

# Lotus Creek Wind Farm

Project Overview

March 2022

## Location



The Lotus Creek Wind Farm site is between Mackay and Rockhampton, and approximately 20 km west of St Lawrence in central Queensland.

It is in the Central Queensland Renewable Energy Zone, an area identified by the Australian Energy Market Operator as optimal for new projects to support the state's renewable energy growth and clean energy transition.

- 55 wind turbines.
- Capacity of ~341 megawatts.
- Up to 300 jobs during construction and 10 ongoing jobs during operation.

*Photograph of the project area*



The location proposed for Lotus Creek Wind Farm is approximately 20 km west of St Lawrence. The project involves 55 wind turbines and associated infrastructure, connected to existing powerlines.

## Planning & assessment

The proposal is subject to a rigorous and comprehensive assessment process at both the state and federal level.

### State assessment

The development application and accompanying assessment reports were lodged with the Queensland Government's State Referral and Assessment Agency (SARA) in December 2021.

SARA delivers a co-ordinated, whole-of-government approach to assessment of wind farm applications and the framework is provided by the State Development Assessment Provisions' (SDAP) *State code 23: Wind farm development*.

State code 23 outlines matters to be assessed and prescribes the methodology for technical assessments, minimum actions and acceptable outcomes to demonstrate compliance. It aims to make sure that a wind farm is appropriately located, sited, designed, constructed and operated to ensure:

- Safety, operational integrity and efficiency of air services and aircraft operations.
- Risks to human health, wellbeing and quality of life are minimised by ensuring acceptable levels of amenity and acoustic emissions at sensitive locations.
- The development avoids, or minimises and mitigates, adverse impacts on the natural environment (fauna and flora) and associated ecological processes.
- The development does not unreasonably impact on the character, scenic amenity and landscape values of the locality.
- The safe and efficient operation of local transport networks and road infrastructure.

### Commonwealth assessment

The project has also been determined a 'controlled action' under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) by the Australian Department of Agriculture, Water and the Environment (DAWE). This means the proposal must also be assessed and approved under the EPBC Act by DAWE.

Epuron has responded to a request for further information from DAWE. Once this has been accepted by DAWE it will be placed on public exhibition.

The project's EPBC Act documentation (Reference: 2020/8867) is available on the EPBC Act - Public notices portal at [epbcnotices.environment.gov.au/referralslist/](http://epbcnotices.environment.gov.au/referralslist/)



## Aboriginal cultural heritage

Epuron recognises the continuing connection that Aboriginal and Torres Strait Islander Peoples have to their land and acknowledges that the Lotus Creek Wind Farm project area is Barada Barna Peoples and Barada Kabalbara Yetimarala Peoples country.

The project team has worked with the site's Traditional Owners to establish Indigenous Land Use Agreements that will ensure respect to traditional values and culture are upheld.

## Ecology

The proposal requires rigorous assessment of potential ecological impacts. The ecological assessment work has been done by independent specialists and scientists according to state and federal requirements. It has involved investigating plant and fauna species and habitats over multiple seasons through field studies and surveys.

Epuron has worked with its consultants and stakeholders to avoid and mitigate impacts to high value areas of habitat. The proposal includes a raft of measures to improve conservation efforts on the project site including monitoring local wildlife and sharing research data, providing funds to support koala conservation and supporting host landowners to improve koala habitat, control predators and maintain best practice fire management. With its conservation commitments the project can achieve a net positive outcome for biodiversity in the site over the longer term, including an increase in the size and quality of koala habitat and a reduction in bushfire risk.

## Landscape and visual impact

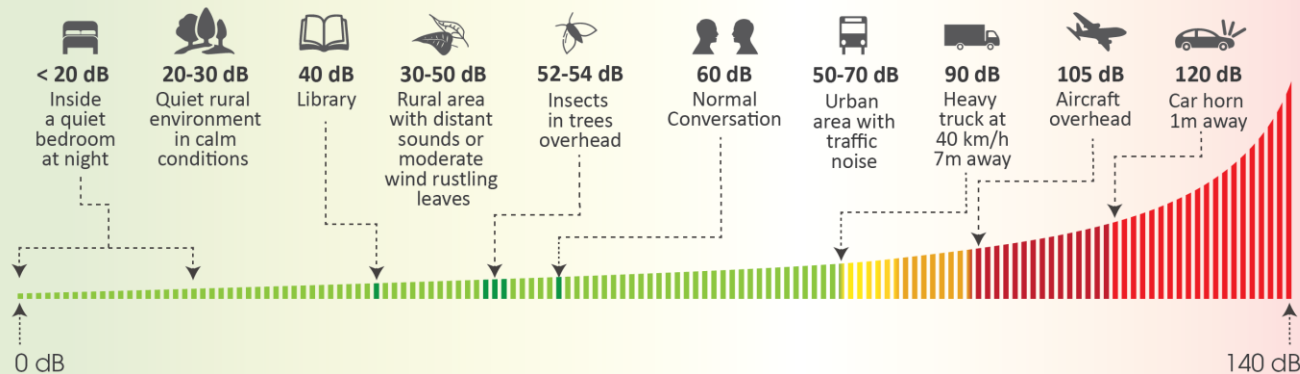
Photomontages have been done to show what the wind farm would look like from selected public viewpoints where it could be seen. These are compiled by combining location photographs with a technical digital representation of the wind farm called a wireframe. Wireframes are produced using specialist industry software and based on precise distances and dimensions of the proposed wind turbine model to provide an accurate and correctly scaled representation.

