MAY 2025

Hexham Wind Farm

FACT SHEET

Landscape and Visual, Shadow Flicker and Blade Glint

The proposed Hexham Wind Farm is located between Hexham, Caramut and Ellerslie in the Moyne Shire in south-west Victoria. If approved, the Project would incorporate up to 106 wind turbines with an approximate height of up to 260 metres from ground to blade tip. The proposed Project also includes an on-site terminal station and Battery Energy Storage System (BESS) and other associated infrastructure.

As part of the Victorian Government's planning and approvals process for major projects, Wind Prospect is preparing an Environment Effects Statement (EES) for the proposed Hexham Wind Farm. An EES is a requirement under the *Environment Effects Act 1978*, and includes a detailed assessment of a wide range of environmental and social assessments such as biodiversity, ecology, historical heritage, Aboriginal cultural heritage, landscape and visual amenity, traffic and transport, noise, socioeconomic and surface and groundwater.

To complete the assessments, considerable research and consultation is being undertaken to avoid and mitigate any potential adverse effects on the environment and the social fabric of the community during construction, operation and decommissioning of the proposed Project. Wind Prospect recognises the value of the natural and built environment in which the proposed Project is based and understands and respects the community's desire to protect both the environmental and social landscape that has existed for many years.

As part of the EES, a landscape and visual impact assessment (LVIA) and a shadow flicker and blade glint assessment are being finalised in accordance with the Victorian Government Planning Minister's scoping requirements for the Project and other relevant government approvals and statutory processes, assessments are to identify potential landscape and visual amenity impacts, including shadow flicker, and to avoid and, where avoidance is not possible, minimise the potential adverse impacts.

How the assessment has been carried out

A preliminary landscape and visual impact assessment (PLVIA) was prepared in January 2022, with further research, field work and photographic survey work continuing. A shadow flicker and blade glint assessment has also been undertaken.

In addition to the wind turbines, ancillary infrastructure including access tracks, road upgrades, underground electricity cabling, overhead power lines, terminal substation and switchyard, BESS, quarrying location, concrete batching plants, operations and maintenance facility and grid connection to the adjacent transmission line have been assessed in the LVIA.

The shadow flicker and blade glint assessment followed the Draft National Wind Farm Development Guidelines. These guidelines are based on a worldwide review of existing assessment methods and are considered to be a good-practice approach to the issue of analysing wind farm shadow flicker.

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Study methods included:

- Undertaking shadow flicker and blade glint assessments to model and mitigate these impacts.
- Determining the landscape character, features and values of the project area through descriptions, mapping and photographs.
- Assessing the potential cumulative impacts of other operating and approved wind farms.
- Identifying existing built features within the landscape (e.g. 500kV powerlines and other transmission lines) and their impact on the landscape and visual setting.
- Identifying viewpoints from which project infrastructure could be seen, including from residences and public viewpoints.
- Developing photomontages and wire frame diagrams to outline and evaluate any potential design and siting options that could avoid or minimise potential effects on landscape and visual amenity.

What is shadow flicker

Shadow flicker results from the fluctuating light levels caused by the movement of shadows across an area. It occurs when the sun passes behind the rotating blades of a wind turbine, and can cause annoyance when it affects a dwelling over an extended period.

It is more common around sunrise and sunset when shadows are longer due to the sun's low position on the horizon. Due to the precise angle of the sun required to cause the effect, shadow flicker is rare and only occurs in limited locations and impacts can be minimised in the planning and siting stages of the Project.

Existing view from Warrnambool-Caramut Road, looking north-east

Proposed view from Warrnambool-Caramut Road, looking north-east (distance to nearest wind turbine is 1.89 km)

Preliminary findings

The preliminary findings from the LVIA and the shadow flicker assessment show that development of the Project is possible while maintaining the key visual features of the landscape and mitigating potential visual impacts.

Although the landscape is mostly flat and cleared, existing natural features will assist in reducing the potential visibility of the Project. These include large areas of roadside vegetation, windbreak planting and riparian (wetlands adjacent to waterways) vegetation associated with creeklines.

Other key findings of the assessments concluded that:

- Shadow flicker results indicate that the Project is compliant with regulations without the need for management measures.
- Viewpoints within three to six kilometres of a wind turbine are most likely to notice turbines within the existing landscape setting.
- All State Significant viewing locations identified are more than 12 km from the Project, at which distance the Project is unlikely to be noticeable.
- Due to the scale and siting of the Project, ancillary infrastructure from the Project has the potential to impact the visual landscape and these potential impacts will be considered mitigated.

Managing adverse effects

The LVIA and the shadow flicker and blade glint assessment provides recommendations which seek to integrate the Project within the landscape and minimise any potential visual impacts to the greatest extent possible.

Updating the Project layout and design is a primary method of managing potential adverse impacts on the landscape and visual amenity. Mitigation measures will include:

Potential visual impacts would be minimised through the design of the layout, aligning the turbines to reflect the contours of the landscape, and ensuring turbines are evenly spaced.

Conservative desktop modelling is used to assess shadow flicker and blade glint and inform the project layout.

Use of uniform, simple colours and non-reflective materials, and avoiding unnecessary lighting or signage.

All turbine blades will be finished with a low reflectivity treatment to minimise blade glint.

Screen planting will be offered to all neighbouring dwellings within 6 km of a wind turbine.

Continued discussion with the community and other key stakeholders to understand other opportunities to minimise the visual impact.

Cropped proposed view from the corner of Hamilton Highway and Boortkoi Road, looking south

Next steps

The final LVIA and shadow flicker and blade glint assessments will be submitted as part of the EES documentation for review and assessment by the Planning Minister. The Minister will place the EES and all technical assessments on public exhibition for a period of 30 days. Feedback received from the community during the public review period will be summarised in a Submissions Report and considered as part of the Minister's Assessment of the Project.

Community consultation

Wind Prospect is committed to engaging with the community in an open, transparent and meaningful way and providing ongoing opportunities for people to have their say. Community consultation has been undertaken since 2019 to establish landscape values, key landscape features, important viewpoints and the community's perception of the Project.

Consultation methods included:

- Phone calls
- One-on-one discussions
- Door-knocks
- Drop-in and information sessions
- Visual impact and shadow flicker assessments
- Visualisation tools
- Webinars
- Newsletters
- Website updates

Have your say

The environmental, social and economic technical studies are being finalised and we welcome you to have your say on the proposed Project. You will be provided with advance notice of the EES exhibition and the formal opportunity to submit a submission, however you can provide feedback at any time by getting in touch with the Project team by email, phone or mail.

We will be out in the community in the lead up to and during the public exhibition period to answer questions about the proposed Project, the EES, technical studies and any other queries you may have.

Visit the Project website for more information on our upcoming in-region engagement activities.

Wind Prospect respectfully acknowledges the Traditional Owners of the land on which our office and each of our projects are located. We also acknowledge and uphold their continuing relationship to the land and pay our respect to their Elders past, present and emerging.

Contact

If you need an interpreter, please call 13 14 50. If you are deaf and/or find hearing or speaking with people on the phone difficult, please contact the National Relay Service on voice relay number 1300 555 727, TTY number 133 677 or SMS relay number 0423 677 767.

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