



South Dundas Wind Farm Brinston, Ontario

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Project Team

G.C./Owner

HB White Canada Corp.

Geotechnical Engineer

CWE Consultants

The Ground Improvement People™

Challenge

A total of seven towers were exhibiting soil conditions that would not support regular spread footing foundations. Four of the seven towers consisted of medium stiff sensitive clay to generally 3-6m below the foundation with virgin shear strengths of around 50 kPa and remolded strengths around 5kPa. The other three towers had firm sensitive clay (lida) too 5-10m below the foundation with virgin shear strengths of 30 kPa and remolded strengths as low as 3 kPa.

Solution

The Geopier GeoConcrete® (GCC) system was selected for the three softer sites due to its ability to bear very high loads in extremely poor soils while allowing for simplified foundation elements (spread footings at up to 450 kPa SLS) on a load transfer cushion. The other towers were constructed on Rammed Aggregate Pier elements using both Geopier GP3® and Impact methods.

Outcome

The Geopier solutions (GCC, Impact, and GP3) were installed generating minimal spoils and allowed for a simplified foundation at roughly 19m diameter, and lower overall project cost when compared to over-excavation or deep foundations.

Contact The Ground Improvement People®

(905) 266-2599 or

Email us at solutions@geosolv.ca

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