

Planning Guidelines for Development of Wind Energy Facilities



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Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it.

We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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Introduction

The planning process for a wind energy facility can be complex. It is strongly recommended that proponents engage a planning consultant to assist them. This will save time, reduce confusion and improve outcomes for applicants. A planning consultant can also assist applicants in saving time preparing plans and other documents to submit a permit application or amend a permit. They can also help you with navigation through the planning process after lodgement.

Victoria has abundant wind resources, and wind energy facilities have the potential to provide for a significant proportion of Victoria's growth in electricity consumption. Victoria's wind resources are well suited to supporting a large-scale grid of connected wind energy facilities. The Victorian Government supports the development of the renewable energy sector as an important contributor to the sustainable delivery of Victoria's future energy needs.

These guidelines advise planning decisions about a wind energy facility proposal. This document is referenced in clause 19.01-2S and 52.32-6 of the Victoria Planning Provisions (VPP).

The guidelines set out:

- a framework to provide a consistent and balanced approach to assist the assessment of wind energy projects
- a set of consistent operational performance standards to inform the assessment and operation of a wind energy facility project
- guidance as to how planning permit application requirements might be met, and
- a framework for the regulation of wind turbine noise.

The guidelines also provide advice about inappropriate locations for wind energy facilities. They provide a framework to ensure proposals for wind energy facilities are thoroughly assessed, including other considerations and approvals required in the planning process.



1. Wind energy facilities

This section defines a wind energy facility and associated infrastructure as outlined in the Victoria Planning Provisions (VPP).

1.1 What is a wind energy facility?

A wind energy facility is defined in clause 73.03 (Land use terms) of the VPP as:

Land used to generate electricity by wind force. It includes land used for:

- a) any turbine, building, or other structure or thing used in or in connection with the generation, of electricity by wind force
- b) an anemometer.

It does not include turbines principally used to supply electricity for domestic or rural use of the land.

1.2 Anemometers and electricity grid connections

1.2.1 Anemometers

In clause 73.01 (General terms) of the VPP, an anemometer is defined as a ‘wind measuring device.’ It is used to measure the wind speed and direction at a site.

Under clause 62.02-1 (Buildings and works not requiring a permit) of the VPP, a temporary anemometer may be located on a site for up to three years to monitor the suitability of the wind resource for a potential wind energy facility without requiring a planning permit. At the end of the three-year period, the temporary anemometer must be removed or a planning permit issued for its long-term use.

An anemometer can also be assessed and approved as part of a wind energy facility if it requires a permit.

1.2.2 Electricity grid connections

A wind energy facility requires a transmission or distribution system of power lines, including substations, converter installations, and other works to connect the wind energy facility to the electricity network. While the transmission or distribution system is generally off-site and distant from the wind energy facility, proponents often seek sites close to existing distribution systems.

A planning permit is required to construct any power line or substation connecting the generator to the electricity network if the generator was granted planning approval after the approval date of Amendment VC157 on 15 March 2019. This applies to all energy generation facilities, not just wind energy facilities.

The Minister for Planning is the responsible authority for determining a permit application for:

- A utility installation used to:
 - transmit or distribute electricity
 - store electricity if the installed capacity is 1 megawatt or greater.

This includes any removal of native vegetation associated with this infrastructure.

A planning permit is not required for power lines and substations associated with a wind energy facility that had a planning permit before the approval date of Amendment VC157 on 15 March 2019. However, a planning permit may still be required for native vegetation removal associated with this

infrastructure, or other requirements of the planning scheme.

A single planning permit application can include the wind energy facility and electricity network connection. This approach is preferred as it enables all aspects of the proposal to be considered by the responsible authority and communities. Refer to Sections 3.2 and 4.3 of these guidelines.

1.3 Characteristics of a wind energy facility

Wind energy facilities are typically located on sites with steady winds throughout the year, good road access, proximity to the electricity grid and the grid’s capacity (existing and planned). They can vary considerably in size and scale depending on the physical features of the land, the wind resources available, and the grid capacity available.

A wind energy facility typically includes:

- a series of wind turbines
- one or more substations
- power lines to connect to the electricity network
- a temporary construction compound
- wind monitoring equipment, which can include an anemometer
- access tracks, and
- underground cabling connecting the wind turbines to the on-site metered output point from the converter station where the generated electricity will enter the distribution system. This includes connections from the wind turbines to the on-site substations (i.e. an electricity generation, transmission and distribution system where voltage is transformed from high to low, or the reverse, using transformers).

A larger facility may also include:

- a quarry
- concrete batching plant(s)
- an operations and maintenance facility
- a battery energy storage system.

Wind turbines in new wind energy facilities are typically large, rotating, three-bladed machines that produce more than 4.0 MW of electrical output. Most wind turbines have a generator and rotor blades mounted on top of a steel tower. The rotor blades rotate horizontally, and the turbine’s total site can be as high as 220 to 250 metres.

2. Wind energy in Victoria

This section outlines the broadplanning policy and statutory context most relevant to assessing wind energy facilities in Victoria.

2.1 Identifying suitable locations for wind energy development in Victoria

Wind energy facilities should not lead to unacceptable impacts on critical environmental, cultural or landscape values. Critical values are those protected under Commonwealth and Victorian legislation and assets of state or regional significance, mapped and recognised through planning schemes, including the Planning Policy Framework (PPF). The following matters need to be considered to determine suitable locations for new wind energy development.

2.1.1 Environmental values

A responsible authority and applicants must consider a range of relevant environmental values and risk factors when identifying suitable sites for wind energy facility development.

These matters are set out in the VPP and include (but are not limited to) the following considerations:

Flora and fauna

Impacts on flora, fauna species, and habitat from wind energy facilities and associated infrastructure can be minimised through siting and design measures at the project planning stage. Project-specific impacts can vary widely with location and species. The assessment of a proposed development must carefully examine any risk to flora and fauna species, and project design and adaptive management measures should be applied where necessary.

Flora and fauna can be protected at the national and state levels.

At the national level, responsible authorities and proponents need to be aware of the following:

- The *Commonwealth Environment Protection and Biodiversity Act 1999* (EPBC Act) provides for the protection of matters of national environmental significance, including nationally significant threatened species and wetlands protected under the Convention of Wetlands of International Importance (the Ramsar Convention).
- The habitat values of wetlands and wetland wildlife habitat designated under the Ramsar Convention or utilised by designated species under the *Japan-Australia Migratory Birds Agreement* (JAMBA), the *China-Australia Migratory Birds Agreement* (CAMBA), the *Republic of Korea – Australia Migratory Birds Agreement* (ROKAMBA).



At the state level, responsible authorities and proponents must consider (as relevant) the following:

- The *Flora and Fauna Guarantee Act 1988* which provides protection for species and ecosystems of statewide importance.
- The PPF sets out the state planning objectives for protecting and conserving biodiversity - refer to clause 12.01 (Biodiversity) of the VPP.
- Clause 52.17 (Native vegetation) of the VPP provides the relevant decision-making framework for native vegetation protection and conservation.
- Other sections of the Planning Scheme may require additional consideration of flora and fauna matters. These may be found in the PPF and the zone and overlay provisions.

Native vegetation

Losses of native vegetation and habitat could occur because of the siting of turbines and associated infrastructure, the creation of access for large turbine components, and power lines to connect to the electricity network. The access requirements and the power lines will often be on land away from the wind energy facility site. If native vegetation is proposed to be removed as part of a development proposal, the responsible authority must have regard to the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning 2017).

