP website<sup>4</sup>. The EES consultation plan will:

- identify stakeholders;
- characterise the stakeholder groups in terms of their interests, concerns and consultation needs and potential to provide local knowledge;
- describe the consultation methods to be used and outline a schedule of consultation activities; and
- outline how inputs from stakeholders will be recorded, considered and/or addressed in the preparation of the EES.

### Statutory approvals and the EES process

The project will require a range of approvals under Victorian legislation. DELWP coordinates the EES process as closely as practicable with the approvals procedures, consultation and public notice requirements.

The key approvals required under Victorian legislation are: an approved cultural heritage management plan (CHMP) under the *Aboriginal Heritage Act 2006*, a planning permit under the Moyne Planning Scheme consistent with the *Planning and Environment Act 1987* and an approved work plan and work authority under the *Mineral Resources (Sustainable Development) Act 1990* (for development of an on-site quarry).

Other approvals will be determined throughout the course of the EES.

## 2.3 Accreditation of the EES process under the EPBC Act

The project was also referred to the Australian Government under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The delegate for the Commonwealth Minister for the Environment determined on 12 June 2019 that the project is a 'controlled action'<sup>5</sup> and hence requires assessment and approval under the EPBC Act. The provisions for the Australian Government's controlled action decision under the EPBC Act are: listed threatened species and ecological communities (sections 18 and 18A).

The EES process is accredited to assess impacts on matters of national environmental significance (MNES) under the EPBC Act through the Bilateral Assessment Agreement between the Commonwealth and the State of Victoria – refer to Schedule 1 (part 5) of the bilateral agreement. Note that what are generally termed 'effects' in the EES process correspond to 'impacts' defined in section 82 of the EPBC Act.

The Commonwealth Minister or delegate will decide whether the project is approved, approved with conditions or refused under the EPBC Act, after having considered the Minister for Planning's assessment under the EE Act.

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<sup>4</sup> [planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria](http://planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria).

<sup>5</sup> Under the EPBC Act, projects are considered as 'actions'. For the purposes of this document the term 'project' also means 'the action'.

## 3. Matters to be addressed in the EES

### 3.1 General approach

Preparation of the EES should be consistent with the principles of a systems approach and a risk-based approach<sup>6</sup>, so that a greater level of effort is directed at investigating and addressing those matters that pose a relatively higher risk of adverse effects. The EES should put forward a sound rationale for the level of assessment and analysis undertaken for any environmental effect or combination of environmental effects<sup>7</sup> arising from construction and operational stages of the project.

In the case of potentially significant effects, analyses documented within the EES should be detailed enough to provide a good understanding of the nature of the effects including:

- the potential effects on individual environmental assets —magnitude, extent and duration of change in the values of each asset— having regard to intended avoidance and mitigation measures;
- the likelihood of adverse effects, including those caused indirectly as a result of proposed activities, and associated uncertainty of available predictions or estimates;
- further management measures that are proposed where avoidance and mitigation measures do not adequately address effects on environmental assets, including specific details of how the measures address relevant policies;
- likely residual effects, including residual significant impacts on MNES, that are likely to occur assuming the proposed measures to avoid and mitigate environmental effects are implemented; and
- proposed approach to managing and monitoring environmental performance and contingency planning.

### 3.2 Content and style

The content of the EES and related investigations is to be guided by these scoping requirements and the Ministerial Guidelines. It is the proponent's responsibility to ensure that adequate studies are undertaken to support the assessment of environmental effects, focusing primarily on significant effects (including those that might emerge during the investigations). The EES should demonstrate how the project will achieve a balance of economic, social and environmental outcomes that contribute to ecologically sustainable development and provide a net community benefit.

