

# Valley of the Winds

Renewable Energy from ACEN

## Fact sheet

### Why we need Valley of the Winds

Valley of the Winds involves the development, construction, operation and decommissioning of a wind project situated south of Coolah, within the Warrumbungle Shire Council.

The project consists of a total of 148 wind turbines located across three clusters named Mount Hope, Girragulang Road and Leadville.

- Valley of the Winds will help Australia transition to net zero carbon emissions, delivering low-cost renewable energy

and jobs for the Central West region of New South Wales.

- The Project, if approved, will generate enough renewable energy to power approx 445,000 average Australian homes per annum and contribute to Australia's domestic and international commitments of renewable energy development, including NSW's target of 50% renewable energy by 2030.
- Analysis in the region has identified

an excellent wind resource, suitable for development of a wind project. Several supporting studies, including environment, noise, visual, cultural heritage and social assessments have been completed and published within the project's Environmental Impact Statement (EIS). These have helped us further design the project resulting in project benefits being seen by the wider regional community.

#### At a glance

**\$1.7B**

construction value



Approx **400** jobs during construction



Up to **50** FTE jobs for 30 years



Employ and buy **LOCAL** commitment



Installed capacity of approx **800MW**

Offset **2M**

tonnes of CO<sub>2</sub> emissions each year



Power around

**445,000**

average Australian homes each year



Contribute to the realisation of NSW's target of **50%** renewable energy by 2030



Shared benefits through **COMMUNITY** benefit funding

#### Renewable Energy Zones (REZs)

Renewable Energy Zones (REZs) were introduced by the Australian Energy Market Operator (AEMO) in 2018 as a way of identifying 'high renewable resource areas'.

Five REZs have been identified in New South Wales, based on their potential to deliver additional clean energy to the National Electricity Market and support the transition away from coal-fired generation. These locations also benefit from existing energy resources such as hydro and wind, and have established grid infrastructure close by.

The Valley of the Winds project is in the Central West-Orana REZ. <https://www.energyco.nsw.gov.au/renewable-energy-zones/centralwest-oranarenewable-energy-zone>

#### Transmission connection

Valley of the Winds requires a high voltage connection to supply power to homes and business across NSW.

We have been working with the NSW Government and Energy Corporation of NSW (EnergyCo) to facilitate connection into the proposed Central West Orana Renewable Energy Zone (CWO REZ).

EnergyCo is responsible for ensuring that new network infrastructure is developed to connect the Central-West Orana REZ to the existing grid, delivering affordable electricity to NSW.


To achieve this outcome, EnergyCo will lead the delivery of the Central-West Orana Transmission Project. This process will involve engaging with the local community and key stakeholders, acquiring land and easements required for REZ network infrastructure, developing and overseeing the Environmental Impact Statement processes and running a competitive tender process to appoint a Network Operator to design, build, finance, operate and maintain the REZ network infrastructure.

FOR MORE INFORMATION:

 [valleyofthewinds.com.au](https://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

 1800 512 339

 **ACEN** | Australia

# Valley of the Winds

Renewable Energy from ACEN

## Fact sheet

### Aboriginal heritage

A detailed Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared in consultation with Registered Aboriginal Parties (RAPs) for the project. The ACHAR included:

- background research, and a predictive model to assist in the identification of potential constraints
- identification and recording objects or sites of Aboriginal heritage significance, as well as any
- landforms likely to contain further archaeological deposits
- assessment of Aboriginal cultural values that have potential to be impacted by the project
- assessment of the significance of any recorded Aboriginal sites, objects, or places likely to be impacted by the project
- assessment of the likely impacts of the proposed work to Aboriginal cultural heritage and development of management recommendations.

Four new Aboriginal sites were identified during the field survey. The location of one previously recorded NSW Aboriginal Heritage Information Management System (AHIMS) site (36-3-0111) was ground-truthed during the inspection. One other known AHIMS site (36-3-0113) was unable to be inspected due to access restrictions.

