Palmer Wind Farm

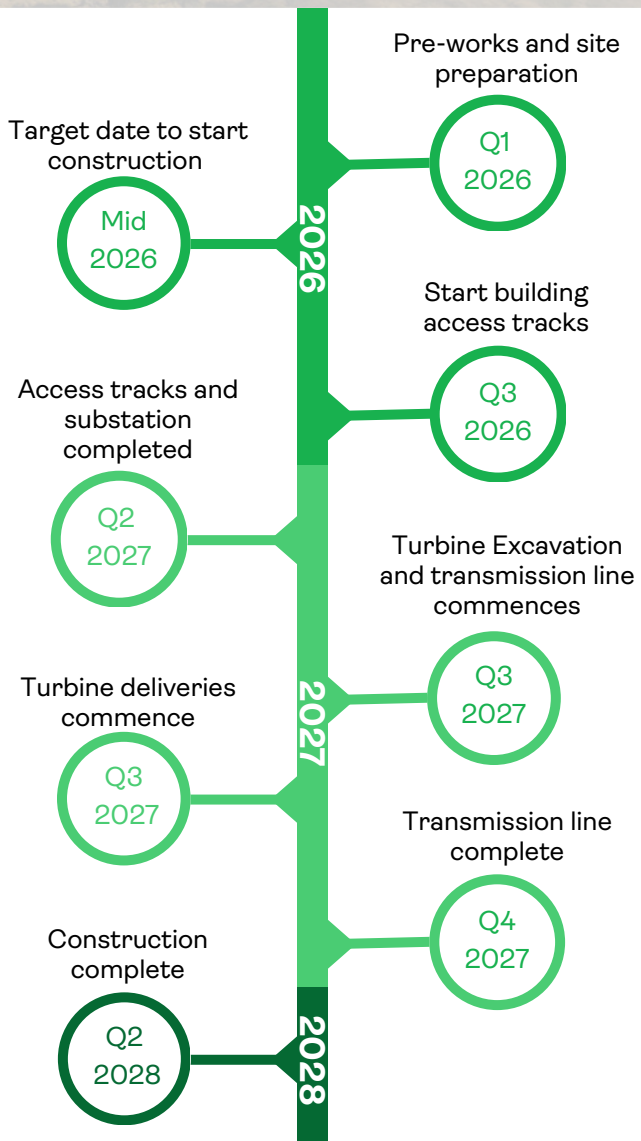
Onsite construction

This factsheet summarises the onsite construction process of the Palmer Wind Farm.

To make the Palmer Wind Farm we need to construct:

- 40 turbines
- Access tracks
- Hardstands (crane pad and assembly area) for the turbines
- Two electrical sub-stations
- A site compound
- Underground cables
- An overhead 275 kV transmission line within the project site.

It will take approximately two years to build the Palmer Wind Farm. A high level timeline is provided in Figure 1.



Construction & Commissioning

How is a wind farm constructed?

Construction will occur in stages, as outlined below.

1

SITE PREPARATION

On the wind farm site, access tracks are built to connect turbine locations to each other and supporting infrastructure. This is to allow the delivery of components and servicing during the life of the wind farm.

Offsite, some intersections may need to be upgraded for use by construction vehicles and oversize over-mass vehicles (OSOM). A concrete batching plant onsite or other temporary construction facilities are set up at the start of construction to supply the project. Environmental and cultural heritage protection measures are put in place prior to construction.

2

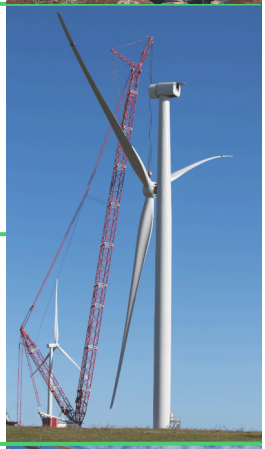
TURBINE FOUNDATIONS

A foundation is built to provide a secure footing for each wind turbine.
Typically, these are around 20 metres across and three metres deep.
A crane pad and assembly area, called a hardstand, are also constructed next to each foundation.

3

TURBINE ASSEMBLY

A wind turbine consists of a several tower sections, a hub, three blades and a nacelle (the box housing the generator). These parts are delivered separately, laid out in the assembly area, pre-assembled where possible, then lifted into place by a crane.



4

SUPPORTING INFRASTRUCTURE

Supporting infrastructure such as substations, monitoring masts, operations buildings and transmission lines are built to allow the wind farm to operate and export electricity to the national grid.

5

ELECTRICAL CONNECTIONS

Underground electrical and fibre optic cables are installed to connect the wind turbines and carry electricity and control data to the substation. Overhead transmission lines are constructed to connect the wind farm substation to the grid.

6

COMMISSIONING

After all supporting infrastructure has been built and tested, wind turbines are commissioned individually to start supplying electricity. Temporary infrastructure including construction buildings and construction access tracks are removed and the ground is rehabilitated.

What to expect during construction

Major project construction can be disruptive. The following questions explain what you will hear and see during construction and what techniques are used to manage impacts as much as possible.