The EES should provide a clear, well-integrated analysis of the potential effects of the proposed project, including proposed avoidance, mitigation and management measures, as well as feasible alternatives. To facilitate decisions on required approvals, the EES should also address statutory requirements associated with approvals that will be informed by the Minister's assessment. Overall, the main report should include:

- an executive summary of the potential environmental effects of the project outlined in Section 4, including potential effects on identified MNES;
- a description of the entire project, including its objectives, rationale and key elements;
- a description of the relationship of the project to public policies and plans;
- an outline of the primary approvals required for the project to proceed;
- descriptions of the existing environment and future climate change scenarios, where these are relevant to the assessment of potential effects;
- appropriately detailed assessments of potential effects of the project on environmental values, relative to the 'no project' scenario, together with an estimate of the uncertainty associated with predictions;
- intended measures for avoiding, minimising, managing and monitoring effects;
- any proposed offset measures where avoidance and mitigation measures will not adequately address effects on environmental values, including the identified MNES, and discussion of how any offset package proposed meets the requirements of the Victorian Guidelines for the Removal, Destruction or Lopping of Native Vegetation and the EPBC Act Environmental Offsets Policy as it relates to MNES;
- predictions of residual effects, including residual significant impacts on MNES, of the project assuming implementation of proposed management measures;

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<sup>6</sup> Ministerial Guidelines (p. 14).

<sup>7</sup> Effects include direct, indirect, combined, facilitated, short and long-term, beneficial, adverse and cumulative effects.

- responses to issues raised through public and stakeholder consultation;
- evaluation of the implications for the project from the implementation of legislation and policy; and
- conclusions on the significance of impacts on regional, state and federal matters.

The proponent must also prepare a concise, graphical-based non-technical summary document (hard copy A4, no more than 25 pages) for free distribution to interested parties. The EES summary document should include details of the EES exhibition, public submission process and availability of the EES documentation.

### **3.3 Project description**

The EES is to describe the project in sufficient detail to allow an understanding of all components, processes and development stages, and to enable assessment of their likely potential environmental effects. The project description should canvass the following:

- an overview of the proponent's environmental performance and track record (including in relation to any EPBC Act approvals), including experience in delivering similar projects, as well as organisation health, safety and environmental policies, and whether the proponent has been subject to 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;
- contextual information on the project, including its objectives and rationale, its relationship to statutory policies, plans and strategies, including the justification for need and selection of the project and implications of the project not proceeding;
- existing and planned land uses within, and in the vicinity of, the proposed project, supported by plans and maps.
- the proposed operational life of the project, and any decommissioning and rehabilitation arrangements; and
- other necessary works proposed for the project, such as road upgrades and/or connections, and infrastructure and services relocation.

The EES, to the extent practicable, should detail the project's components:

- location, footprint, layout and access arrangements during construction and operation;
- design and expected construction staging and scheduling;
- proposed construction methods, and extent of areas to be disturbed during construction;
- estimations of the required rock, aggregate and/or sand volumes during construction, including for turbine foundations, access tracks and associated infrastructure;
- solid waste, wastewater and hazardous material generation and management during construction and operation;
- lighting, safety, security, and noise requirements during construction and operation;
- hours of construction work and a description of the expected duration of project components, including which components are temporary and which are permanent; and
- operational requirements including maintenance activities and decommissioning.

### **3.4 Project alternatives**

The EES should document the proponent's design development process leading to the project design presented in the EES and the proponent's consideration of feasible alternatives and include an explanation of how specific alternatives were shortlisted for evaluation within the EES. The EES should document the likely environmental effects of the alternatives, particularly where these offer a potential to achieve beneficial environmental outcomes and can meet the objectives of the project. The discussion of feasible alternatives should include:

- turbine models and configurations (including height, blade length and generator models);
- internal and external collector powerline route selection process and investigations into the potentially suitable technologies, such as undergrounding;
- access road site selection and alignment process;
- infrastructure layouts;
- sourcing of raw construction materials (e.g. on-site quarry, including proposed locations); and
- transport route and site selection process.

Where appropriate, the assessment of environmental effects of relevant design alternatives is to address the matters set out in the subsequent sections of this document.

The depth of investigation of alternatives should be proportionate to their potential to minimise potential adverse effects as well as meet project objectives.

### **3.5 Applicable legislation, policies and strategies**

In addition to the EE Act and the EPBC Act, the EES will need to identify relevant legislation, policies, guidelines and standards, and assess their specific requirements or implications for the project, particularly in relation to required approvals.

### **3.6 Draft evaluation objectives**

Draft evaluation objectives are provided in Section 4 for each of the topics to be addressed in the EES. The draft evaluation objectives identify desired outcomes in the context of key legislative and statutory policies, as well as the principles and objectives of ecologically sustainable development and environment protection, including net community benefit. They provide a framework to guide an integrated assessment of environmental effects, in accordance with the Ministerial Guidelines, and for evaluating the overall implications of the project. These objectives may be refined by the proponent or DELWP as the EES is prepared.