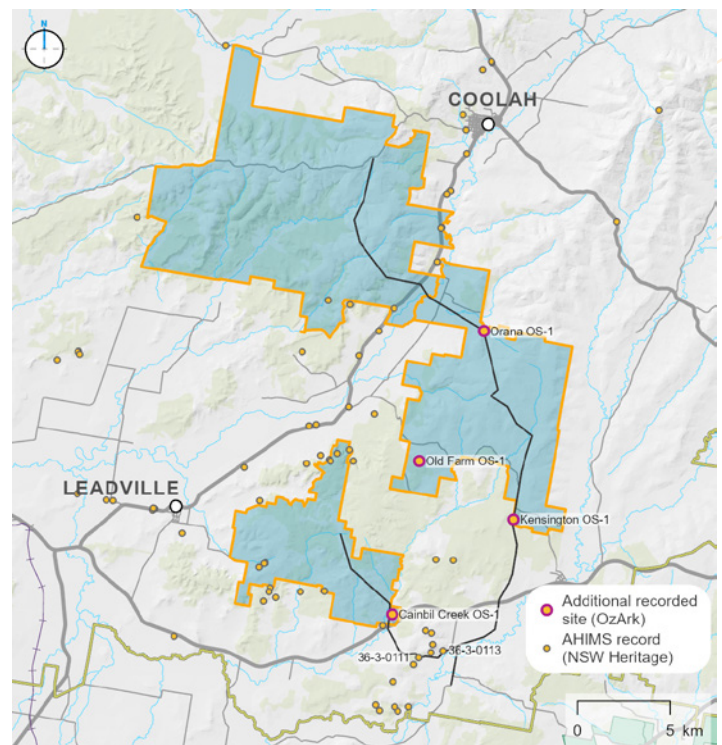


Image: silcrete and quartzite flakes found at Orana OS-1

The four new Aboriginal sites included:

- Orana OS-1 – artefact scatter with potential archaeological deposit (PAD)
- Old Farm OS-1 – stone quarry and artefact scatter with PAD
- Kensington OS-1 – artefact scatter
- Cainbil Creek OS-1 – artefact scatter with PAD.

One site (Cainbil Creek OS-1) is expected to be partially impacted by the project and the remaining five sites have been avoided through design refinement.


An Aboriginal cultural heritage management plan will be developed which is to be agreed to by the RAPs and the Department of Planning and Environment prior to commencement.

#### FOR MORE INFORMATION:

 [valleyofthewinds.com.au](http://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

 1800 512 339

 **ACEN** | Australia



# Valley of the Winds

Renewable Energy from ACEN

## Fact sheet

### Traffic and transport

A detailed traffic and transport assessment has been prepared as part of the EIS for the project. The assessment included the following:

- a review of existing baseline conditions, including traffic survey data
- estimation of future year traffic generation for the construction, operation, and decommissioning phases
- analysis of the future year conditions with and without the project.

The traffic and transport impact assessment deals primarily with the construction phase of the project as traffic generation is forecast to be greatest during the construction phase, when compared to the operation and decommissioning phases, which would require lower or equivalent labour force and materials.

The potential traffic impacts associated with the construction workforce on the surrounding road network have been assessed under two scenarios:

- regional distribution of workforce: including the townships of Coolah, Dunedoo, Cassilis, Coonabarabran, Gulgong and Mudgee
- centralised workforce: bulk of the construction workforce accommodated at a temporary workers accommodation camp located on site.