The PPF sets out the Victorian Government's policy objective and provides relevant strategies and guidelines for native vegetation management in clause 12.01 (Biodiversity) of the VPP. Additional planning provisions are set out in clause 52.16 (Native vegetation precinct plan) and clause 52.17 (Native vegetation).

Other environmental values and risk factors must also be considered in identifying suitable sites for wind energy facilities as set out in the PPF.

2.1.2 Significant landscape values

The Victorian Government recognises that the Victorian community places a high value on landscapes with significant visual amenity due to their environmental, social and economic benefits. Strategic planning plays an important role in identifying and managing these important landscapes.

A responsible authority and proponents must consider (as relevant) clause 12.05 (Significant environments and landscapes) of the VPP.

In addition, strategic landscape studies have been completed for several regions across Victoria, including the *Great Ocean Road Region Landscape Assessment Study* (2003) and the *Coastal Spaces Landscape Assessment Study* (2006). These studies identify visually significant landscapes and provide appropriate recommendations for improved planning scheme guidance. Clause 12.02 (Marine and Coastal environment) of the PPF requires these studies to be considered by decision-makers.

Relevant local strategic studies may also be referenced in the PPF, and significant landscapes may be recognised in overlays, such as the Environmental Significance Overlay, Vegetation Protection Overlay or the Significant Landscape Overlay.

To help guide appropriate site selection, design and layout of individual wind turbines, consideration should be given to the significance of the landscape as described in relevant planning scheme objectives, including relevant overlays and strategic studies referenced in the planning scheme.

Suggested mitigation measures to minimise the potential impact of wind energy facilities on a landscape set out in Section 5.1.3 of these guidelines should also be considered.

Landscape assessment requirements are also under the state environmental assessment process. For details, refer to Section 3.3.1 of these guidelines.

2.1.3 Aboriginal cultural heritage values and engagement with traditional owners

Wind energy facilities and associated infrastructure can impact First Peoples' cultural heritage values. These values are protected under Victoria's *Aboriginal Heritage Act 2006* and *Aboriginal Heritage Regulations 2018*. Any impacts and the views of the Traditional Owners are considered in the early planning stages of a wind energy facility. The Department of Transport and Planning's (DTP) Planning Practice Note 45: *The Aboriginal Heritage Act 2006 and the planning permit process* provides guidance and assistance. The practice note can be obtained at [Planning practice notes](#).

Where wind energy facilities are located on Crown Land, a range of legal requirements, including the provisions of the Commonwealth *Native Title Act 1993*, may apply.

A responsible authority and proponents must also consider clause 15.03-2S (Aboriginal cultural heritage) of the PPF, which sets out the Victorian Government's policy for protecting and conserving places of Aboriginal cultural heritagesignificance.

If approval is required under the *Aboriginal Heritage Act 2006*, this must occur before a planning permit application can be determined.

Regardless of whether approval is required under the Aboriginal Heritage Act, all proponents are encouraged to undertake pre-application discussions with traditional owners to get their views on the project. DTP Planning can assist proponents in making these connections and commencing engagement.

2.1.4 Exclusion of wind energy facilities in National Parks, State Parks, Coastal Parks and other high-quality environmental and landscape locations in the state

Wind energy facilities are not permitted in the following areas, in recognition of their landscape and environmental values:

- National Parks and other land subject to the *National Parks Act 1975*
- Ramsar wetlands as defined under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
- Yarra Valley and Dandenong ranges, Bellarine and Mornington Peninsulas, the Great Ocean Road area within five kilometres of the high water mark, and Macedon and McHarg Ranges

- the land within five kilometres of the high water mark of the Bass Coast, west of Wilsons Promontory
- all land west of the Hume Freeway and the Goulburn Valley Highway
- all land within five kilometres of the high water mark of the coast east of the urban area of Warrnambool, and
- any other areas identified in the schedule to clause 52.32 in the relevant planning scheme.

The specific locations of these areas where wind energy facilities are not permitted are specified in the relevant planning schemes, in clause 52.32-2 and the schedule to this clause.

Exceptions to wind energy facility prohibitions include:

- Where the turbines are principally used to supply electricity for domestic or rural use of the land. These turbines are excluded from the definition of a wind energy facility in the VPP.*
- Turbines on land in a residential zone, an industrial zone, a commercial zone or a special purpose zone that are integrated as part of the development. This allows for the consideration of turbines in an urban setting which would allow for the generation of electricity to support the energy needs of a dwelling, industry, business or the like on the land.*
- Turbines on land described in a schedule to the *National Parks Act 1975* principally used to supply electricity to a facility used in conjunction with conservation, recreation, administration, or accommodation use on that land. This allows for the generation of electricity for park facilities.

***Note:** A turbine generating electricity for onsite use may be connected to the grid. The critical question in these circumstances is whether the wind energy facility or turbine(s) generates an amount of electricity that is generally proportional to the electricity requirements of the use of the land.

2.1.5 Exclusion of wind energy facilities in locations that are likely to be required for future population growth

A wind energy facility is a prohibited use in an Urban Growth Zone.

A wind energy facility is also prohibited on land within five kilometres of major regional cities and centres specified in the Regional Victoria Settlement Framework plan in the PPF, being: Ararat, Bairnsdale, Ballarat, Bendigo, Benalla, Colac, Echuca, Geelong, Hamilton, Horsham, Mildura, Moe, Morwell, Portland, Shepparton, Swan Hill, Traralgon, Sale, Wangaratta, Warrnambool and Wodonga.

These locations are specified in the relevant planning schemes in the schedule to clause 52.32-2. The five-kilometre exclusion areas are proposed to be replaced by more specific locations once the future growth planning for these centres has been completed.

These prohibitions do not apply:

- where the turbine is principally used to supply electricity for domestic or rural use of the land
- on land in a residential zone, an industrial zone, a commercial zone or a special purpose zone that is integrated as part of the development. This allows for the consideration of turbines in an urban setting, allowing electricity generation to support the energy needs of a dwelling, industry, business or the like on the land.

2.1.6 Turbines within one kilometre of an existing dwelling

If an existing dwelling is located within one kilometre of any turbine (measured from the centre of the tower at ground level) that forms part of a proposed wind energy facility, the permit application must be accompanied by evidence of the written consent of the dwelling owner. The application is prohibited by the planning scheme where evidence of written consent is not provided. This does not apply:

- where the turbine is principally used to supply electricity for domestic or rural use of the land
- on land in a residential zone, an industrial zone, a commercial zone or a special purpose zone. This allows for the consideration of turbines in an urban setting
- to an application to amend an existing permit unless the amendment proposes to increase the number of turbines or move a turbine so that it is located closer to an existing dwelling (within one kilometre of a turbine measured from the centre of the tower at ground level) than the closest permitted turbine to that dwelling. Refer to Section 4.3.1(b) of these guidelines.

2.1.7 Permit required for accommodation within 1 kilometre of a proposed wind energy facility

A planning permit is required in the Farming Zone for buildings or works associated with accommodation, including a dwelling located within one kilometre from the nearest title boundary of land subject to:

- a permit for a wind energy facility or
- an application for a permit for a wind energy facility or
- an incorporated document approving a wind energy facility, or
- a proposed wind energy facility for which an action has been taken under sections 8(1), 8(2), 8(3) or 8(4) of the *Environment Effects Act 1978*.

Wind energy facility proponents are encouraged to notify the local council (and provide a map of the proposed facility land boundary) as soon as one of the above occurs so that the council can determine when a permit is required for accommodation.

3. Policy framework for wind energy facility proposals

This section provides a decision-making framework for assessing wind energy facility applications.