### **3.7 Environmental management framework**

Inadequate management of environmental effects during project construction, operation and rehabilitation and closure could result in a failure to achieve necessary environmental outcomes and statutory requirements or sustain stakeholder confidence. Hence, the environmental management framework (EMF) in the EES should provide a transparent framework with clear accountabilities for managing and monitoring the environmental effects and hazards associated with the construction and operational phases<sup>8</sup>. The entity responsible for approval of environmental plans should be identified.

The EMF should describe the baseline environmental conditions to allow evaluation of the residual environmental effects of the project, as well as the efficacy of applied environmental management and contingency measures. The framework should include:

- the context of required approvals and consents;
- the proposed environmental management system to be adopted;
- organisational responsibilities and accountabilities for environmental management;
- an environmental risk register that is maintained during project implementation;
- the environmental management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes;

An important aspect of the EMF is community consultation, stakeholder engagement and communications during the construction and operation of the project. As the project proceeds it will largely be the EMF that outlines opportunities for local stakeholders to engage with the proponent to seek responses to issues that might arise during construction or operation. To this end the EMF will set out procedures for:

- complaints recording and resolution;
- auditing and reporting of performance including compliance with relevant statutory conditions and standards; and
- review of the effectiveness of the EMF for continuous improvement.

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<sup>8</sup> Ministerial Guidelines (p. 20).

Management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes should be clearly described in the EMF. The EMF should describe proposed objectives, indicators and monitoring requirements, including for (but not limited to) managing or addressing:

- biodiversity values (including MNES);
- surface water and groundwater values;
- landscape and visual values, including blade glint and shadow flicker;
- noise and vibration, including during construction, decommissioning, and from operational turbines;
- air quality during construction;
- cultural heritage values;
- aviation (including with respect to aerial firefighting) and electromagnetic interference;
- land use and socioeconomic values; and
- traffic, particularly during construction, including managing temporary disruption and changed accessibility.

## 4. Assessment of specific environmental effects

Preparation of the EES document and the necessary investigation of effects should be proportional to the project risk, as outlined in the Ministerial Guidelines (p. 14). The risk-based approach should be adopted during the EES studies prior to the assessment of potential impacts, so that a greater level of effort is directed at investigating and managing those matters that pose relatively higher risk of adverse effects. The following sections set out specific requirements for the assessment of effects, using the following structure for each draft evaluation objective.

1. **Identify key issues or risks** that the project poses to achieve the draft evaluation objective.
2. **Characterise the existing environment** to underpin impact assessments having regard to the level of risk.
3. **Assess the likely effects** of the project on the existing environment and evaluate their significance.
4. **Present design and mitigation measures** that could substantially reduce and/or mitigate the risk of significant effects. An assessment of residual effects (post mitigation) and their significance will be required to illustrate the effectiveness of the proposed mitigation measure.
5. **Propose performance objectives** and management measures to evaluate whether the project's effects are maintained within permissible levels and propose contingency approaches if they are not.

The description and assessment of effects must not be confined to the immediate area of the project but must also consider the potential of the project to impact on nearby environmental values, including areas impacted through transport route upgrades.

### 4.1 Biodiversity and habitat

#### Draft evaluation objective

*To avoid or minimise potential adverse effects on biodiversity values within and near the site including native vegetation, listed threatened species and ecological communities, and habitat for these species. Where relevant, offset requirements are to be addressed consistent with state and Commonwealth policies.*

#### Key issues

- Direct loss or degradation of native vegetation and associated listed ecological communities, including those listed as threatened under the EPBC Act, the FFG Act and/or DELWP advisory lists.
- Direct loss or degradation of habitat for flora and fauna listed as threatened under the EPBC Act, the FFG Act and/or DELWP advisory lists.
- Disturbance and/or degradation of adjacent or nearby habitat that may support listed species or other protected flora, fauna or ecological communities.
- Disturbance and/or individual to population level loss of flora and fauna species listed as threatened under the EPBC Act, FFG Act and/or DELWP advisory lists.
- Indirect habitat loss or degradation resulting from other effects, such as edge effects, surface hydrological changes, groundwater drawdown, noise, vibration, light or the introduction of weeds/pathogens.
- Disruption to the movement of fauna between areas of habitat across the broader landscape, including between roosting or breeding sites for the Southern Bent-wing Bat.
- The availability of suitable offsets for the loss of native vegetation and habitat for listed threatened species under the EPBC Act and FFG Act.
- Potential collision risk for protected bird and bat species with project infrastructure, including with wind turbine blades.
- Potential cumulative effects on relevant listed threatened species and communities of flora and/or fauna, in particular Brolga and Southern bent-wing bat, from the project in combination with the construction and operations of other energy facilities.