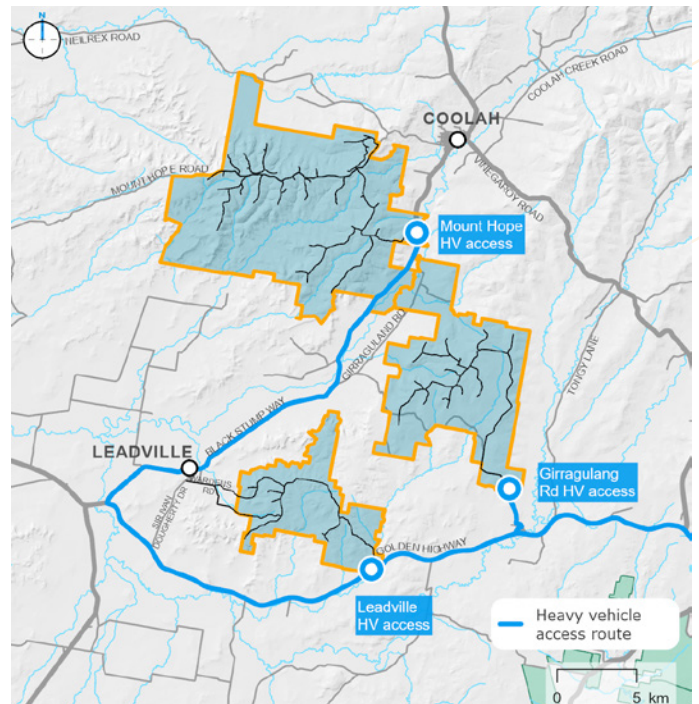
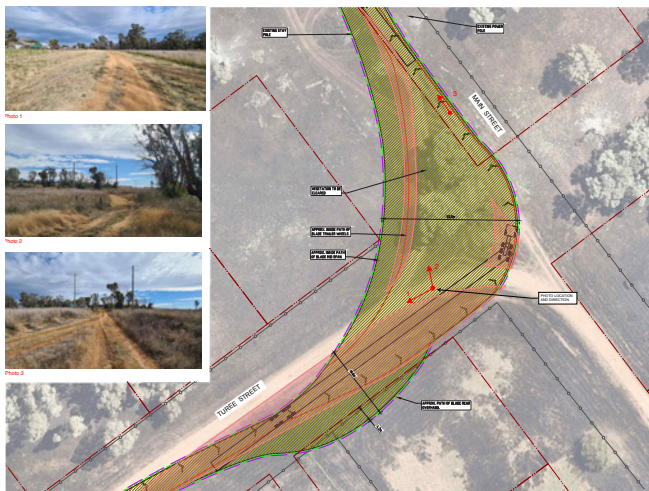


Image: View north to Mt Hope-HS01 showing the trigonometrical station and surrounding stone circle

The project would generate the greatest traffic and transport impact during the construction peak period.

The existing low volume of background traffic in the area, these additional trips are expected to have minimal impact on the surrounding road network operational performance.

The assessment indicates upgrades would be needed along the local access roads to the three clusters and to some intersections prior to construction commencing.

A construction traffic management plan will be prepared in consultation with TfNSW and Warrumbungle Shire Council. The plan will include details such as temporary traffic management plans, driver's code of conduct, dilapidation survey and controls for transport and use of dangerous goods.


The plan will seek to minimise any traffic delays, disruptions, and safety risks associated with project related construction traffic.

FOR MORE INFORMATION:

 [valleyofthewinds.com.au](http://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

 1800 512 339

 **ACEN** | Australia

# Valley of the Winds

Renewable Energy from ACEN

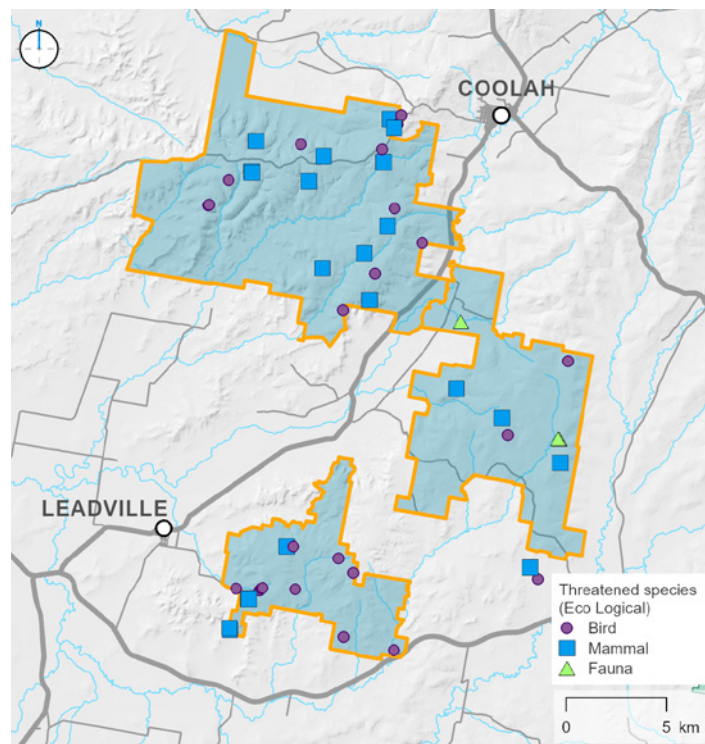
## Fact sheet

### Biodiversity

A detailed biodiversity assessment has been prepared as part of the EIS and to help inform the development of the project's layout. The biodiversity assessment included the following:

- desktop review of background information, mapping, and publicly available databases
- extensive field surveys within the project's site
- quantification of potential impacts to biodiversity values
- calculation of the biodiversity offsets that may be required, and development of management and mitigation measures to reduce potential impacts.

