

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

**Project:** Windfarm Ostermoor-Scharrel  
**Location:** Saterland, Germany  
**Year:** 2011-2012

Development of road construction by using Geoweb® geocells instead of soil excavation for 6 km access roads



## PROJECT DESCRIPTION

The wind farm "Ostermoor-Scharrel", located 30 kilometers western of Oldenburg in northern Germany near Saterland, consists of 24 Enercon E-101 wind turbines. For installation and maintenance of the wind turbines, about six kilometers access road needed to be constructed and the existing road enhanced. In one section Geoweb® stabilized test trials were constructed as an alternative to soil replacement method.



## PROJECT FACTS

- Construction of about 6 kilometer of access roads 2.5 m soft peat layer with stiffness modulus of  $E_s = 0.5$  to  $1.5$  MN/m<sup>2</sup>, water content ranging from 350 - 900 % and vane shear strength of 2 to 5 kPa
- Standard Construction: Excavation of peat up to 2.5 m depth and replacement by sand layer with gravel layer
- Test Trials: 12 tests sections using Geoweb® geocells to stabilize the 40 to 60 cm high gravel layer



## OUR SERVICE

- Design and configuration of 12 test sections including specification of geocells and geosynthetics
- Soil mechanical investigation and additional testing of the sections (CBR field tests, CBR tests, Plate load tests) to be used for comparative study
- Settlements measurement of (ruts) during test by 3D-Photogrammetry
- Test report and construction recommendations
- Analysis of measured rut depths for verification of the design method for geocell stabilized base layers (Dr. Emersleben)