#### Existing environment

- Characterise the type, distribution and condition of biodiversity values that could be impacted by the project, including native vegetation, terrestrial and aquatic habitat and habitat corridors or linkages. This should include identifying and characterising any ephemeral wetlands/ habitat for threatened species and communities listed under the EPBC Act, FFG Act and/or DELWP advisory lists.

- Identify the presence of roosting or breeding sites for the Southern Bent-wing Bat within movement distances from the project site.
- Identify the presence or likely presence of any species or communities listed under the EPBC Act, FFG Act and/or DELWP advisory lists that could be impacted by the project, as well as any declared weeds, pathogens or pest animals.
- Identify the presence or likely presence of any important populations of threatened species listed under the EPBC Act, FFG Act and/or DELWP advisory lists, as described in relevant conservation advices and national recovery plans, and how any important populations may be impacted by the project.
- Characterisation of the existing environment is to be informed by relevant databases, literature (and published data) and appropriate targeted and/or seasonal surveys and modelling of the potential and actual presence of threatened species and communities consistent with Commonwealth and state survey guidelines, conservation advices and threatened species recovery plans. Where surveys do not identify a listed species or community, but past records and/or habitat analysis suggest that it may occur, a precautionary approach to the further investigation and assessment of its occurrence should be applied.

#### **Likely effects**

- Assess the effects of the project and feasible alternatives, on native vegetation, listed ecological communities, and listed threatened and other protected flora species.
- Assess the effects of the project and feasible alternatives, on listed threatened, migratory and other protected fauna species under the EPBC Act, FFG Act and/or DELWP advisory lists, including Brolga and Southern Bent-wing Bat collisions with turbines and/or overhead powerlines.
- Assess the effects of the project, including transport route upgrades and use, on biodiversity values, including:
  - direct removal of individuals or destruction of habitat;
  - disturbance or alteration of habitat conditions (e.g., habitat fragmentation, severance of wildlife corridors or habitat linkages, changes to water quantity or quality, changes to (ephemeral) wetland function, fire hazards etc.);
  - on the ability of ephemeral wetlands to support listed species and communities;
  - threats to mortality of listed threatened fauna; and
  - the presence and potential spread of any declared weeds, pathogens and pest animals within and in the vicinity of the project area.
- Assess the potential cumulative effects on listed species of fauna, in particular Brolga and Southern bent-wing bat, from the project in combination with other nearby approved or operating wind energy facilities.

#### **Design and mitigation**

- Identify and describe potential alternatives and proposed design options and mitigation measures, which could avoid or minimise significant effects on any flora, fauna and/or ecological communities listed on the EPBC Act, FFG Act and/or DELWP advisory lists, and clearly state which avoidance or mitigation measure will be committed to.
- Justify and describe the assumptions and level of uncertainty associated with the proposed measures achieving their desired outcomes.

#### **Performance objectives**

- Describe and evaluate proposed commitments to manage residual effects of the project on biodiversity values, including an outline of an offset strategy and offset management plan that sets out the ability to secure appropriate offsets to satisfy both Commonwealth and state offset policy requirements.
- Describe the approach to develop contingency measures to be implemented in the event of adverse residual effects on flora and fauna values requiring further management.
- Identify any further commitments proposed to monitor and manage risks and effects on biodiversity values and native vegetation.

## 4.2 Catchment values and hydrology

### Draft evaluation objective

*To maintain the functions and values of aquatic environments, surface water and groundwater quality and stream flows and avoid adverse effects on protected beneficial uses.*

### Key issues

- Potential for the project to have a significant effect on hydrology and affect existing sedimentation and erosion processes leading to land and aquatic habitat degradation.
- Potential for the project to have a significant effect on surface water and/or groundwater and its beneficial uses, including through the temporary on-site quarry.
- Potential for the project to have significant impact on wetland systems, including, but not limited to, Seasonal Herbaceous Wetlands (EPBC Act listed community), and the ability for wetland systems to support habitat for flora species listed under the FFG Act and EPBC Act.