Early site surveys in 2019 helped to identify areas of high biodiversity values which were considered during further refinement of the layout to **avoid, minimise and mitigate** impacts to biodiversity values.



Nine plant community types were recorded during the surveys, including:

- one plant community type assessed to meet the threshold for **Inland Grey Box** Endangered Ecological Community (EEC), listed under both the *Biodiversity Conservation Act 2016* (BC Act) and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- two plant community types conforming to **White Box - Yellow Box - Blakely's Red Gum Grassy Woodland**, a Critically Endangered Ecological Community (CEEC), listed under the BC Act and EPBC Act.

Assessment and survey of potential threatened species habitats recorded fifteen threatened fauna species and one flora species within or adjacent to the project site.


A detailed biodiversity management plan will be developed by ACEN Australia prior to commencement of construction.

FOR MORE INFORMATION:

 [valleyofthewinds.com.au](http://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

 1800 512 339

 **ACEN** | Australia



# Valley of the Winds

Renewable Energy from ACEN

## Fact sheet

### Consultation and planning pathway

#### Planning pathway

The project will be assessed as a State Significant Development under Part 4 of the *NSW Environmental Planning and Assessment Act 1979*. The planning process for State Significant Developments is shown on the right.

#### Emerging themes

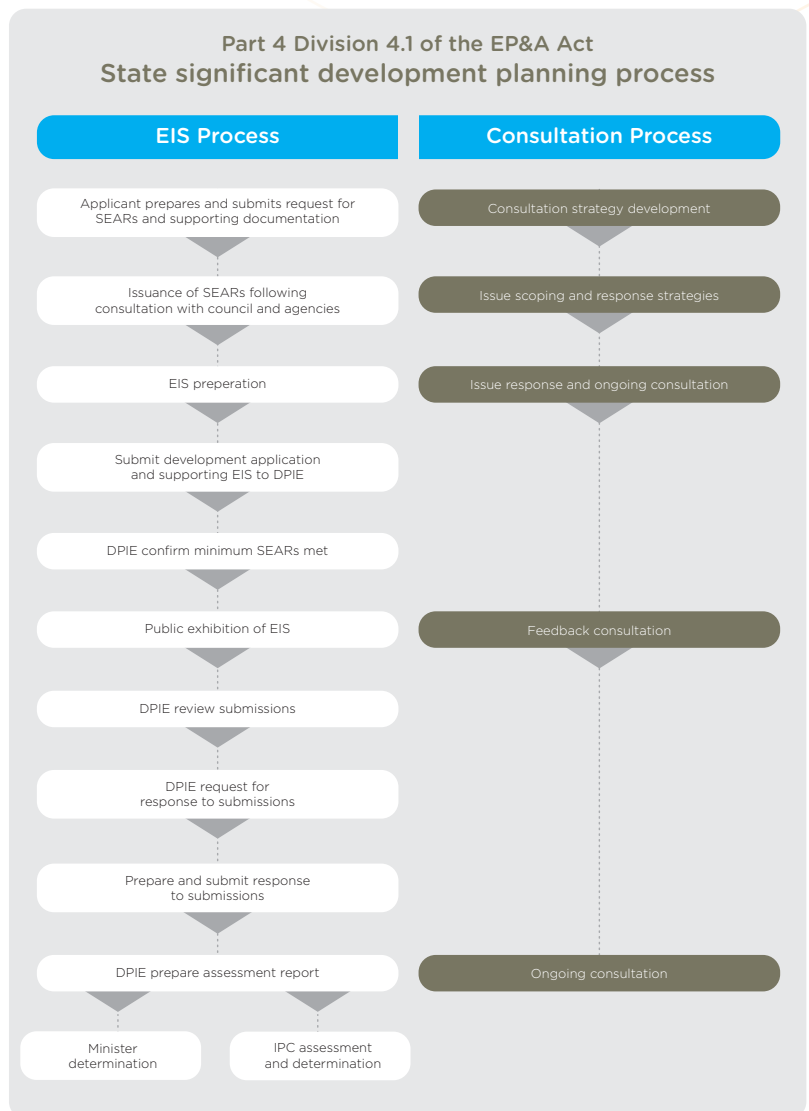
Key themes emerging from community consultation include:

- enhanced wellbeing from job opportunities and local spend
- local community benefit from direct investment in community initiatives
- landscape values and changes to how people experience the rural surroundings
- workforce housing, including accommodation pressures due to construction workforce if required to house in local townships
- construction noise, dust and traffic impacting on how people live, work and play
- cumulative impacts as a result of concurrent nearby major projects
- changes to community composition and cohesion as a result of the transient construction workforce.