The photomontage above shows the view from a location on St Lawrence Croydon Rd, facing north-east from about 1.2 km away.

## Noise

Wind turbine noise can be predicted based on acoustic modelling and a comprehensive technical noise assessment is required for the application. Compliance with strict noise limits must be demonstrated before approval is granted and via a noise monitoring program during operation. For host lots the noise level at a residence must not exceed 45 dB or the background noise by more than 5 dB at night (10pm-6am). For non-host lots it must not exceed 35 dB or the background noise by more than 5 dB at night (10pm-6am) and 37 dB or the background noise by more than 5 dB during the day (6am -10pm). The diagram below shows noise levels in decibels (dB) of familiar sounds for reference.

The technical noise assessment has been done using predictive modelling by leading independent acoustic specialists and the project is predicted to be well within the noise limits.





## Livestock

Wind farms and cattle farming are complementary land uses. Livestock appear to be unaffected by wind turbines and will often use the towers for shelter or shade.

## Construction and traffic

The project will involve comprehensive construction management and traffic management plans, compliant with Queensland Occupational Health & Safety legislation and the local government planning scheme. They will cover all aspects of construction including working hours, noise, traffic and dust management.

Construction can only commence after the detailed engineering design has been completed and preparation may require upgrading the access road. Access tracks would be the standard width of 5.5 m and only wider where required due to topography or for parts, cabling, safety, fire management and erosion and sediment control. Where roads are temporarily wider for construction they will be rehabilitated afterwards.

## Fire safety and management

Wind turbines are designed to mitigate fire risk. They are constructed with fire resistant materials and operated by sophisticated monitoring systems that automatically follow shutdown procedures in response to operational issues, and can be remotely shut down in the event of fire in the area.

Wind turbines also provide a safe path for lightning strikes to the ground and access tracks serve as natural fire breaks.

A comprehensive bushfire management plan for the site would be developed in consultation with Queensland Fire and Emergency Services (QFES). QFES would manage firefighting on the site in the same way as any other area, using ground and air based resources subject to prevailing weather conditions, and avoiding wind turbines in the same manner as any other obstructions such as buildings or powerlines.

## End of operation

Wind turbines have an operational life of approximately 25 years. Options at the end of this period include extending the life of the wind farm via refurbishment, repowering the site with new infrastructure or decommissioning.

If the operator decides not to extend or refurbish the facility it will be decommissioned, usually within 12 months of ceasing operation.

Decommissioning would involve the establishment of a decommissioning fund by the operator, the removal of above ground infrastructure including wind turbines, electrical infrastructure and maintenance buildings, and returning the site to its former state where practicable.



## EMI and shadow flicker

Electromagnetic interference (EMI) refers to interference by operating wind turbines with the transmission of magnetic waves emitted from a source such as television, radar or radio signals. Shadow flicker refers to the appearance of shadows from rotating turbines under certain conditions and times of day.

Expert consultants have determined that the project would not cause any EMI impacts and that shadow flicker would not be an issue.

## Project benefits

**JOBS** - The project is expected to provide up to 300 jobs during the construction period and 10 ongoing jobs during operation.

**ECONOMIC BOOST** - Construction is expected to generate significant direct and indirect expenditure within the local, regional and Queensland economy including work for contractors and increased patronage for surrounding accommodation, retail, service and hospitality businesses.

**CLEAN ENERGY** - Growth in Queensland's renewable energy capacity will continue to put downward pressure on electricity prices and deliver affordable, clean, reliable electricity to households and businesses. Once operational Lotus Creek Wind Farm would have a generation capacity of about 341 megawatts, enough electricity to power ~300,000 homes, and will support the Queensland Government's target of 50% renewable energy generation by 2030.