### Existing environment

- Characterise the groundwater (including depth quality and availability to licence/ use) and surface water environments and drainage features in the project area.
- Characterise the wetland systems in and around the project site and the type, distribution and condition of wetlands that could be impacted by the project, having regard to terrestrial and aquatic habitat and habitat corridors or linkages.
- Characterise soil types and structures in the study area and identify the potential location of acid sulphate soils, including hydrological requirements and their acceptable limits for change.

### Likely effects

- Assess the potential effects of the project on surface water and groundwater environments and beneficial uses, including on permanent and ephemeral wetland systems (both on-site and adjacent to the proposal), and surface water and groundwater flow and quality.
- Identify and assess potential effects of the project on soil stability, erosion and the exposure and disposal of any waste or hazardous soils.

### Design and mitigation

- Identify proposed measures to mitigate any potential effects, including any relevant design features or preventative techniques to be employed during construction.

### Performance objectives

- Describe proposed measures to manage and monitor effects on catchment values and identify likely residual effects.
- Describe contingency measures for responding to unexpected impacts resulting from disturbed acid sulphate soils.

## 4.3 Landscape and visual

### Draft evaluation objective

*To minimise and manage potential adverse effects for the community with regard to landscape and visual amenity.*

### Key issues

- Potential for nearby residents / communities to be exposed to significant effects to the visual amenity, including blade glint and shadow flicker, from project infrastructure.
- Potential effects on landscape, including significant volcanic and other landforms, through removal or covering of features or reshaping of surfaces.
- Potential cumulative impacts of other operating and approved wind farms on landscape values of the region.

#### **Existing environment**

- Characterise the landscape character, features and values of the project area.
- Identify public and private view sheds to and from the project and characterise visual values of the area, including dark skies.
- Identify existing built features within the landscape (e.g., Macarthur wind farm and 500 kV powerlines) and their impact on the existing landscape and visual setting.
- Identify the components of the project that may result in a significant visual amenity effect including turbines, powerlines and on-site quarry.

#### **Likely effects**

- Assess the landscape and visual effects of the project, including on public and private views, and effects of blade glint and shadow flicker on neighbouring dwellings and communities. Use photomontages and other visual techniques to support the assessment.
- Assess the potential for cumulative impacts associated with the development of the project in the context of existing built infrastructures and nearby proposed/approved wind farm developments.

#### **Design and mitigation**

- Outline and evaluate any potential design and siting options that could avoid and minimise potential effects on landscape and visual amenity of neighbouring residences and communities and additional management strategies that may further minimise potential effects.

#### **Performance objectives**

- Describe proposed measures to manage residual effects on landscape and visual amenity values, including in the context of potential rehabilitation and restoration work following decommissioning.

### **4.4 Geoheritage values**

#### **Draft evaluation objective**

*To minimise and manage potential adverse effects to geoheritage values.*

#### **Key issues**

- Potential for the project to have a significant effect on the geoheritage values present in the area.

#### **Existing environment**

- Characterise the features and values of the project area with respect to geoheritage.

#### **Likely effects**

- Assess the potentially significant effects of the project on geoheritage values.

#### **Design and mitigation**

- Outline and evaluate any potential design and siting options that could avoid and minimise potential effects on geoheritage values and additional management strategies that may further minimise potential effects.

#### **Performance objectives**

- Describe proposed measures to manage and monitor effects on geoheritage values and identify likely residual effects and describe contingency measures for responding to unexpected impacts.

## 4.5 Amenity

### Draft evaluation objective

To minimise and manage adverse air quality and noise and vibration effects on residents and local communities as far as practicable during construction, operation and decommissioning having regard to applicable limits, targets or standards.

### Key issues

- Potential for adverse effects to air quality at sensitive receptors and on other sensitive land uses during construction of wind turbines, associated infrastructure and use of an on-site quarry.
- Potential for adverse effects on noise and vibration amenity at sensitive receptors during construction, operation and decommissioning (including on-site quarry).