What times will construction occur?

Working hours are Monday to Saturday, 7am to 7pm. Any works occurring outside these hours is considered 'out of hours' works.

Examples of when out of hours work could be needed are activities that can't be stopped until they are finished (e.g., concrete pours, turbine lifts).

We may, if needed, apply for permission to do work out of these hours.

What will you hear during construction?

Construction activities you may hear during working hours include concrete batching, excavation, rock breaking, blasting, moving construction vehicles and machinery on site. These activities will occur at different locations within the project area at different times, so the noise will not be constant throughout the two years of construction.

Why are you using blasting?

Blasting is used to break through rock more efficiently and is less disruptive to the community than prolonged rock breaking with machinery. Blasting will generally take place during normal construction hours and only in areas where there is a significant presence of rock.

What construction activities will you see?

The majority of construction activities happen onsite. However, you will likely see more vehicles on the road and around the project area, you could also see some dust associated with vehicles moving around site or construction activities. Once the turbines begin being erected, you will see the towers, turbines and cranes.

Based on the height of the cranes used to build the turbines, lights may remain on at nights if needed to comply with aviation requirements.

You may see helicopters in the area for short periods to string the transmission line.

How do you construct a transmission line?

A benefit of this site is that there is an existing transmission line nearby. This means we only have to build a short transmission line within the project area to connect it to the Tungkillo Switchyard.

Helicopters may be used to string the transmission lines, where the helicopter lifts and places cables between towers, reducing the need for heavy machinery on the ground. Helicopters are used to do this because it:

- is faster than traditional ground-based methods,
- reduces the need for new access tracks, and
- means less vegetation clearing and reduced impact on the landscape.

Where will materials come from?

Materials will come from various quarries throughout the southern part of South Australia. Exact quarry locations are yet to be determined and will part of the contractors final planning.

Other items needed for construction, such as pipes, electrical components and steel reinforcement, will also be sourced from suppliers across southern Australia. Some highly specialised electrical equipment may need to be imported from overseas. The turbine blades will come from overseas.

Concrete will be made on site using a temporary batching plant set up in the project's site compound area. This plant automatically mixes sand, gravel and cement to produce the concrete needed for the turbine foundations.

How much water will you use and where will you get it from?

Water will be sourced from an existing water pipeline on site. It is expected construction will require a maximum of 300,000 litres per day to manage dust suppression and to provide water for the concrete batching plant.

Figure 1: An example of dust created when constructing a hardstand.

Managing construction impacts

How will you manage dust and noise during construction?

We will take practical steps throughout construction to minimise noise and dust impacts on nearby communities.

Noise

Noisy activities will be located away from sensitive areas where possible. Work will generally take place within approved construction hours.

Use of horns, alarms and beepers will be kept to a minimum where it is safe to do so. Noise and vibration levels will be monitored, particularly if concerns are raised.

Regular site inspections will be carried out, and work methods will be adjusted if noise levels are too high. This may include rescheduling works, using quieter equipment, or installing temporary noise barriers.

Dust

Water trucks and other dust-suppression methods will be used to control dust from construction activities and public roads. Dust levels will be monitored visually, with controls increased if needed.

Vehicles carrying materials will be covered, and equipment will be well maintained to reduce emissions. Dust-generating activities will be planned around weather conditions where possible.

Stockpiles are managed, vegetation will be retained where feasible, and disturbed areas will be rehabilitated as soon as practicable. No burning of waste materials will occur on site.