Changes to the project's layout, construction methodology and local investment initiatives have been incorporated throughout the project development to minimise potential negative impacts and maximise benefits to the region.


#### Key stakeholder groups

- **Government** – Government and regulatory departments and consent authorities
- **Community** – near neighbours within and surrounding the study area, either directly or indirectly affected by the project, community service providers, special interest




FOR MORE INFORMATION:

 [valleyofthewinds.com.au](http://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

 1800 512 339

 **ACEN** | Australia

# Valley of the Winds

Renewable Energy from ACEN

## Fact sheet

### Noise

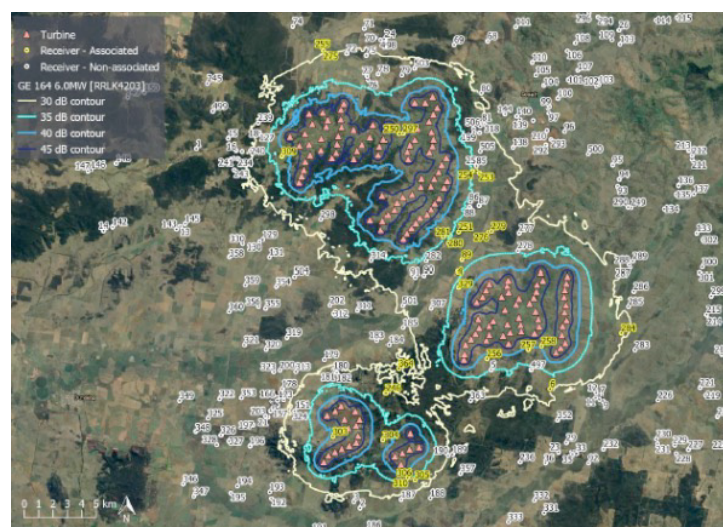
A detailed noise and vibration assessment has been prepared as part of the EIS for the project.

The assessment included:

- background noise monitoring to confirm the existing noise levels across the wind farm site
- assessment of potential construction and operational noise impacts
- assessment of potential cumulative noise impacts when considering operation of the Liverpool Range Wind Farm
- assessment of road traffic noise
- recommended management and mitigation measures.

Three different types of turbines were modelled to confirm if specific technologies should be included or excluded from further consideration.

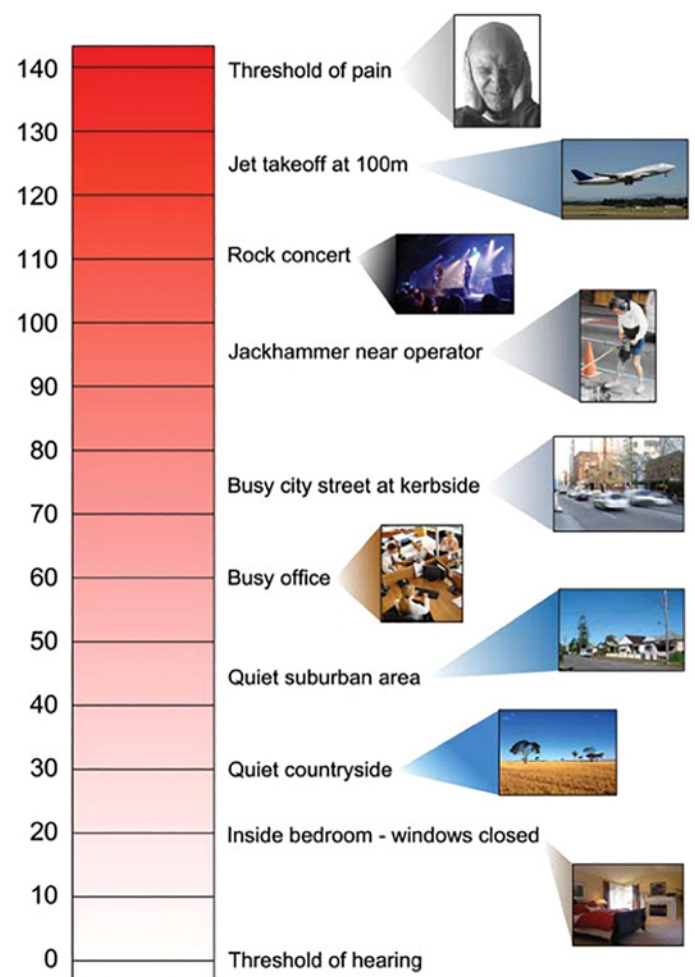
The assessment demonstrates that the current wind turbine layout would meet NSW's strict **noise limits of 35 dB(A)** at all non-associated dwellings, except for one dwelling when considering one of the modelled turbine types. This exception will be considered further.