### Existing environment

- Characterise current local conditions in relation to air quality using data collected from existing local monitoring stations, or project-installed monitoring equipment.
- Characterise the ambient noise environment in adjacent established residential, farming zone, commercial and open space areas and at other sensitive land use locations.
- Identify sensitive receptors that may be subject to effects to amenity from the project including, but not limited to, all dwellings within 3km of wind turbines, associated infrastructure and on-site quarry.

### Likely effects

- Assess the potential effects of construction, operation and decommissioning activities on air quality.
- Assess the potential dust impacts from the proposed on-site quarry in accordance with the requirements of EPA Victoria's *Protocol for Environmental Management: Mining and Extractive Industries (2007)*.
- Assess the potential effects of the project on noise and vibration amenity at sensitive receptors, including information that addresses:
  - how the noise associated with construction of the wind farm will be managed in accordance with relevant guidelines, such as EPA Victoria's *Noise Control Guidelines Publication 1254* and *Noise from Industry in Regional Victoria Publication 1411*; and
  - how the operational wind farm noise will be managed in accordance with relevant guidelines, including *Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria and NZS 6808:2010 Acoustics – Wind Farm Noise* for the turbines, and EPA Victoria's *Noise from Industry in Regional Victoria Publication 1411* for other relevant project infrastructure such as the on-site substation.
- Assess the potential noise and vibration (ground and airborne) effects from the proposed on-site quarry activities on sensitive receptors in accordance with guidelines, such as *The Guidelines for Ground Vibration and Airblast Limits for Blasting in Mines and Quarries*.

### Design and mitigation

- Describe and propose siting, design, mitigation and management measures to control emissions to air from construction activities.
- Describe and evaluate both potential and proposed design responses and/or other mitigation measures (e.g. staging/scheduling of works) which could minimise noise and vibration during construction, operation and decommissioning.

### Performance objectives

- Describe proposed measures to manage and monitor effects on amenity values and identify likely residual effects, including compliance with standards and proposed trigger levels for initiating contingency measures.
- Describe contingency measures for responding to unexpected impacts to amenity values resulting from the project during construction, operation and decommissioning.

## 4.6 Cultural heritage

### Draft evaluation objective

*To avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values.*

### Key issues

- Destruction or disturbance of sites or places of Aboriginal or historical cultural heritage significance.

### Existing environment

- Identify and characterise Aboriginal cultural heritage sites or areas of sensitivity potentially impacted by the project, in accordance with the requirements for the Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Act 2006*.
- Identify and document known and previously unidentified places and sites of historic cultural heritage significance potentially impacted by the project, including any areas of significant archaeological interest, in accordance with the Guidelines for Conducting Archaeological Surveys (Heritage Victoria, 2013).

### Likely effects

- Assess potential effects of the project on:
  - identified sites or places of Aboriginal cultural heritage significance; and
  - sites and places of historic cultural heritage significance, having regard to the *Guidelines for Investigating Historical Archaeological Artefacts and Sites*.

### Design and mitigation

- Describe and evaluate proposed design or other measures that could avoid or mitigate potential adverse effects on known or potential Aboriginal or historical cultural heritage values.

### Performance objectives

- Outline any proposed commitments to mitigate and manage residual effects on sites and places of Aboriginal cultural heritage significance, within the framework of a draft cultural heritage management plan.
- Outline any proposed commitments to mitigate and manage residual effects on sites and places of historical heritage significance, including site investigation and recording procedures.

## 4.7 Land use and socioeconomic

### Draft evaluation objective

*To avoid and minimise adverse effects on land use (including agricultural and residential), social fabric of the community (with regard to wellbeing, community cohesion), local infrastructure, electromagnetic interference, aviation safety and to neighbouring landowners during construction, operation and decommissioning of the project.*

### Key issues

- Significant disruption to existing and/or proposed land uses, with associated economic and social effects on households and businesses.
- Potential adverse effects of wind turbines and associated infrastructure from an aviation perspective, including but not limited to impacts on aerial safety, air traffic control equipment, obstruction and turbulence.
- Potential interference with communication systems that use electromagnetic waves as the transmissions medium (e.g. television, radio, mobile reception).
- Potential adverse impacts on existing infrastructure, including the high-pressure gas transmission pipelines.