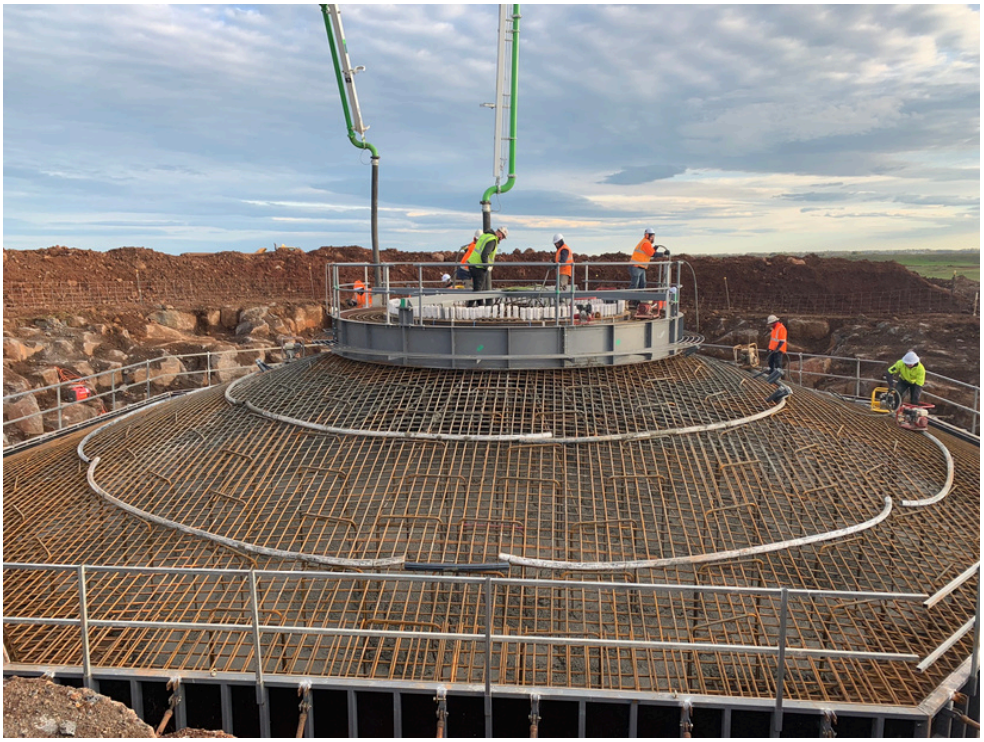


Figure 2: Turbine foundations being prepared.

How do you manage waste and run off during construction?

Where possible, construction materials will be reused or recycled. Waste and recycling will be separated on site and regularly collected and taken to licensed facilities.

Regulated and liquid wastes will be safely stored, tracked and disposed of in accordance with regulations. Work areas will be kept clean and tidy, with secure, vermin-proof bins provided. Waste storage areas will be regularly inspected and managed to prevent spills or litter.

Soil

Where possible, soil will be retained and reused on site within the original property boundaries. Any soil identified as potentially contaminated will be managed in line with EPA SA requirements and safely transported to a licensed facility for disposal.

Run off

Erosion and sediment controls will be installed and maintained throughout construction to protect land and waterways. Controls will be checked before and after heavy rainfall to ensure they are working effectively and to reduce the risk of impacts on nearby watercourses.

Figure 3: A crane erecting a turbine at Dundonnell Wind Farm.

What do you to protect the environment during construction?

As required by the Environment Protection Act, mitigation measures will be put in place to ensure that all activities on the site do not pollute the environment in a way which causes or may cause environmental harm. A Construction and Operational Environmental Management Plan will be developed for the project.

Environmental controls will be checked and approved before work starts in new areas.
Protected vegetation will be clearly marked, with no-go zones in place. Clearing will be limited to approved areas only and kept to a minimum wherever possible. We will use specialist wildlife handlers to safely manage and relocate animals if needed.

Sediment controls will be installed as per approved plans that comply with the Environmental Protection Act.

Dust control will be assessed daily and speed limits imposed to reduce excess dust along with water suppression on access roads.

How will you manage biosecurity during construction?

We will prepare a Biosecurity Management Plan that includes clear procedures for managing contamination risks arising from potential disease pathways.

All equipment and vehicles will be cleaned, inspected, and confirmed compliant prior to entering sensitive areas or moving between neighbouring properties to prevent the spread of soil-borne pathogens, weeds, and other biosecurity hazards.

All project personnel will undergo a Biosecurity induction as part of the site onboarding process. Biosecurity responsibilities and required practices will be reinforced through daily prestart briefings, ensuring ongoing awareness and consistent implementation of contamination-prevention measures across the project team.

How do you protect cultural heritage during construction?

The project was designed to avoid cultural heritage and we intend to have no impacts during construction. To ensure this, we are working with Peramangk representatives to design protections for the area, and we will have heritage monitors onsite for relevant ground disturbance activities. During construction no-go areas are protected with fencing and other markings, and these areas put into GPS control systems for vehicles.

How do you prevent fires during construction?

Protecting the community, workers, and the environment is a top priority. A range of strict fire-prevention measures will take place during construction to minimise the risk of fire at all times, including:

ADHERING TO FIRE DANGER RATINGS
Construction activities are carefully planned around daily fire danger forecasts. High-risk activities (such as welding or grinding) are restricted or avoided on days of elevated fire danger.

TOTAL FIRE BAN DAYS
No high-risk construction works will occur on total fire ban days.

USING SAFE CONSTRUCTION PRACTICES
We implement a range of on-site controls to prevent sparks, heat or ignition sources, including:

- Avoiding the use of certain equipment or materials that could pose a fire risk in hot or windy conditions.
- Ensuring machinery is well-maintained.
- Keeping vegetation, dry grass and combustible materials cleared from active work areas.

FIRE RESPONSE PREPAREDNESS
Keep firefighting equipment (such as water carts and extinguishers) on site and ready for use.
Conduct regular site inspections to monitor fuel loads and potential hazards.
Implement hot-works permits and supervision where necessary.

WORKING WITH LOCAL AUTHORITIES
We actively engage with the local Country Fire Service (CFS) and follow their guidance on safe operations. This includes:

- Coordinating activities during higher-risk periods.
- Adopting recommended prevention and response protocols.
- Ensuring emergency access is maintained throughout construction.

What site rehabilitation will occur after construction?

Areas disturbed during construction that are not needed for the ongoing operation of the project, such as laydown areas, access roads and turbine hard stand sites, will be rehabilitated as soon as practicable. Rehabilitation will be carried out progressively across the site during construction and at the end of the project's life.

Questions?

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