



Base Reinforcement

Working Platforms / Wind Turbines

High Sheldon Wind Farm, Wyoming County, New York, USA

Base Reinforcement with **Fornit**® Geogrids



Project Description

The High Sheldon Wind Farm produces wind energy for the Town of Sheldon in Wyoming County, New York. The project has a maximum electric generating capacity of 129 Megawatts and produces enough clean, renewable energy to power 60,000 homes every year.

The project consists of 75 wind turbines installed predominantly on active agricultural lands occupying two windswept plateaus. With elevations of up to 550 m, the two plateaus are exposed to consistent winds from Lake Erie, about 50 km to the west. Energy from the project is delivered to a 230 kilovolt (kV) electric transmission line that passes through the project area.

Fornit® 30 Performance

The major challenge facing the contractor was the potential rutting caused by the extremely high live loads on the turbine access roads. In order to support loading from equipment of up to 240 kPa, **Fornit**® 30 was installed

to enhance the subgrade of the access roads on the site. **Fornit**® 30 was the ideal reinforcement solution for this project because of its exceptional reinforcement and confinement properties. Aggregate base course thickness of the access roads was reduced as a result of using **Fornit**® 30, leading to significant savings for the project owner, Invenergy.

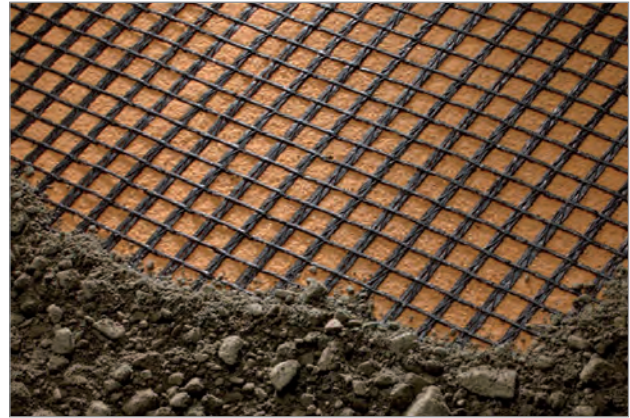
The contractor was pleased with the ease of installation of **Fornit**® and the greater coverage achieved with **Fornit**®'s wide rolls. The 5,20 m width of **Fornit**® rolls added value because fewer overlaps were required than with narrower products, resulting in less waste. With no sharp edges or roll "memory", installation of **Fornit**® 30 was smooth and easy. **Fornit**® geogrid's high aperture stability resulted in less rutting because deformation of the base coarse was restricted.

An added benefit of **Fornit**® 30 is separation between aggregate materials and subgrade soils. The design of **Fornit**® geogrid's apertures creates separation, keeping large base particles from penetrating the softer subgrade



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soils without losing confinement. In fact, pullout tests confirm that interaction with the aggregate is greater than or equal to products with larger apertures.

Product Description

Manufactured with high strength polypropylene yarns and coated for protection against both installation damage and exposure to ultraviolet rays, **Fornit**® geogrids are made to last. Strong and durable, they reinforce, confine, and separate unbound aggregate base and subbase materials. **Fornit**® geogrids are easy to install and are resistant to freeze-thaw conditions and degradation from a wide range of chemicals. By distributing loads over a greater area, **Fornit**® dramatically improves the bearing capacity of subgrade soils. **Fornit**® geogrids are manufactured in HUESKER's ISO 9001 certified production facility.



Location: High Sheldon Wind Farm,
Wyoming County, New York

Client: Town of Sheldon

Year of
Construction: 2008

Product: **Fornit**® 30 biaxial geogrid

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