



Turbine foundations completed

Construction of Wellington's first wind farm is progressing well, thanks in part to a long and dry summer.

Most of the 33 kilometres of new roading, linking the temporary wharf, temporary storage areas and 62 turbine foundations, has now been completed. An unusually dry and extended summer enabled the civil works contractor Higgins and its sub-contractors to keep the construction of roads and excavation for the turbine foundations on schedule.

The hot, dry weather created some issues with dust, but the team worked to minimise the effects of this on the surrounding area. With the advent of winter and rain, the hydro seeding of many areas adjacent to roads and at fill sites could then proceed.

Foundations

By the end of September, all of the 62 turbine foundations had been concreted. Each octagonal foundation is 15 metres in diameter and 1.5 metres deep. With 48 tonnes of steel reinforcing and 370 cubic metres of concrete used for each foundation, they are an impressive sight. In selected sites, the foundations measure 16 metres across, providing additional support for strengthened towers on the windiest of the sites.

The steel shutters surrounding the concrete are removed after about a week and once inspections have taken place, the area around the concrete is backfilled, leaving only a low ring of bolts set in concrete ready to receive the turbine tower sections. A crane pad about 30 metres by 22 metres is then prepared next to the turbine site where the 400-tonne crane will be sited for lifting the towers, nacelle (housing the generator) and three blades.

Foundations have been poured at a rate of two per week since autumn. Despite a very wet winter, the schedule has remained on target with some weeks three foundations being poured.

With the completion of the foundations, the aggregate carting programme ends, thereby reducing traffic impact to road users.

Transmission line

The transmission line needed to carry the electricity generated from the wind farm to Transpower's Wilton-Central Park 110kV line is well underway.

Electricity from each turbine is supplied into an underground 33kV network that goes back to the on-site substation. At the substation, the electricity is then stepped up to 110kV and connected by an overhead line to the Wilton-Central Park circuit.

Temporary wharf

The temporary wharf has been constructed at Oteranga Bay. The wharf is an essential element in the design of Project West Wind, and will ensure the delivery of large turbine components to the site without associated traffic disruption to the city and local community.

The 128 metre-long temporary structure is designed to be removed after two to three years, with both the decking and piles to be recycled. The location of the wharf in Oteranga Bay has meant a high level of co-operation with Transpower and Telecom over the vitally important national infrastructure of the HVDC cable (also known as the Cook Strait cable)

and fibre optic cables linking the North and South Islands.

The first shipment of turbine components is due to be landed in late October at Shakespeare Bay near Picton. From there they will be transported across Cook Strait to Oteranga Bay by two barges.



Community Liaison Group and Recreation Group

As part of the consent conditions for Project West Wind, Wellington City Council included a requirement for Meridian to establish, administer and fund two separate groups: a Community Liaison Group and a Recreation Group.

The Community Liaison Group comprises of representatives from Wellington City Council, the Makara/Ohariu Community Board, Makara residents and Meridian. The purpose of the group is to help balance the effects of the wind farm by enabling the local community to benefit directly from its construction and operation. The anticipated outcome is that Meridian will provide funds on a continuing basis for the benefit of the community that will enhance it and add to its well-being. Community representatives on the Liaison Group are Deb Compton, Dave Bennett and Ruth Paul.

Meridian has a strong reputation for supporting the communities in which we generate electricity. Three community funds (Te Āpiti, Waitaki, Manapouri – Te Anau) have been established that recognise the special contributions generation communities make to Meridian's hydro and wind operations, and to the country's electricity sector. More information on the community funds is available on the Meridian website www.meridianenergy.co.nz/AboutUs/

The purpose of the Recreation Group is to plan and develop recreation and visitor opportunities



Top and left: The wharf at Oteranga Bay, which now has the gantry cranes installed and commissioned ready for the first deliveries expected in late October. Above right: A turbine foundation being poured.

About Meridian

Meridian is the country's largest renewable electricity generator and is 100 percent New Zealand owned.

We generate around 30 percent of the electricity used in New Zealand.

We own and operate nine South Island hydro stations, including eight on the Waitaki hydro scheme and the Manapouri power station. We own and operate the Te Āpiti wind farm north of the Manawatu Gorge and White Hill wind farm in Southland. We have plans for more wind farms in both the North and South Islands.

for the wind farm site. The 10 members of the group contribute expertise from a variety of backgrounds. Below is a list of current members:

Ross Jackson, Greater Wellington Regional Council
Michael Oates, Wellington City Council
Rob Stone, Department of Conservation
Anne Wells, Historic Places Trust
Christine Grace, Makara community representative
Marieke Hillhorst, Makaracarpas Society Incorporated
Dave Bamford, Tourism Resource Consultants
Jo Breese, Tourism Resource Consultants
Carolyn Wylie, Meridian
Mark France, Meridian

Further information on the progress of these groups will be available in upcoming issues of this newsletter.

For more information

Please contact us if you require more information.

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