3.1 Decision-making framework for a planning permit application

The use and development of land for a wind energy facility requires a planning permit under clause 52.32-2 of the VPP.

In addition to the decision guidelines in clause 65.01 (Approval of an application or plan), planning schemes include provisions that apply to assessing proposals for wind energy facilities. These provisions include:

- the definition of a wind energy facility in clause 73.03 (Land use terms)
- state planning policy for renewable energy in clause 19.01-2S of the PPF
- relevant renewable energy regional policies under clause 19.01-2R of the PPF
- planning provisions and requirements for planning permit applications set out in clause 52.32
- planning permit exemptions for anemometers erected for less than three years set out in clause 62.02-1.



3.2 Who is the responsible authority?

Clause 72.01-1 specifies that the Minister for Planning is the responsible authority for a permit application or amendment to a permit related to the use and development of land for an energy generation facility (including a wind energy facility) with an installed capacity of 1 megawatt or greater and a utility installation used to:

- transmit or distribute electricity
- store electricity if the installed capacity is 1 megawatt or greater.

Refer to Section 6 of these guidelines regarding planning permit administration and enforcement.

Note: Clause 72.01-1 specifies that the Minister is the responsible authority for the endorsement of, approval of or being satisfied with matters required by a permit or the scheme to be endorsed, approved or done to the satisfaction of the responsible authority, in relations to the use and development of land for an energy generation facility (including a wind energy facility) with an installed capacity of 1 megawatt or greater and a utility installation used to:

- transmit or distribute electricity.
- store electricity if the installed capacity is 1 megawatt or greater.

Note: If a project is subject to the requirements of the *Environment Effects Act 1978*, the *Planning and Environment Act 1987* (P&E Act) prescribes the planning permit process that will apply. See Section 3.3.1 of these guidelines.

Note: Clause 72.01-1 sets out exemptions where the Minister for Planning is not the responsible authority. This includes amendments to permits that were issued by council.

3.3 Other statutory approvals

In addition to planning requirements for a wind energy facility, proponents should be aware that there may be other local, state and national regulatory requirements.

Some approvals must be obtained before a planning permit application can be determined. Early consideration of these matters can reduce delays in determining a planning permit application.

Other statutory approvals under the following acts may also be required:

- For Victoria:
 - *Environment Protection Act 2017*
 - *Environment Effects Act 1978*
 - *Aboriginal Heritage Act 2006*
 - *Water Act 1989*
 - *Heritage Act 2017*
 - *Wildlife Act 1975*
 - *National Parks Act 1975*
 - *Livestock Disease Control Act 1994*
 - *Flora and Fauna Guarantee Act 1988* (FFG Act)
 - *Catchment and Land Protection Act 1994* (CaLP Act)
 - *Road Management Act 2004*
 - *Mineral Resources (Sustainable Development) Act 1990*
- For the Commonwealth:
 - *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
 - *Native Title Act 1993*

The onus is on the proponent to contact the relevant agency to determine its requirements. Relevant agency contacts and a list of legislation that may impact a proposed wind energy facility can be found on the wind energy facility page at planning.vic.gov.au.

Note: Other components of wind energy facilities such as quarries and removal of native vegetation may require approval under other legislation as well as other permissions from the Australian Energy Market Operator or electricity network.

3.3.1 State environmental assessment

If an Environment Effects Statement (EES) is required for a wind energy facility, this process must be completed before the planning permit application can be determined.

The Minister for Planning is responsible for administering the *Environment Effects Act 1978* and deciding whether an EES is required under that Act. If a proposal is likely to have a significant effect on the environment, the proponent should refer it to the Minister for a decision on the need for an EES.

The onus is on the proponent to refer a proposal to the Minister for Planning to determine whether an EES is required.

The Minister for Planning will require a preliminary landscape assessment to accompany a referral of a proposed wind energy facility. Should an EES be required, then it must include an independently peer-reviewed visual impact assessment by a suitably qualified and experienced person.

The ministerial guidelines for assessment of environmental effects under the *Environment Effects Act 1978* provide guidance on EES processes. More information can be found at [Environment assessment guides](#).

3.3.2 Commonwealth environmental assessment

A proposal may also need approval under the EPBC Act if it is likely to have a significant impact on matters of national environmental significance, for example a significant listed threatened or migratory species.

When a person proposes to take an action that they believe may need approval under the EPBC Act, they must refer the proposal to the Commonwealth Minister for Environment. If the Minister determines that an approval is required, the proposed action must be assessed under the EPBC Act.

Further information on the operation of the EPBC Act is available from the Australian Government Department of Climate Change, Energy, the Environment and Water, or for help in deciding whether an action should be referred, you should consult the EPBC Administrative Guidelines on Significance at dcceew.gov.au, including the *Significant Impact Guidelines 1.1: Matters of National Environmental Significance* (2013) and the *EPBC Act Policy Statement 2.3 – Wind Farm Industry* (2009).

If approval is required under the EPBC Act, the project may need to be assessed using an assessment process specified under that Act, or an accredited state impact assessment process may be able to be used.

Under the Bilateral Agreement (2014) between Victoria and the Commonwealth, the following Victorian processes can be accredited:

- EES process
- Advisory Committee process
- Planning permit process.

The Commonwealth Minister for the Environment will make the final decision under the EPBC Act, even if a project is assessed using an accredited state impact assessment process.

4. Planning permit applications - information for applicants

This section provides information for persons applying for a permit for a wind energy facility.

Proponents are encouraged to familiarise themselves with the planning process before commencing their application.

Chapter 3 of [Using Victoria's Planning System](#) is a good starting point for permit applicants. This guide is available at: planning.vic.gov.au

4.1 The planning permit application process

Section 4.2 of these guidelines provides further details about preparing a planning permit application.

Proponents should also determine if any other parts of the proposal trigger the need for planning permit approval, such as off-site works or native vegetation removal, including removal of vegetation along roads away from the site to enable delivery of oversized turbine components.

Planning scheme zoning and overlay information for any location in Victoria can be obtained from the [Browse Planning Schemes page](#) at planning.vic.gov.au.

4.1.1 Pre-application consultation with community, stakeholders and the Department of Transport and Planning (DTP)

Pre-application consultation with DTP and other stakeholders is encouraged. It provides an opportunity for information gathering and exchange. Proponents should also consider engaging with the community where the wind energy facility is proposed.

At a pre-application meeting, you can discuss:

- the planning application process
- the EES process
- the EPBC process, and
- information requirements for fauna (including avifauna and bats) and native vegetation removal.

Proponents can meet with DTP planning and other government agencies to discuss their application at the pre-application stage.

Requests for a pre-application meeting should be made using the 'Request a pre-application meeting' tool available on the [wind energy facility page](#) at planning.vic.gov.au.

The development of a community and stakeholder communications and consultation plan is highly recommended, as it will help drive an effective and efficient consultative program. Proponents are encouraged to engage early with the Traditional Owners where the project is proposed.

Pre-application consultation is not a formal statutory requirement of the planning process; however, effective pre-application consultation benefits proponents and other stakeholders. After a planning permit application is lodged, there are statutory requirements to notify the public of a proposal.



Pre-application consultation allows the proponent to identify and understand any concerns of the community and stakeholders while obtaining information and feedback on existing conditions and potential issues to address before lodging the planning permit application. Early consultation will assist in developing a well-conceived proposal and contribute to an efficient assessment process.