When assessing the potential cumulative noise impacts of the project with the operation of the Liverpool Range Wind Farm, no change to the compliance outcomes of the assessment are expected.

A noise and vibration management plan will be developed for both the construction and operations phases of the project.

### Indicative A-weighted decibel (dBA) noise levels in typical situations




FOR MORE INFORMATION:

 [valleyofthewinds.com.au](http://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

 1800 512 339

 **ACEN** | Australia



# Valley of the Winds

Renewable Energy from ACEN

## Fact sheet

### Non-aboriginal heritage

A heritage impact statement has been prepared as part of the EIS for the project. The assessment included:

- background research and desktop information review
- site survey
- assessment of the historic values of items that have potential to be impacted by the project.

Four historic heritage items were recorded within the survey boundary. No areas that are likely to contain significant archaeological deposits of conservation value were identified within the survey boundary.

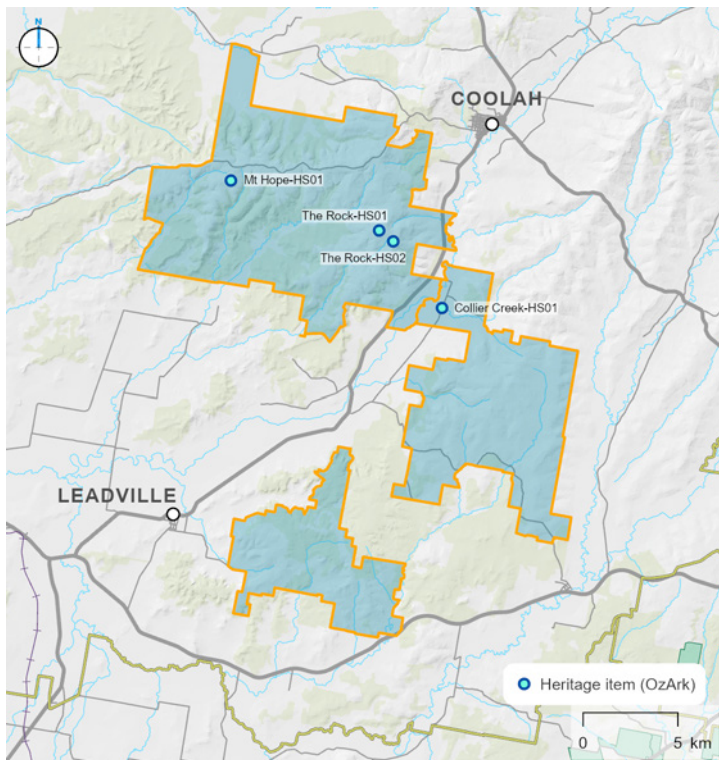


Image: View north to Mt Hope-HS01 showing the trigonometrical station and surrounding stone circle

The four sites included:

- Mt Hope-HS01: trigonometrical station
- The Rock-HS01: trigonometrical station
- The Rock-HS02: rural structure
- Collier Creek-HS01: rail bridge.


The four identified historic items have been assessed as having no significant historic values under the current Heritage NSW guidelines and the Burra Charter.

Regardless, ACEN Australia is committed to avoiding disturbance to each of the sites to the extent practical, and no impacts to items of are currently expected.


A historic heritage management plan will be developed prior to commencement of construction to guide the management of non-Aboriginal heritage items.

