



## South Kent Wind Farm

Merlin, Ontario

South Kent Wind provides the power equivalent of approximately 100,000 Ontario homes

## Project Team

**G.C./Owner**

RES Canada Construction

**Geotechnical Engineer**

Exp

## The Ground Improvement People™

### Challenge

The geotechnical conditions at the location of six of the projects wind turbines consisted of a surficial layer of topsoil underlain firm to very stiff clayey silt/silty clay to silty clay till. The soil conditions did not allow for a regular spread footing, which is generally the preferred foundation method. There were bearing capacity limitations with the existing soil, particularly along the tower foundation edges where huge tower overturning moments create larger edge pressures.

### Solution

The Geopier GP3® system was ultimately selected for five of the poor soil towers, eliminating the cost and risk associated with over-excavation and replacement or deep foundations. The Geopier Amorpack® system was used for one location where soils were especially poor, and some additional confinement was required to manage the large tower loads. The Geopier system was easily

### Outcome

GeoSolv created a stiff, engineered crust using the Geopier GP3 system for support of the 6-turbine mat foundations with a high allowable bearing pressure. The system strengthened up to 8 meters (24.6 ft) of soil beneath the six turbine foundations and allowed for common foundation sizes with the other turbines on the project.

**Contact The Ground Improvement People®**

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