### **Existing environment**

- Describe the project area in terms of land use (existing and proposed), residences, zoning and overlays under the Moyne Planning Scheme and public infrastructure that support current patterns of economic and social activity.
- Describe community attitudes, identified through consultation activities, to the existing environment and the potential changes and opportunities brought by the project.
- Identify and describe the nearest aerodromes, air navigation and air traffic management services, transiting air routes, and designated airspace such as Danger, Restricted or Prohibited areas.
- Characterise current use of aerial spraying by district farmers and aerial firefighting that could be affected by the project (including any significant water resource that may be used for aerial firefighting in the region).
- Characterise current local television and radiocommunication services within the project area and surrounding areas.
- Identify and describe any existing infrastructure, including high pressure gas transmission pipelines, within the area.

### **Likely effects**

- Identify potential long and short-term effects of the project on existing and potential land uses (such as aerial spraying and other agricultural activities), public infrastructure (such as roads, transport routes) and fire and emergency management (such as aerial firefighting).
- Identify the potential economic effects, taking into account direct and indirect consequences of the project on employment and existing economic land uses within the area.
- Identify the potential effects and risks to aviation safety from the project.
- Identify the potential for electromagnetic interference to radio-communications services from the project.
- Identify the potential effects on existing infrastructure, including gas transmission pipelines, particularly risks to infrastructure integrity, operation and associated public safety issues, such as:
  - potential gas pipeline failure resulting from mechanical damage (i.e. associated with excavation activity, falling wind tower or failed rotor blade and vibrations);
  - pipeline corrosion, caused by stray currents or induced voltages associated with wind farm operation;
  - excessive stresses/ impacts caused by heavy vehicles crossing gas pipelines; and
  - health and safety risks from induced voltages on the pipeline caused by stray or fault currents associated with wind farm operation.

### **Design and mitigation**

- Demonstrate whether the project is consistent with relevant provisions of the Moyne Planning Scheme and other relevant strategies made under Victorian legislation.
- Outline measures to minimise potential adverse effects and enhance benefits to the community and local businesses.
- Describe consultation undertaken with Civil Aviation Safety Authority and Country Fire Authority regarding potential issues and merits of mitigation measures, and propose design responses and/or other mitigation measures to reduce potential effects to aviation safety.
- Describe and evaluate potential design responses and/or other mitigation measures (e.g. installation of additional transmitter masts) to reduce potential electromagnetic interference to radio-communications services.
- Outline measures to minimise potential effects to infrastructure, including high-pressure gas pipelines, including appropriate separation distances, and electrical mitigation to reduce potential electrical hazards.

#### **Performance objectives**

- Describe any further measures that are proposed to mitigate, offset or manage social, land use and economic outcomes for communities living within or in the vicinity of the project area, as well as proposed measures to enhance beneficial outcomes.
- Outline and evaluate any proposed measures designed to manage and monitor residual electromagnetic interference and effects to aviation safety and describe contingency measures for responding to unexpected impacts.
- Outline and evaluate any proposed measures designed to manage and monitor residual effects to high-pressure pipeline integrity and describe contingency measures for responding to unexpected impacts.

### **4.8 Traffic and roads**

#### **Draft evaluation objective**

*To avoid and minimise adverse effects on roads and road users during construction, operation and decommissioning of the project.*

#### **Key issues**

- Managing traffic disruptions for residents, businesses and travellers during the construction of the project.
- Potential damage to local and regional road surfaces along transport routes and increased risk to road safety on transport routes.

#### **Existing environment**

- Describe the existing road network surrounding the project area, including proposed construction transport route options, in terms of capacity, condition, accessibility, potentially sensitive users and travel.
- Describe the source and predicted volumes of construction materials for wind turbines and associated infrastructure.

#### **Likely effects**

- Assess the potential effects of construction activities on existing traffic, preferred traffic routes and road conditions. This assessment should take account of amenity and accessibility impacts on adjoining residents and in nearby townships, environmental effects arising from such works and physical impacts on the road infrastructure.
- Identify any additional road works / upgrades required to accommodate the project traffic during the construction stage (including having consideration of the type of vehicles) and any significant environmental effects arising from such works.
- Assess the potential effects to traffic and roads during operation and decommissioning of the project.