Some principles to guide consultation include:

- start early
- ensure the consultation is well-planned
- provide suitable opportunities for input by stakeholders, and
- communicate effectively by:
 - listening to what stakeholders and the public have to say
 - listening to what the local council, the DTP and other agencies have to say
 - providing sufficient information to enable stakeholders to make a valuable contribution
 - providing briefings on progress and further information on request
 - being prepared to make improvements/changes to the proposal in response to stakeholder inputs, and
 - monitoring stakeholder involvement and inputs to refine and better target the consultation.

See also: [*Community Engagement and Benefit Sharing in Renewable Energy Developments – A Guide for Renewable Energy Developers* \(DELWP, 2021\) at \[energy.vic.gov.au\]\(http://energy.vic.gov.au\)](#).

4.1.2 Lodgement and processing of planning permit applications

All applicants are encouraged to engage a suitably qualified and experienced planning consultant with experience in Victoria's planning system to prepare and lodge their planning permit application.

A planning permit application must be lodged with the responsible authority, via the DTP Development Approvals and Design, Renewables Team.

An application will not proceed until the proponent provides all the required information. A planning application must include sufficient information and explanation to allow the responsible authority to make a sound and timely decision. Clauses 52.32-3 and 52.32-4 contain details of information that must be submitted with an application. Your application must also address additional requirements in other parts of the planning scheme. A pre-application meeting will assist in understanding what information is required.

These guidelines assist proponents in designing and siting proposed wind energy facilities and preparing planning permit applications.

When all the relevant information has been received and is deemed satisfactory, the responsible authority will proceed with the public notice and referral requirements. Upon completion of notice and referral, the responsible authority will determine the application.

More information on the planning system and process can be found in the following documents available at planning.vic.gov.au:

- [Using Victoria's planning system](#)
- [A Practitioner's Guide to Victorian Planning Schemes](#)

4.1.3 Responsible authority Decisions

The Minister for Planning may decide to grant a permit, refuse to grant a permit, or, where objections have been received, issue a notice of decision to grant a permit, allowing objectors to lodge an application for review at VCAT.

When drafting a permit, a responsible authority must comply with Form 4 of the Planning and Environment Regulations 2015. Model conditions for permits for wind energy facilities are available on the [wind energy facility page](#) at planning.vic.gov.au.

If a permit is granted or notice of decision issued for a wind energy facility, it will typically be subject to conditions relating to environmental management, decommissioning and rehabilitation requirements, among other things.

If a permit application is called in by the Minister for Planning and is issued under Division 6 of the *Planning and Environment Act 1987*, the Minister's decision is final and cannot be reviewed by VCAT.

4.2 Preparing a planning permit application, or application to amend a permit

4.2.1 Pre-application discussions

Research the planning controls and then talk to the responsible authority regarding the following:

- the relevant State and local planning policies, guidelines and other planning scheme requirements that apply to the proposal
- the requirements of any referral authorities or other agencies that may have an interest or be affected by the proposal
- scheduling a pre-application meeting (refer to Section 4.1.1 of these guidelines).

In addition, you should contact the Australian Energy Market Operator for early advice about grid connection matters.

4.2.2 Seek expert advice

It is strongly encouraged that proponents engage a town planning consultant to manage their application.

An application should be accompanied by a planning assessment detailing how the project performs against the requirements of the planning scheme. It should also include an assessment of the ecological, visual, noise, traffic, aviation and other environmental impacts of the proposal prepared by suitably qualified persons.

Expert advice on these matters should be sought early to inform the site selection process and prepare the site analysis and design response. The assessments submitted with the application should clearly state the facts, matters and all assumptions on which the assessments were based.

4.2.3 Prepare the site analysis

A site analysis is an assessment of the subject site and its surrounds. It will comprise a plan, photographs or other suitable information describing the land and the matters that influence the proposal.

The information requirements for a site analysis for a wind energy facility are set out in clause 52.32 and Section 4.3.2 of these guidelines. If the land is also to be used for other purposes, such as agriculture, the site analysis should include this information.

4.3 Meeting application requirements

Clause 52.32 of the VPP outlines information that must accompany an application for a permit for a wind energy facility.

The following assists applicants on matters that should be addressed to meet these information requirements. The level of information required to be provided by proponents will vary depending on the size and extent of the proposal and the requirements of the responsible authority and any referral authorities.

4.3.1 Turbines within one kilometre of a dwelling

Evidence of written consent

Where an application includes a turbine or turbines within one kilometre of an existing dwelling, the application must include evidence of written consent of the owner of each dwelling within one kilometre of a turbine.

An application is prohibited if the written consent of dwelling owners within one kilometre is not provided.

The application requirements in clause 52.32-3 require a planning permit application to include:

- a plan showing all dwellings within one kilometre of a proposed turbine* that forms part of the wind energy facility (*see note in Section 2.1.4)
- evidence of the written consent of the owner of any existing dwelling located within one kilometre of a proposed turbine* that forms part of the wind energy facility (*see note in Section 2.1.4).

This does not apply to a wind energy facility that is located on land in a residential zone, an industrial zone, a commercial zone or a special purpose zone.

Evidence of written consent should include the following:

- a statement of consent that includes
 - the name and address of the owner(s) of the dwelling
 - the address of, and title particulars for, the land on which the dwelling is located
 - a statement that the owner consents to an application that includes a turbine(s) located as shown on the attached plan.
- a plan showing:
 - the dwelling
 - the proposed location of the turbine(s) * within one kilometre of the dwelling (*see note in Section 2.1.4)
 - the distance between the dwelling and the proposed turbine(s) * (*see note in Section 2.1.4).

The location of the turbine(s) can be a specific site or a more general area in which the turbine(s) will be sited.

The plan should be able to be read and reconciled with the plans of the wind energy facility that form part of the application (including the plan showing all dwellings within two kilometres of a proposed turbine that forms part of the wind energy facility and a list of the distances of these dwellings to the nearest turbine).

The statement of consent attached to the plan should both be signed and dated by the owner of the dwelling.

Attachment A can be used as a statement of consent.

Applications to amend a planning permit

Often, any amendment to a permit for a wind energy facility requires the consent of a dwelling owner where turbines are within one kilometre of a dwelling. Clause 52.32-3 enables amendments to a planning permit under section 72 or 97I of the P&E Act to be considered by the responsible authority without needing a dwelling owner's consent where turbines are within one kilometre of a dwelling, in certain circumstances.

To be exempt from dwelling owner consent, the following requirements apply to an application to amend a planning permit:

- it does not increase the number of proposed turbines, or
- it does not change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling.

Proposals to amend a planning permit will be required to meet the relevant application requirements (refer to section 4.3) and are subject to the notice requirements of section 52 of the *Planning and Environment Act 1987*.

Refer to Section 6 of these guidelines to determine who is the responsible authority for an amendment to an existing permit.

4.3.2 Application requirements for a wind energy facility

Clause 52.32-4, Application requirements requires the submission of information with an application including:

- a site and context analysis
- design response, and
- a mandatory predictive noise assessment.