## Planning and assessment

### Queensland Government

- 1 Site selection, initial concept and preliminary investigations
- 2 Pre-lodgement meeting with State Assessment and Referral Agency (SARA)
- 3 Studies and assessments (prescribed by SARA State code 23)
- 4 Application and assessments submitted to SARA

**WE ARE HERE** Assessment

- 6 Determination

### Commonwealth

- 1 Referral to the Australian Department of Agriculture, Water and the Environment for review under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

- 2 Decision: controlled action (Referral 2020/8867), assessment by preliminary documentation

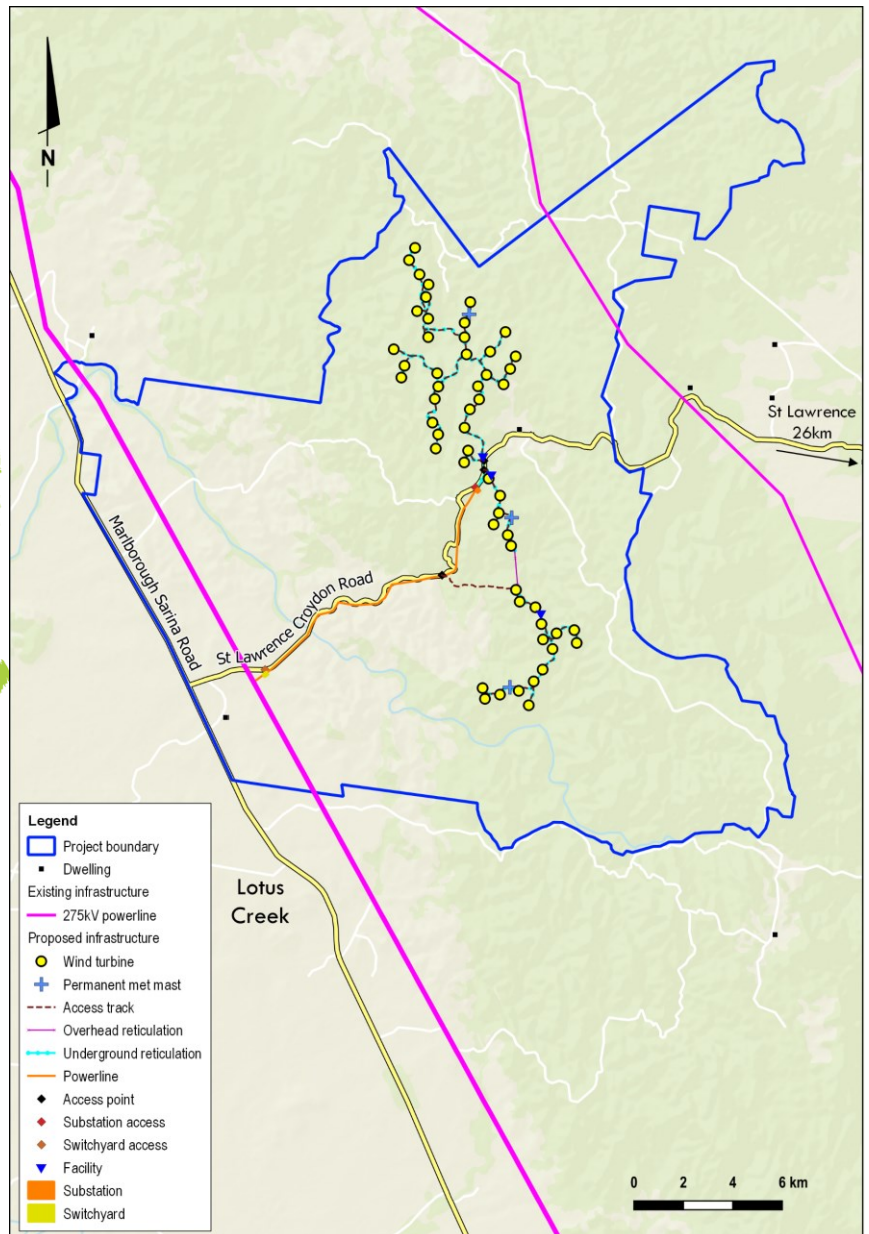
- 3 Request for further information (RFI)

**WE ARE HERE** Response to RFI submitted

- 5 Response accepted and put on public exhibition

- 6 *If required:* response to submissions / information revised

- 7 Determination



Lotus Creek Wind Farm proposed site layout with 55 wind turbines.

## Questions and feedback

Questions and feedback are welcome at any time and can be sent to the project team via email to [info@lotuscreekwindfarm.com.au](mailto:info@lotuscreekwindfarm.com.au) and the online feedback form at [lotuscreekwindfarm.com.au](https://lotuscreekwindfarm.com.au)

## Project updates

Project updates are available via post or email. For email updates register at [epuron.com.au/mailling-list-details](https://epuron.com.au/mailling-list-details). To receive updates via post please email your name, postal address and a request to be added to the mailing list to [info@lotuscreekwindfarm.com.au](mailto:info@lotuscreekwindfarm.com.au). We value your privacy and your details will only be used for this purpose.

## More information

[lotuscreekwindfarm.com.au](https://lotuscreekwindfarm.com.au) or scan the QR code  
Email updates: [epuron.com.au/mailling-list-details](https://epuron.com.au/mailling-list-details)  
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