PROJECT DESCRIPTION
EARTH- AND TRAFFIC ROUTE CONSTRUCTION
ACCESS ROADS TO WIND FARM

UNDER your feet
Develop | Design | Consult
Geotechnical Engineering GmbH

Project:	Wind Farm Engelschoff
Location:	Engelschoff
Year:	2016

Design of an access road for a wind farm in northern Germany using Geoweb® geocells

PROJECT DESCRIPTION

Around 20 km north of Stade within the wind park „Engelschoff“ of the operator Enercon GmbH plans the a new construction of 5 wind turbines of the type Enercon E-92 with a tower height of 102 m. For the construction, new access roads were required. Due to the peaty subsoil with extremely low bearing capacity either soil replacement or a construction using geocells for stabilisation of the base layer were considered. To minimise rut depths and to increase serviceability during the construction phase, the access roads were stabilised by the use of Geoweb® geocells.

PROJECT FACTS

- Construction of access roads with a total length of 3,5 kilometres
- Subsoil consists of peat with thickness up to 9 m, tip resistance of cone penetration test qc < 1 MPa
- Soil mechanical parameter: Peat: $E_{Stat.}$ = 0,5 MN/m²; $E_{dyn.}$ = 10 MN/m²; φ = 12°; c = 2 kN/m²
- Initial design: Soil replacement up to 0,80 m depth, construction of a geogrid reinforced base layer with a thickness of 80 cm

OUR SERVICE

- First draft and design of an alternative road construction without requirement of soil replacement by using 30cm high, sand filled Geoweb® geocells and a 20 cm thick gravel layer
- Geotechnical consultancy to the client during construction
- Analysis and interpretation of the conducted control section