Site and context analysis

A site and context analysis is an application requirement of the planning scheme. The site and context analysis may include a site plan, photographs or other techniques to describe the following accurately:

- in relation to the site:
 - site shape, dimensions and size
 - orientation and contours
 - current land use
 - the existing use and siting of existing buildings or works on the land
 - existing vegetation types, condition and coverage
 - the landscape of the site
 - species of flora and fauna listed under the FFG Act and the EPBC Act
 - sites of cultural heritage significance
 - wind characteristics
 - any other notable features, constraints (e.g. acid sulphate soil, highly erodible soils and land instability) or other site characteristics.
- in relation to the surrounding area:
 - existing land uses
 - above-ground utilities
 - access to infrastructure
 - direction and distances to nearby dwellings, townships, urban areas, significant conservation and recreation areas, water features, tourist routes and walking tracks, major roads, airports, aerodromes and existing and proposed wind energy facilities

- the siting and use of buildings on adjacent properties
- the location of all existing dwellings within one kilometre of the nearest turbine measured from the centre of the tower at ground level (adopting a precautionary approach, accounting for micro-siting variation in final placement of turbines). Where the proposal includes any turbines within one kilometre of an existing dwelling, the application must be accompanied by evidence of the written consent of the owner of the dwelling. The application is prohibited under the planning scheme where evidence of the written consent is not provided
- the landscape, including any significant landscape features
- views to and from the site, including views from existing dwellings and key vantage points, including major roads, walking tracks, tourist routes and regional population growth corridors
- sites of flora and fauna listed under the FFG and EPBC Acts, including significant habitat corridors, and movement corridors for these fauna
- sites of cultural heritage significance
- National Parks, State Parks, Coastal Reserves and other land subject to the *National Parks Act 1975*
- land declared a Ramsar wetland as defined under section 17 of the EPBC Act
- location of any nearby land included in the schedule to clause 52.32-2 of the planning scheme (i.e. specified areas of landscape and environmental significance, specified coastal locations and areas identified to accommodate future population growth of regional cities and centres) showing that the setback requirements are met
- any other notable features or characteristics of the area
- bushfire risks.

A location plan showing the area around the site, including:

- local electricity grid (including capacity)
- access roads to the site.

Design response

A development plan comprising:

- detailed plans of the proposed development showing:
 - the layout of the wind turbine generators and associated buildings and works (this can include anemometers)
 - GIS coordinates showing the location of each turbine and key infrastructure
 - distances from each turbine to the closest dwelling and to the site boundary
 - location of all houses within one and two kilometres of a turbine
 - the location and dimensions of all buildings and works
 - the location of all vegetation removal
 - proposed connections to the electricity grid, including the infrastructure required to connect the facility to the electricity network
 - access roads on the site
 - access road options and swept path diagrams that demonstrate that oversize vehicles can access the site, and the impact on roadside vegetation
 - accurate visual simulations showing the appearance of the development in the context of the surrounding area and from key public viewpoints
 - measures to manage any fire risks associated with the facility or connections to the electricity grid
 - a rehabilitation plan for the site, including plans for revegetation and regeneration works.

Written reports

Written reports including:

- A description of the proposal
- An explanation of how the proposed design derives from and responds to the site analysis
- A description of how the proposal responds to any significant landscape features for the area identified in the planning scheme

- An assessment of:
 - the visual impact of the proposal on the surrounding landscape
 - the visual impact on abutting land that is described in a schedule to the *National Parks Act 1975* and Ramsar wetlands and coastal areas
 - the impact of the proposal on any species (including birds and bats) listed under the FFG Act or EPBC Act
 - the impacts upon Aboriginal or non-Aboriginal cultural heritage.
- A statement of why the site is suitable for the wind energy facility
- An environmental management plan, including any rehabilitation and monitoring requirements
- A pre-construction (predictive) noise assessment report prepared by a suitably qualified and experienced acoustician that:
 - reports on a pre-construction (predictive) noise assessment conducted following *New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise*
 - provides an assessment of whether the proposed wind energy facility will comply with the noise limit for that facility
 - where the proposed wind energy facility will be the subject of a wind turbine noise agreement under the *Environment Protection Regulations 2021*, specifies the premises of the relevant landowner (including any particular buildings) to which the agreement relates and provides an assessment of whether the proposed wind energy facility will comply with the modified noise limit for that facility specified in the agreement
 - is prepared on the basis that the relevant noise standard will be the *New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise* and includes an assessment of whether a high amenity noise limit is applicable under Section 5.3 of the standard.
- A report prepared by an environmental auditor appointed under Part 8.3 of the *Environment Protection Act 2017* that verifies whether or not the pre-construction (predictive) noise assessment was conducted under *New Zealand Standard NZS6808:2010, Acoustics – Wind Farm Noise*.

4.3.3 Flora and fauna impacts assessment

In the first instance, proponents should contact DTP's Development Approvals and Design, Renewables team or the Commonwealth Department of Environment directly for advice on who to approach regarding whether the proposed wind energy facility may impact species of flora or fauna protected under the FFG Act or the EPBC Act.

Where it is reasonably likely that species listed under the FFG Act or the EPBC Act will be present on or near the site, or using the site as a migratory corridor, applicants for a wind energy facility permit should conduct surveys at the appropriate time for at least 12 months preceding the planning permit application. DTP or the Commonwealth Department of Environment (as appropriate) should be consulted on the timing of the surveys. Survey work should determine the species present, any potential adverse impacts likely to arise from the proposed wind energy facility, and any appropriate mitigation measures.

Information on the EPBC Act can be found at dceew.gov.au.

Potential biodiversity impacts

Possible impacts of a wind energy facility on biodiversity can be considered under six categories set out below. Responsible authorities should consider the following matters in assessing applications and developing permit conditions:

Direct removal of native vegetation and habitat

- May arise for turbine tower footings, tracks and other infrastructure.
- May be minimised by layout design and micro-siting.
- Address unavoidable losses under Victoria's Native Vegetation Framework.

Native fauna casualties resulting from construction activities

- Site induction to minimise risks to wildlife onsite.
- Minimise risks to wildlife arising from excavation works.

Bird and bat casualties resulting from collisions with moving turbine blades

- Site selection rotor swept area size, ground clearance of the rotor and turbine layout will impact on risk level, especially for large, slow-flying birds (e.g. waterbirds, raptors).
- Aside from direct collision, bats can be killed by barotraumas (lung injury) created by rapid air-pressure reduction near moving turbine blades.
- Some bird and bat species may require special consideration due to significance, behaviour or movement patterns.

Bird and bat casualties resulting from collisions with stationary infrastructure (for example, towers, anemometers, fences, powerlines)

- Lighting may disorient birds at night, increasing collision risk.
- Fences, wires and transmission lines can be difficult for many species to avoid, resulting in fatalities.
- Transmission lines pose a well-documented hazard for many species of large birds.

Indirect habitat loss resulting from avoidance

- Some species may avoid turbines by large margins, leading to loss of access to adjacent habitat.
- Different avoidance distances may apply to different species or to particular species at different seasons.

Cumulative barrier effects

- Migratory or otherwise mobile species may require turbine-free corridors to travel between critical sites (e.g. breeding and non-breeding habitats).
- Corridor needs may vary according to relevant species.

In evaluating wind energy facility impacts on birds and bats, including cumulative impacts of several discrete wind energy developments within a broad area, it is important to place the collision risks inherent in wind energy facilities in context with other anthropogenic collision risks such as fences, windows and motor vehicles. However, potential impacts of specific developments should still be identified, quantified, minimised, and, where necessary, offset to ensure that the net impact of wind energy facility developments on biodiversity values, especially regarding threatened species, is, at worst, neutral.

4.3.4 Environmental Management Plan

The preparation of an Environmental Management Plan (EMP) will be required. An environmental management plan details how the site will be managed through construction and sets out future operational and maintenance requirements. It may include:

- measures to minimise the amenity and environmental impacts of the construction and decommissioning of the facility
- organisational responsibilities and procedures for staff training and communication
- a construction component that includes procedures to manage dust and noise emissions, erosion, mud and stormwater run-off and procedures to remove temporary works, plant, equipment, buildings and staging areas and reinstate the affected parts of the site, when construction is complete
- complaints management processes.