FOR MORE INFORMATION:

 [valleyofthewinds.com.au](http://valleyofthewinds.com.au)

 [info@valleyofthewinds.com.au](mailto:info@valleyofthewinds.com.au)

 @ValleyoftheWinds

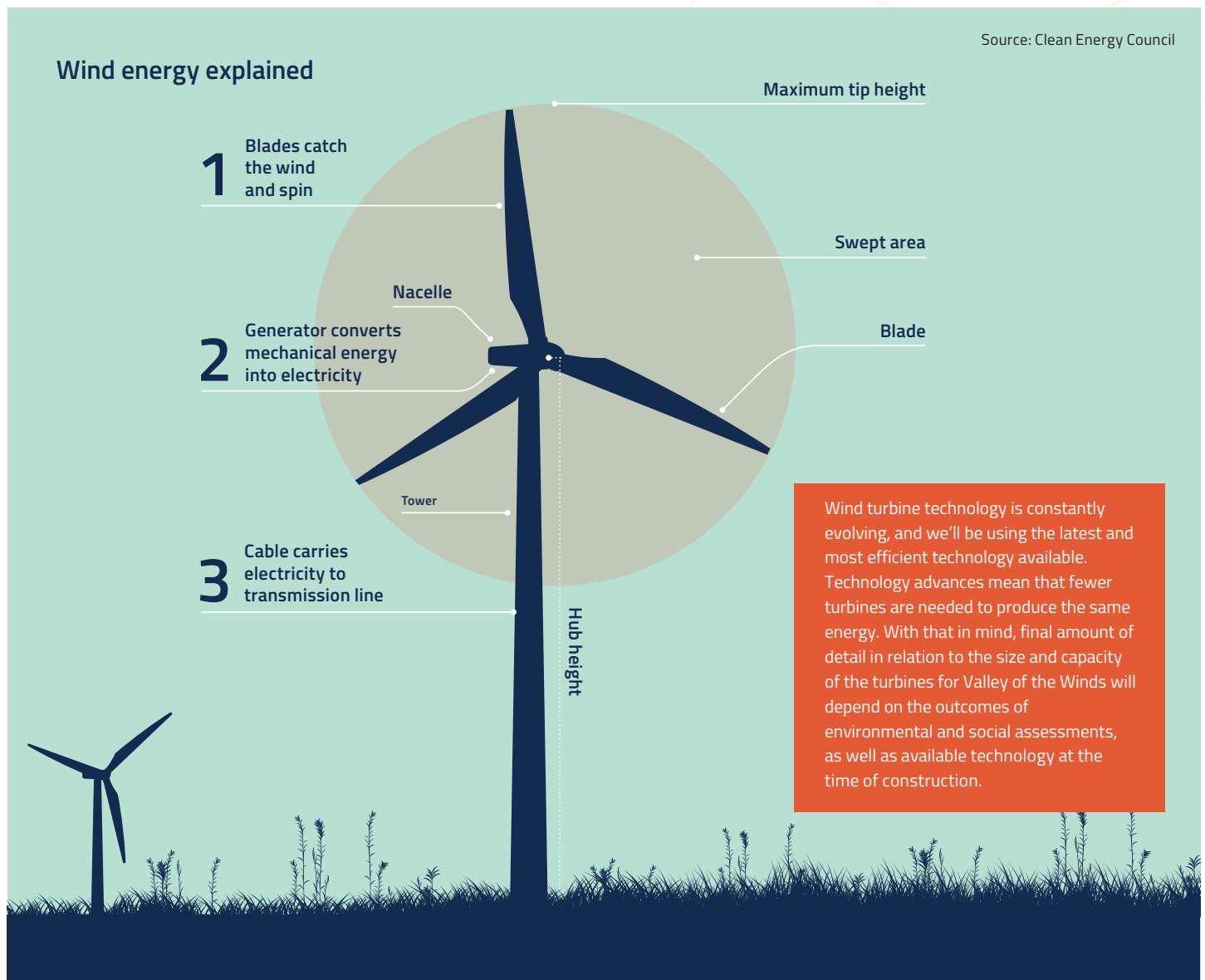
 1800 512 339

 **ACEN** | Australia

## Fact sheet

### Wind power and turbine technology

Wind power is currently among the cheapest sources of large-scale renewable energy. It involves generating electricity from the naturally occurring power of the wind. Wind turbines capture wind energy within the area swept by their blades. The spinning blades drive a generator that produces electricity for export to the grid.



FOR MORE INFORMATION: