

Hexham Wind Farm

FACT SHEET Surface Water

The proposed Hexham Wind Farm (the project) is located between Hexham, Caramut and Ellerslie in the Moyne Shire in south-west Victoria. The project would incorporate up to 106 wind turbines with a total height of up to 260 metres from ground to blade tip. The project would also include an on-site terminal station and battery energy storage system (BESS) and other associated infrastructure such as access tracks.

As part of the Victorian Government's planning and approvals process for major projects, Wind Prospect has prepared 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 aspects such as biodiversity, ecology, historical heritage, Aboriginal cultural heritage, landscape and visual amenity, traffic and transport, noise, socioeconomic and surface and groundwater.

Extensive research and community and stakeholder consultation has been 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 project. Wind Prospect recognises the value of the natural and built environment in which the 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.

Assessment

As part of the EES, Wind Prospect engaged Water Technology Pty Ltd to prepare a Surface Water Impact Assessment. This assessment has been prepared in accordance with the Victorian Government Planning Minister's scoping requirements for the assessment of environmental effects, relevant legislation and government guidelines, and stakeholder and community consultation. The impact assessment outlines the likelihood and consequences of impacts to water catchments within the project site and surrounding areas. The studies consider the hazards and risks during construction, operation and decommissioning phases and makes recommendations for mitigation measures and procedures to manage potential surface water impacts.



- ▼ The surface water investigation area, shown on the map below, includes the project site and surrounding areas, comprising of the Hopkins River catchment (north and central portions of the project site) and Mustons Creek catchment (upstream of the confluence of Mustons Creek and the Hopkins River).

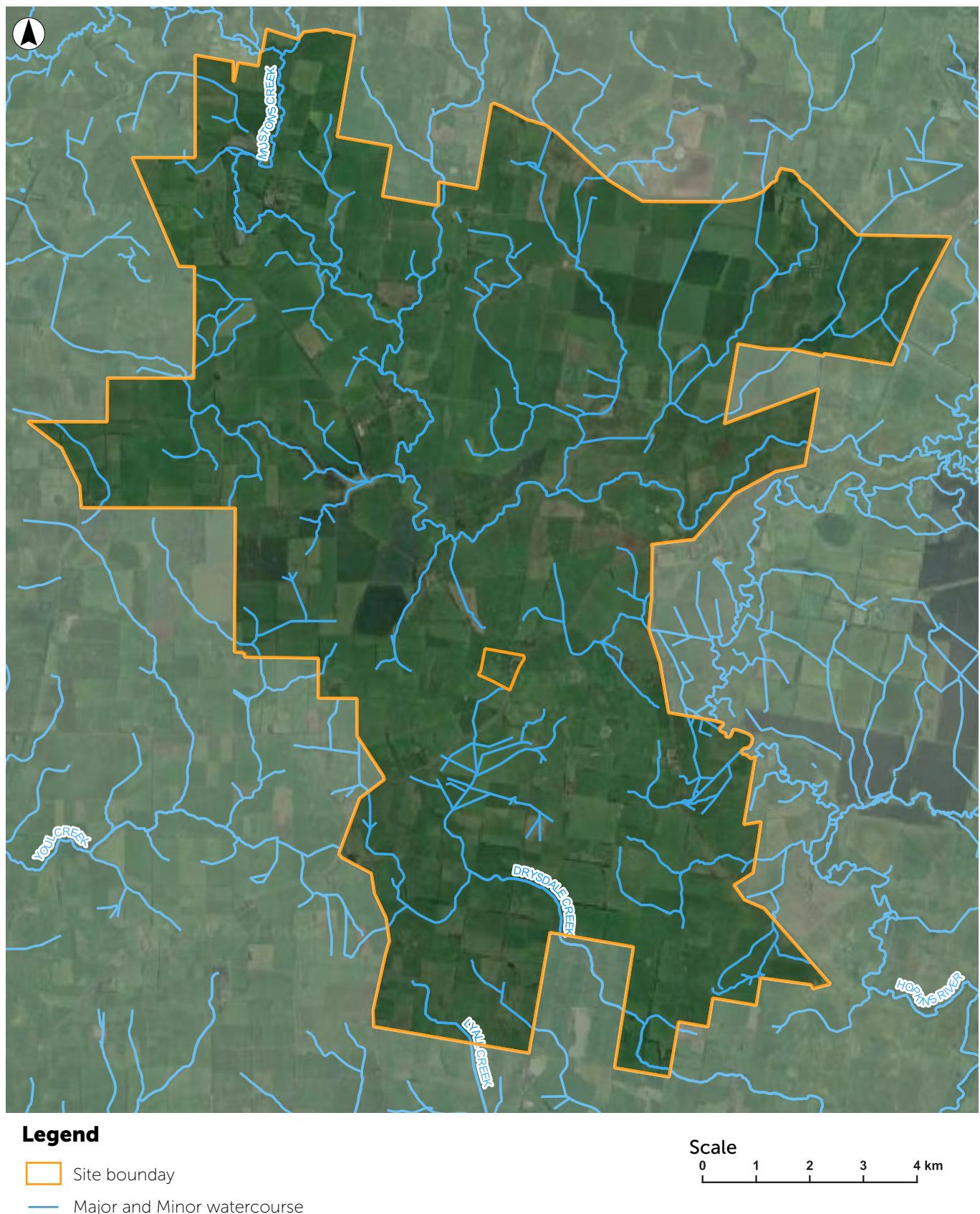


Figure 1. Local watercourses in relation to the project site

Background

The project is located within the Hopkins basin, where large areas have been cleared for agriculture (primarily for sheep and cattle grazing).

