



Oxley Wind Farm Harrow, Ontario

Installation of the Armorpack® system at
Oxley Wind

Project Team

Constructor

Carlsun Energy Solutions

Geotechnical Engineer

LVM (Englobe)

Structural Engineer

MMM Group (WSP)

The Ground Improvement People™

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 Armorpack® 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.

Outcome

The Armorpack® 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.

Contact The Ground Improvement People®

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Email us at solutions@geosolv.ca

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