

DEVELOPING A WIND FARM

The Mt Fyans Wind Farm is designed to operate for at least 25 years.

During its operational phase approximately 10 to 14 local staff will be hired to maintain and run the wind farm.



Musselroe Wind Farm

CONSTRUCTION

If the project is approved, construction will be subject to a detailed Construction Management Plan.

At the height of construction there may be up to 200 workers required. The construction process will take approximately 12 to 18 months.

Building access roads

Access roads are needed for transportation of equipment and future maintenance activities. During construction, components of the turbines are transported separately and assembled on-site.

Preparing foundations

A concrete foundation will be built to ensure that each turbine is safely secured. Each foundation is approximately 20 metres in diameter and has a maximum depth of 3 metres.

Assembling the tower

Once the foundation has been built, the tower is erected in sections by a large crane and bolted into place. The nacelle and blades are then carefully lifted and fixed to the tower.

Connecting the turbines

Underground cables will be installed to connect the turbines with an on-site substation. An overhead electrical line, sitting on poles, will connect the wind farm to the Mortlake substation.

Commissioning

After the installation process has finished, an extensive testing and commissioning process takes place before operations start.

Selecting turbines

The exact model of turbine will be selected during a tendering phase. The planning approval will cater for a range of turbine models. We are considering turbines with a maximum height of 165 metres.

The turbines are likely to have:

- a 3 to 4 megawatt generation capacity
- a 80-100 metre tower
- a rotor diameter of 120-130 metres.

Decommissioning

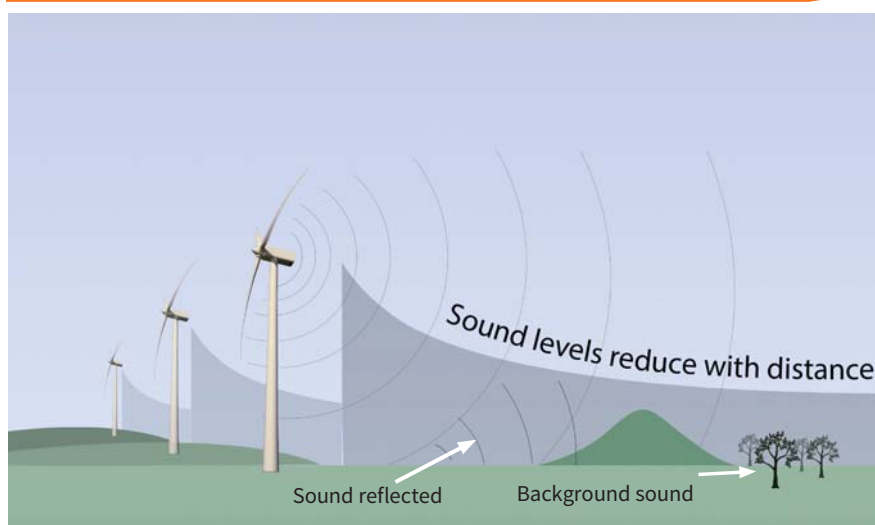
At the end of the wind farm's 25 year life, a decision will be made to either continue operations or decommission the wind farm.

If decommissioned, the turbines and towers will be removed and recycled. Decommissioning the site is always the responsibility of the owner of the wind farm.



Waterloo Wind Farm

WHO WILL HEAR THE TURBINES?



The sound from wind turbines increases with higher wind speed. Background sounds, such as wind blowing through trees also increases, masking the sound of the turbines.

Sound emitted by a turbine is created by the blade on its way down. Whether someone

hears a turbine is dependent on many factors including:

- wind direction and speed
- background noise levels
- topography, and,
- vegetation cover.

SOUND LEVELS

Source/activity	Indicative sound level (dbA)
Threshold of pain	135
Jet aircraft at 50 m	105
Pneumatic drill at 15 m	95
Truck at 50 km/h at 100 m	65
Conversation	60
Car at 65 km/h at 100 m	55
Wind farm at 1 km	35-45
Rural night time background	20-50