How the assessment was carried out

The assessment of potential impacts to surface water was informed by:

- A desktop review of various databases, maps and reports to develop an understanding of the existing surface water environment within the project site
- Hydrologic and hydraulic modelling to analyse flood impacts and behaviours within the project catchments and calculate projected areas of flooding as a result of infrastructure positioning
- Climate projection modelling to understand the effect of climate change on flood levels for the existing topography of the project site
- A conceptual water balance model for the proposed temporary on-site quarry, which estimates catchment run-off volume and behaviour
- Water quality sampling to assess impacts on aquatic ecosystems

Findings

The Surface Water Impact Assessment considered the potential impacts of the project on key surface water features and environmental values. The assessment found that the impacts of the project would be low to negligible providing design measures and management controls are implemented.

Key findings concluded:

- Impacts on the water quality and flow would be localised, occur for a short duration and be of low severity
- There could be a temporary increase in sedimentation from runoff from stockpiles or cleared areas. This would most likely occur during periods of intense rainfall, which has the potential to reduce water quality, but is considered manageable with appropriate mitigation measures
- With the implementation of design mitigations for the proposed temporary on-site quarry and BESS, no impacts from their construction and operation are predicted to impact watercourses or tributaries
- No permanent changes to drainage patterns are predicted for ephemeral wetlands.

Managing surface water impacts

The project has sought to eliminate potential impacts to surface water through careful and detailed design measures including:



Flooding avoidance and minimisation – surface water modelling has guided location selection and design of project infrastructure.



Water management – the temporary on-site quarry has been designed as a 'zero discharge site' meaning all surface and groundwater would be managed within the quarry site using retention basins, swale drains, bunding, sediment traps and sumps.



Waterway crossings – modelling has informed the planned location of crossing points for access tracks and electrical cables to avoid areas of potential flooding; site specific designs would also be prepared to guide how the crossings are constructed.



Avoidance of environmentally sensitive locations – buffer zones have been included in the design to avoid wetlands, watercourses and riparian zones to protect important habitats for aquatic and terrestrial biodiversity.

The following targeted management controls would also be applied:

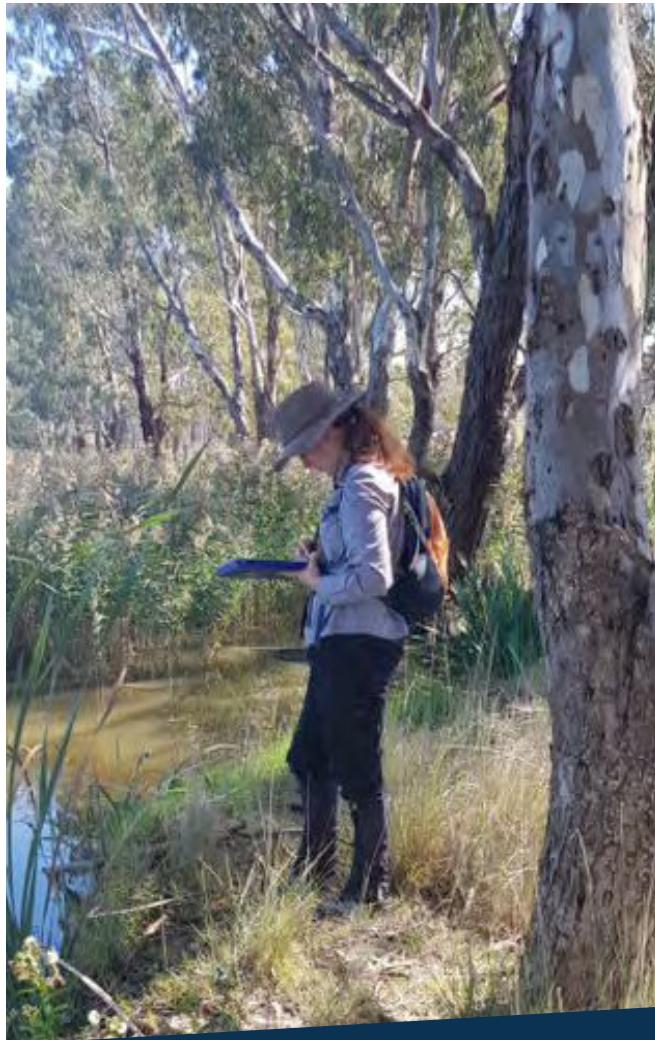
- Where possible, scheduling watercourse trenching works during the drier months of the year and lowest flow of the waterway
- Avoiding works during high rainfall events
- Restoring temporarily disturbed waterways and vegetation as soon as practicable following open cut trenching works
- Monitoring surface water quality upstream and downstream of the works during planning, construction and operation
- Minimising clearing of vegetation particularly along drainage lines, waterways and steep slopes
- Installing sediment fencing to protect riparian zones where works occur within 30 metres of creeks.



▲ Figure 2. Hopkins River at Ellerslie (east of the project site)

Summary

The Surface Water Impact Assessment prepared for the EES concludes that the project can be built and operated with low to negligible impact on surface water, providing design measures and management controls are implemented.



Next steps

The Surface Water Impact Assessment has been submitted as part of the EES documentation. The EES and all technical assessments will be placed on public exhibition for a period of 30 days. You can review the EES and technical reports on the Hexham Wind Farm website at: www.hexhamwindfarm.com.au/ees.

Formal submissions received from the community during the public exhibition period will be summarised in a Submissions Report and considered as part of the Minister's Assessment of the project.



Have your say

During the public exhibition period, you have the opportunity to provide a formal submission on the proposed Hexham Wind Farm. There will be opportunities to meet the project team and hear from technical experts about the proposed project, the EES and technical studies.

Visit the *Community page*
(hexhamwindfarm.com.au/community)
of the website for more information on
our upcoming in-region engagement
activities and ways to get in touch.

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

For more information or to speak directly to a Wind Prospect team member contact us.

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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