4.3.5 Aircraft safety issues

The height of wind energy turbines can be substantial, resulting in potential impacts on nearby airfields and air safety navigation. Applicants should address aircraft safety issues by considering the site's proximity to airports, aerodromes, or landing strips.

Applicants should consult with the Civil Aviation Safety Authority (CASA) for wind energy facility proposals that:

- are within 30 kilometres of a declared aerodrome or airfield
- infringe the obstacle limitation surface around a declared aerodrome
- include a building or structure that the top of which will be 110 metres or more above natural ground level (the height of a wind turbine is determined by the tip of the turbine blade when vertically above ground level).

Early engagement with aviation safety organisations like CASA is encouraged as aviation safety is a complex area of wind energy facility assessment.

In addition to CASA consultation, the following is relevant for anemometers and other pre-permit infrastructure.

The Aeronautical Information Service of the Royal Australian Air Force (RAAF AIS) maintains a database of tall structures in the country. The RAAF AIS should be notified of all tall structures meeting the following criteria:

- 30 metres or more above ground level for structures within 30km of an aerodrome, or
- 45 metres or more above ground level for structures located elsewhere.

The contact details for the RAAF AIS are: tel: [03 9282 5750](tel:0392825750) or ais.charting@defence.gov.au.

Operators of certified aerodromes are required to notify CASA if they become aware of any development or proposed construction near the aerodrome that is likely to create an obstacle to aviation, or if an object will infringe the Obstacle Limitation Surfaces (OLS) or Procedures for Air Navigation Services – Operations (PANS-OPS) surfaces of an aerodrome. Operators of registered aerodromes should advise CASA if the proposal will infringe the OLS; CASA will ask Airservices to determine if there is an impact on published flight procedures for the aerodrome.

More information can be found on the [aviation safety page](https://infrastructure.gov.au/aviation/safety) at infrastructure.gov.au.

4.4 Application to amend a planning permit

An application to amend a planning permit must be lodged with the responsible authority, usually the Minister for Planning. Refer to Section 6.1 of these guidelines regarding who is the responsible authority.

4.4.1 Applications to amend a permit under section 72 of the P&E Act

Clause 52.32-7 specifies that an application to amend a planning permit made under section 72 of the P&E Act is exempt from the review rights of the P&E Act (decision requirements of section 64(1), (2) and (3) and review rights of section 82(1) if the amendment of the permit does not:

- increase the number of turbines, or
- change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling.

4.4.2 Applications to amend a permit under section 97I of the P&E Act

This section relates to amending referred wind energy facility planning permits, known as 'called in' planning permits.

Clause 52.32-8 specifies that an application to amend a permit under 97I of the P&E Act is exempt from being referred to a planning panel (section 97E(1)) if the application does not seek to:

- increase the total number of turbines, or
- increase the maximum height of any turbine, or
- change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling.

Clause 52.32-8 also specifies that the requirements of section 97E(1) of the P&E Act are modified to require referral of objections and submissions to an advisory committee established under section 151 of the P&E Act if an application to amend a permit does not seek to:

- increase the total number of turbines by more than 15 per cent, or
- increase the maximum height of any turbine by more than 20 per cent, or
- change the location of a turbine so that the centre of the tower (at ground level) is located closer to an existing dwelling (within one kilometre of a permitted turbine) than the centre of the tower (at ground level) of the closest permitted turbine to that dwelling.

4.4.3 Applications to amend a permit to remove operational noise conditions

If the above requirements in clause 52.32-7 are met, an application to amend a permit to remove conditions relating to WEF operational noise will be exempt from notice and review. With the introduction of the new regulations, it is open to wind farm permit holders to apply to amend their existing permits to remove these conditions. Applications to amend permits will be referred to the EPA for comment.

5. Information for responsible authorities assessing a wind energy facility

This section outlines the key criteria for evaluation of the planning merits of a wind energy facility.

5.1 Assessing wind energy facility proposals – matters for consideration

Proposals for wind energy facilities must be assessed against state planning policy, local planning policy and other matters specified in section 60 of the P&E Act.

These guidelines provide a responsible authority with assistance in assessing a wind energy facility. The extent and breadth of issues that arise and require assessment will differ between proposals and will need to be determined on a case-by-case basis. A responsible authority should balance environmental, social and economic matters in favour of net community benefit and sustainable development.

An explanation of matters to be considered by a responsible authority in assessing permit applications for wind energy facilities follows. Some suggested impact reduction measures specific to wind energy facilities are outlined below.

5.1.1 Contribution to government policy objectives

The PPF requires that a planning authority make decisions based on fair, orderly, economic and sustainable use and development of land. In this context, the PPF contains a specific policy position regarding renewable energy in clause 19.01-2, Renewable energy. This is the overarching policy statement regarding wind energy development, which states:

Objective

To promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.

Strategies

Facilitate renewable energy development in appropriate locations.

In considering proposals for renewable energy, consideration should be given to the economic and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a proposal on the local community and environment.

In planning for wind energy facilities, recognise that economically viable wind energy facilities are dependent on locations with consistently strong winds over the year.



5.1.2 Amenity of the surrounding area

A wind energy facility can affect the amenity of the surrounding area due to noise, blade glint, shadow flicker, visual impact, and electromagnetic interference.

Noise

A wind energy facility can create noise due to the:

- mechanical noise produced by the wind turbine generators
- movement of the rotor blades passing the tower
- electrical transformers and substations
- construction noise.

The impact of the noise depends on the sensitivity of the surrounding land uses, existing background noise levels, topography, wind speed and direction, power output from the turbines and any special auditory characteristics¹ present.

This is why clause 52.32-4 requires a pre-construction(predictive) noise assessment report for a permit application.

A wind energy facility must comply with the noise limits in the [New Zealand Standard NZS 6808:2010 Acoustics](#) – Wind Farm Noise (**the Standard**).

The 'A-frequency-weighted L90 centile level' is the metric used in the Standard to assess wind energy facility noise. This is expressed as dB LA90(10mins), and in effect, means a sound level measurement will be the decibel that was equalled or exceeded for 90 per cent of the time over a 10-minute period.

The Standard specifies a general 40 decibel limit (40 d B LA90(10min)) for wind energy facility sound levels outdoors at noise-sensitive locations, or that the sound level should not exceed the background sound level by more than five decibels (referred to as 'background sound level +5 dB'), whichever is the greater.

Noise-sensitive locations are defined in the Standard as, "The location of a noise sensitive activity, associated with a habitable space or education space in a building not on a wind farm site ", and include:

- any part of land zoned predominantly for residential use

- residential land uses included in the accommodation group at clause 73.03, Land use terms of the VPP and all planning schemes
- education and child care uses included in the child care centre and education centre groups at clause 73.03 of the VPP and all planning schemes.

For further information on types of locations included, refer to Section 2.4 (Definitions) of the Standard.

A 45-decibel limit is recommended for stakeholder dwellings. A stakeholder dwelling is a dwelling located on the same land as the wind energy facility, or one that has an agreement with the wind energy facility to exceed the noise limit.

Under Section 5.3 of the Standard, a 'high amenity noise limit' may be justified in special circumstances. All wind energy facility applications must be assessed using Section 5.3 of the Standard to determine whether a high amenity noise limit is justified for specific locations, following procedures outlined in 5.3.1 of the Standard. Guidance can be found on this issue in the VCAT determination for the Cherry Tree Wind Farm².

Measurement and compliance assessment methods are set out in the Standard. The assessment must be made without relying on noise reduction operation modes to achieve compliance.

What is a verification report by an EPA-appointed auditor?

Clause 52.32-4 requires an environmental auditor appointed under Part 8.3 of the *Environment Protection Act 2017* to prepare a report that verifies if the acoustic assessment undertaken for the purpose of the pre-construction (predictive) noise assessment report has been conducted in accordance with the Standard.

The report issued by the EPA appointed auditor is a declaration that the noise assessments have been conducted in accordance with the Standard.

This report should be thorough but concise. The report must have adequate detail including an annexure listing all documents examined or relied upon to permit any reader to follow the deliberations that the auditor undertook in forming their view.

¹ Refer to Section 5.4, Page 23 of the Standard for further information.

² Cherry Tree Wind Farm v Mitchell Shire Council (2013).

Auditor duties

An EPA-appointed auditor is expected to undertake any function to apply sound engineering and audit practices, behaving in an ethical manner upholding the reputation of the “audit system” and adhere to the wording and intent of relevant guidelines. EPA has guidelines detailing the duties and responsibilities of an EPA-appointed auditor. Please visit the EPA website to learn more about the roles and responsibilities of an EPA-appointed auditor. A good starting point is EPA publication 865 *Environmental Auditor Guidelines for Appointment and Conduct*.

Wind energy facility noise compliance

From 1 July 2021, the *Environment Protection Act 2017* introduced a general environmental duty and unreasonable noise provisions, which apply to all industries in Victoria, including wind energy facilities. The Environment Protection Authority (EPA) will be Victoria’s primary regulator of wind turbine noise.

Amendment VC206 to the VPP and all planning schemes supported these changes by removing planning requirements for regulating operational wind turbine noise for a wind energy facility.

Planning permits for wind energy facilities issued after 1 July 2021

Permits issued after 1 July 2021 will not have conditions regulating operational wind turbine noise, as this will be covered under the Environment Protection Regulations (regulated by the EPA).

Permit application requirements for wind energy facilities will remain, including the requirement to conduct a pre-construction (predictive) noise assessment to demonstrate that the facility can comply with the New Zealand Standard.

Existing planning permits that have conditions for operational wind turbine noise

Wind farm operators are required to comply with the conditions of permits, including conditions that regulate operational wind turbine noise. Responsible authorities, such as councils, will continue to be responsible for enforcement of permit conditions.

To avoid duplication of requirements, wind farm operators can apply to amend existing permits under section 72 or section 97I of the Planning and Environment Act, 1987.

Blade glint

Blade glint can result from the sun reflecting from turbine blades.

Blades should be finished with a surface treatment of low reflectivity to minimise glint.

Shadow flicker

Shadow flicker results from the sun’s position in relation to the wind turbine blades as they rotate. This occurs under certain combinations of geographical position and time of day. The seasonal duration of this effect can be calculated from the machine’s geometry and the site’s latitude.

Shadow flicker can be modelled in advance, and siting and design can mitigate the problem. This is more likely to be an issue for turbines located to the east or west of a dwelling.

The shadow flicker experienced immediately surrounding the area of a dwelling (garden-fenced area) must not exceed 30 hours per year as a result of the operation of the wind energy facility.

Electromagnetic interference

The effect of wind turbines on electromagnetic waves will usually be limited. Potential electromagnetic interference effects can be calculated from information about affected telecommunications transmitting or receiving stations, local conditions, turbine design and location.

The potential for electromagnetic interference from electricity generation from a wind energy facility should be minimised, if not eliminated, through appropriate turbine design and siting.

The siting of wind turbines in the ‘line of sight’ between transmitters and receivers should be avoided.

5.1.3 Landscape and visual impact

The degree of visual impact of a wind energy facility depends on the extent of the change to the landscape caused by the development, taking into account:

- the visibility of the development (including all components: turbines, office compound, construction compound(s), substation(s) and power lines to connect to the electricity network)
- the locations and distances from which the development can be viewed

- the significance of the landscape as described in the planning scheme (including in an overlay, a relevant strategic study or landscape features referenced in the planning scheme)
- landscape values associated with nearby parks described in a schedule to the *National Parks Act 1975* or Ramsar wetlands
- landscape values associated with nearby land included in the schedule to clause 52.32-2 of the planning scheme, such as specified areas of landscape and environmental significance, specified coastal locations and areas identified to accommodate future population growth of regional cities and centres
- the sensitivity of the landscape features to change.

The visual impact of the development relates to:

- the number, height, scale, spacing, colour and surface reflectivity of the wind turbines
- the quantity and characteristics of lighting, including aviation obstacle lighting (subject to CASA requirements and advice)
- avoidance of visual clutter caused by turbine layout and ability to view through a cluster or array (visually well-ordered series) of turbines in an orderly manner
- the removal or planting of vegetation
- the location and scale of other buildings and works, including power lines and associated access roads
- proximity to sensitive areas
- proximity to an existing or proposed wind energy facility, regarding cumulative visual effects.

The features of the landscape include:

- the topography of the land
- the amount and type of vegetation
- natural features such as waterways, cliffs, escarpments, hills, gullies and valleys
- visual boundaries between major landscape types
- the type, pattern, built form, scale and character of development, including roads and walking tracks
- flora and fauna habitat
- cultural heritage sites
- the skyline.

Wind energy facilities will have a degree of impact on the landscape.

A responsible authority needs to determine whether or not the visual impact of a wind energy facility in the landscape is acceptable. In doing so, they should consider planning scheme objectives for the landscape, including whether the land is subject to an Environmental Significance Overlay, Vegetation Protection Overlay, Significant Landscape Overlay or a relevant strategic study that is part of the relevant planning scheme.

The visual impact of a proposal should have regard to relevant state, regional and the planning policy framework.

The following measures are suggested to reduce the visual impacts of wind energy facilities:

- siting and design to minimise impacts on views from areas used for recreation and from dwellings
- locating arrays of turbines to reflect dominant topographical and/or cultural features, such as ridgelines, the coastline, watercourses, windbreaks or transmission lines
- using turbine colour to reduce visual impacts from key public viewpoints
- limiting night lighting required for the safe operation of a wind energy facility and aviation safety
- reducing the number of wind turbines with obstacle lights while not compromising aviation safety
- mitigating light glare from obstacle lighting through measures such as baffling (fittings that absorb or screen light glare)
- selecting turbines that are consistent in height, appearance and rotate the same way
- spacing turbines to respond to landscape characteristics
- undergrounding electricity lines wherever practicable
- minimising earthworks and providing measures to protect drainage lines and waterways
- minimising removal of vegetation
- avoiding additional clutter on turbines, such as unrelated advertising and telecommunications apparatus.

5.1.4 Flora and fauna

A responsible authority should consider the effects of the proposed wind energy facility on flora and fauna at the site and in the surrounding area. Consideration should be given to:

- whether the species and communities are protected under the EPBC Act or the FFG Act
- the sensitivity of any protected species to disturbance
- the potential loss of habitat of species protected under the EPBC Act or the FFG Act
- measures to minimise the impacts on any native species.

If the proposal is likely to have significant impacts on listed species, the responsible authority should consider whether the applicant has provided appropriate survey work (refer to Section 4.3.3 of these guidelines for more detail). A responsible authority should consider whether to impose planning permit conditions requiring monitoring of flora and fauna, including further survey work, after construction of the wind energy facility. An environmental management plan may provide for the development of reasonable and cost-effective steps to minimise any ongoing risks.

If native vegetation is proposed to be removed, a responsible authority must have regard to *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning 2017). In applying the policy, there are three key steps for land managers and owners to address when considering vegetation clearing (as addressed in clause 12.01-2S of the PPF):

- as a priority, avoid the removal of native vegetation
- if the removal of native vegetation cannot be avoided, minimise the loss of native vegetation through appropriate consideration in planning processes and expert input into project design or management
- identify appropriate offset actions.

Details regarding removing native vegetation can be found on the [native vegetation page](#) at environment.vic.gov.au or contact the relevant regional office at the Department of Energy, Environment and Climate Action (DEECA).

5.1.5 Aircraft safety

The height of wind energy turbines can be substantial, resulting in potential impacts on nearby airfields and air safety navigation. A responsible authority should consider the site's proximity to airports, aerodromes or landing strips, and ensure that any aircraft safety issues are identified and addressed appropriately.

Although the Civil Aviation Safety Authority (CASA) is not a formal referral authority for wind energy facility permit applications, a responsible authority should nevertheless consult with CASA concerning aircraft safety impacts of a wind energy facility proposal, particularly proposals that:

- are within 30 kilometres of a declared aerodrome or airfield
- infringe the obstacle limitation surface around a declared aerodrome
- include a building or structure, the top of which will be 110 metres or more above natural ground level (the height of a wind turbine is that reached by the tip of the turbine blade when vertically above ground level).

Other private airstrips may not be identified by consultation with CASA. These may be determined using aerial photographs, discussions with the relevant council, or consultation with local communities.

A responsible authority should ensure that the proponent has consulted appropriately with CASA about aircraft safety and navigation issues. It is recommended that the proponent consults and receives approval from CASA before lodging their application for ease of process. Refer to Section 4.3.5 of these guidelines for more detail.

CASA may recommend appropriate safeguards to ensure aviation safety. These may include changes to turbine locations, turbine heights and/or the provision of aviation safety lighting. A responsible authority should ensure that any concerns raised by CASA are appropriately reflected in permit conditions.

Aviation safety lighting can impact the amenity of the surrounding area. Responsible authorities may consider the following impact reduction measures (subject to CASA requirements and advice):

- reducing the number of wind turbines with obstacle lights

- specifying an obstacle light that minimises light intensity at ground level
- specifying an obstacle light that matches light intensity to meteorological visibility
- mitigating light glare from obstacle lighting through measures such as baffling (fittings that absorb or screen light glare).

5.1.6 Construction impacts and decommissioning

As outlined above, the construction of a wind energy facility and associated infrastructure (access roads and transmission lines) must be managed to minimise on and off-site adverse impacts on nearby residents and the environment. An Environmental Management Plan (EMP) must be provided as part of every planning application, setting out how environmental impacts will be managed through construction and providing future operational and maintenance specifications. Refer to Section 4.3.4 of these guidelines for more detail.

The approved EMP should be endorsed by the responsible authority and form part of the planning permit. A responsible authority should consider imposing a permit condition requiring that the use and development be conducted in accordance with the endorsed EMP.



6. Planning permit administration and enforcement

This section describes the role of the responsible authority in administering and enforcing wind energy facility permit conditions.

6.1 Administration of planning permits

Section 13(a) of the P&E Act has the effect that the responsible authority for the administration of the planning scheme is the local council unless the planning scheme specifies another person as the responsible authority for those purposes.

Clause 72.01-1 of the VPP specifies that the Minister for Planning is the responsible authority for considering and determining planning permit applications for the use and development of land for a:

- energy generation facility, which includes a wind energy facility with an installed capacity of 1 megawatt or greater, and
- utility installation used to:
 - transmit or distribute electricity
 - store electricity if the installed capacity is 1 megawatt or greater.

Clause 72.01-1 specifies that the Minister is the responsible authority for the endorsement of, approval of or being satisfied with matters required by a permit or the scheme to be endorsed, approved or done to the satisfaction of the responsible authority, in relation to the use and development of land for an energy generation facility (including a wind energy facility) with an installed capacity of 1 megawatt or greater and a utility installation used to:

- transmit or distribute electricity
- store electricity if the installed capacity is 1 megawatt or greater.

Clause 72.01-1 also specifies a number of circumstances where the council is the responsible authority in relation to older permits.

6.2 Planning permit conditions

Planning permit conditions must be consistent with provisions set out in clause 52.32 of the VPP and should be generally consistent with these guidelines. Model planning permit conditions for wind energy facilities are available on the [wind energy facility page](#) at planning.vic.gov.au.

The document, *Using Victoria's Planning System*, provides more information on planning permits and conditions.

6.3 Enforcement of planning scheme and planning permits

Section 13(a) of the P&E Act specifies that the responsible authority for the enforcement of the planning scheme is the local council, unless the planning scheme specifies another person as the responsibility authority for that purpose.

Therefore, the local council is the responsible authority for the enforcement of wind energy facility permits issued under Part 4, Division 1 of the P&E Act, and most permits issued under Part 4, Division 6 of the P&E Act.



Glossary

Terms

CASA: The Civil Aviation Safety Authority.

DEECA: Department of Energy, Environment, and Climate Action – Victorian Department administering the FFG Act.

DCCEEW: Department of the Climate Change, Energy, the Environment and Water – Federal Department administering the EPBC Act.

EES: Environment Effects Statement- A statement prepared under the *Environment Effects Act 1978* (Vic) assessing the significant environmental effects of proposed works.

DTP: Department of Transport and Planning.

EMP: Environmental management plan.

EPA: Environment Protection Authority.

EPBC Act: *Environment Protection and Biodiversity Conservation Act 1999* (Cth) – Federal legislation dealing with the protection of, and assessment of impacts of activities on, matters of national environmental significance.

FFG Act: *Flora and Fauna Guarantee Act 1988* – Victorian legislation dealing with the protection of listed species of flora and fauna.

PPF: Planning Policy Framework – contained in the VPP and all planning schemes.

the Standard: New Zealand Standard NZS 6808:2010 Acoustics – Wind Farm Noise – The noise standard for wind energy facilities applicable under clause 52.32 of the VPP.

VCAT: Victorian Civil and Administrative Tribunal.

VPP: Victoria Planning Provisions – A set of standard provisions on which all Victorian planning schemes are based.

WEF: Wind energy facility.

Units

W: watt – A unit of power. The power generation capacity of a wind generator is measured in watts.

MW: megawatt. A unit of energy. 1 megawatt = 1000 watts.

Wh: watt hour. A unit of energy. The amount of electricity a wind energy facility generates is measured in watt hours.

Attachment A: Statement of consent

Application for [a planning permit/an amendment to a planning permit] for a wind energy facility

Dwelling located within one kilometre of a turbine

Statement of consent

Full details of the property on which the dwelling is located:

Address:

Title Particulars:

Volume Folio

Name(s) and address(es) of the owner(s) of the dwelling:.....

.....
.....

- I/we, as the owner/s of the existing dwelling on the above property:
- declare that I/we consent to an application for [a planning permit/an amendment to Planning Permit number [insert]] for a wind energy facility to be made that includes a turbine or turbines in the location(s) shown on the attached plan
- acknowledge that the proposed turbine(s) will be located within one kilometre from the dwelling.

Signed:

Dated:

Attached: A plan showing the dwelling and the proposed location of the turbine(s) within one kilometre of the dwelling and the distance between the dwelling and the proposed turbine(s).

This plan should be able to be read and reconciled with the plans of the wind energy facility that form part of the planning permit application. The location of the turbine(s) can be a specific site or a more general area in which the turbine(s) will be sited.

Owner(s) must also sign and date the attached plan.