

HAU NUI WINDFARM MARTINBOROUGH

GEOTEXTILES & GEOGRIDS

Products: Tensar Geogrid, Bidim

Problem

Access for an additional 8 x Enercon E40 wind turbines was required by Genesis Energy, these towers and turbines are very long and loads are heavy. Construction on the pavement needed to begin in the middle of winter and at this time the site was extremely wet with soft soil CBR conditions and was further complicated by snow and very stormy conditions during the proposed construction period.

Solution

By utilising Bidim geotextiles and Tensar geogrids over the soft soil conditions, a significant reduction in aggregate requirements was able to be achieved with minimal disturbance to the surrounding areas. This represented huge savings to the client in aggregate, logistics and time and also meant construction could continue through even the harshest of conditions.

The towers are approx 86m high including hubs and rotors. These 8 turbines are able to generate 4.8MW, enough energy to supply approx 2000 homes and are additional to the 7 turbines erected in 1996. Average wind speed is 9.2 m/second. The turbines and components were able to be transported and located on the sites with machinery capable of lifting up to 300 tonnes.

The Tensar Pav software programme was used to determine the pavement thickness, based on the loading and the number of passes required to construct each turbine. CBR conditions worsened throughout the construction, but with the use of Bidim geotextile and Tensar geogrids, the required access to each site was achieved.

Future

Wind farms lessen the need for fossil fuel generated electricity, reducing greenhouse gas emissions, and supporting NZ's commitment to the Kyoto Protocol. Renewable energy is a proven, sustainable, and reliable source of energy for the country.

Client:

GENESIS ENERGY

Contractor:

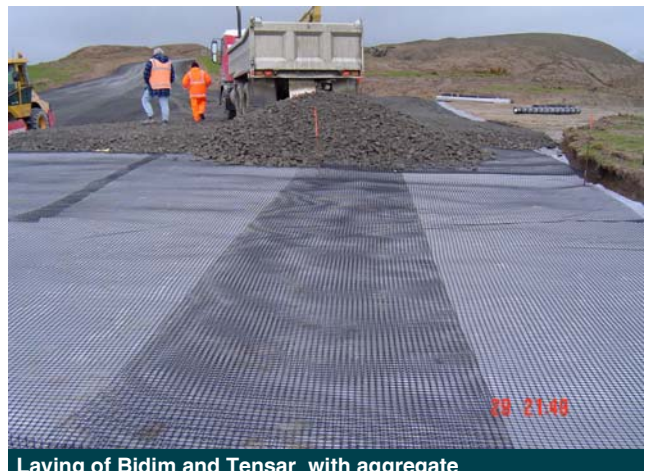
OLDFIELD ASPHALTS

Products:

BIDIM A34, TENSAR SS40 GEOGRID



Access road prior to initial work



Laying of Bidim and Tensar with aggregate



Partially completed road

Maccaferri NZ Ltd.

14 Goodman Place, P.O. BOX 12536, Penrose, Auckland, New Zealand
Tel. (+64) 9 6346495 - Fax (+64) 9 6346492, FREEPHONE 0800 60 60 20
E-mail: sales@maccaferri.co.nz - Web site: www.maccaferri.co.nz
Quality System AS/NZS ISO 9001:2000

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