#### **Design and mitigation**

- Identify the required road upgrades to accommodate construction traffic and additional road maintenance regime to address adverse impacts from project construction (including with reference to potentially limited construction windows due to project area's climate).
- Describe and evaluate the proposed traffic management and safety principles to address changed traffic conditions during construction of the project, covering (where appropriate) road safety, temporary or permanent road diversions, different traffic routes, hours of use, vehicle operating speeds, types of vehicles and emergency services provisions.
- Describe consultation undertaken with Moyne Shire Council and VicRoads, to coordinate scheduled roadworks and upgrades and additional roadworks and upgrades required for project traffic.

#### **Performance objectives**

- Outline and evaluate proposed measures designed to manage and monitor residual effects on road users and describe contingency measures for responding to unexpected impacts.

# Appendix A

## Procedures and requirements under section 8B(5) of the *Environment Effects Act 1978*

The procedures and requirements applying to the EES, in accordance with both section 8B(5) and the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Ministerial Guidelines), are as follows.

- (i) The EES is to document the investigation and avoidance of potential environmental effects of the Willatook Wind Farm (the proposal), including for any relevant alternatives, as well as associated avoidance, mitigation and management measures. In particular the EES should address:
  - a. Effects on biodiversity and ecological values within and near the site including native vegetation, listed communities and species (flora and fauna) under the *Flora and Fauna Guarantee Act 1988* and *Environment Protection and Biodiversity Conservation Act 1999*;
  - b. Effects on water environments and related beneficial uses, including as a result of changes to stream flows, discharge of sediment and acid formation from disturbance of wetlands;
  - c. Effects on the geoheritage values within the proposal area, including for the potential on-site quarry;
  - d. Effects on the local visual amenity values, including for non-neighbouring landholders;
  - e. Effects on the socio-economic environment, at local and regional scales, including increased traffic movement and indirect effects of construction on the capacity of local community infrastructure;
  - f. Effects from a cumulative perspective, including on threatened flora and fauna, social and amenity values, with particular consideration of the currently operating and already approved wind farm projects in the region.
- (ii) The matters to be investigated and documented in the EES will be set out in detail in scoping requirements prepared by the Department of Environment, Land, Water and Planning (the department). Draft scoping requirements will be exhibited for 15 business days for public comment, before being finalised and then issued by the Minister for Planning.
- (iii) The level of detail of investigation for the EES studies should be consistent with the scoping requirements issued for this proposal and be adequate to inform an assessment of the potential environmental effects (and their acceptability) of the proposal and any relevant alternatives, in the context of the Ministerial Guidelines.
- (iv) The proponent is to prepare and submit to the department a draft EES study program to inform the preparation of scoping requirements.
- (v) The department is to convene an inter-agency technical reference group (TRG) to advise the proponent and the department, as appropriate, on scoping and adequacy of the EES studies during the preparation of the EES, as well as coordination with statutory approval processes.
- (vi) The proponent is to prepare and submit to the department its proposed EES consultation plan for engaging with the public and stakeholders during the preparation of the EES. Once completed to the satisfaction of the department, the EES consultation plan is to be implemented by the proponent, having regard to advice from the department and the TRG.
- (vii) The proponent is also to prepare and submit to the department its proposed schedule for the studies, and preparation and exhibition of the EES, following confirmation of the draft scoping requirements. This is to enable effective management of the EES process on the basis of an agreed alignment of the

proponent's and department's schedules, including for TRG review of technical investigations and the EES documentation.

- (viii) The proponent is to apply appropriate peer review and quality management procedures to enable the completion of EES studies and documentation to an acceptable standard.
- (ix) The EES is to be exhibited for a period of 30 business days for public comment, unless the exhibition period spans the Christmas–New Year period, in which case 40 business days will apply.
- (x) An inquiry will be appointed under the *Environment Effects Act 1978* to consider and report on the environmental effects of the proposal through a public hearing.

### **Notification**

The following parties (proponent and relevant decision-makers) are to be notified of this decision in accordance with sections 8A and 8B(4)(a)(i) of the *Environment Effects Act 1978*, as appropriate:

- Willatook Wind Farm Pty Ltd (proponent)
- Secretary of the Department of Environment, Land Water and Planning
- Moyne Shire Council
- CEO of the Glenelg Hopkins Catchment Management Authority
- CEO of the Environment Protection Authority
- Executive Director of Aboriginal Victoria
- Executive Director of Heritage Victoria
- Commonwealth Minister for the Environment and Energy

**HON RICHARD WYNNE MP**

**Minister for Planning**

Date: