GEOSOLV DESIGN > BUILD

GEOPIER®

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Oxley Wind Farm
Harrow, Ontario

Challenge

During the late stages of design for a wind turbine farm, consisting of 100m tall wind turbines founded on 19.2 m diameter spread footings, it was discovered that there were loose sands, silts, organic soils and challenging high ground water. The poor soils prevented the use of the standard spread footings that were initially designed for the wind towers.

Solution

GeoSolv determined that the Geopier Armorpact® system was the most cost-effective alternative to support the proposed tower in place of deep foundations. For this project and soils, the Geopier® system provides up to 275 kPa ULS and 180 kPa at SLS, as well as limits overall tilt of the wind turbine to less than 0.17 degrees. This allowed the turbines to be supported on the existing spread footing design with no design changes required.

Installation of the Armorpact® system at Oxley Wind

Outcome

The Armorpact® system provided for cost-effective, high-bearing capacity spread footings. This system improved the project schedule and eliminated the need for deep foundations, which would not have been financially feasible and would have require a time-consuming redesign.

Project Team

Constructor
Carlsun Energy Solutions

Geotechnical Engineer
LVM (Englobe)

Structural Engineer
MMM Group (WSP)

Ground Improvement - Rigid Inclusions - Piling Systems - Slope Stability - Ground Reinforcement

Before you Remove It or Go Through It, contact us to *Improve It*
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