

Project Information:

Blackwell Role	Main Contractor
Form of Contract	Fidic Yellow Book Amended
Contract Value	£2.5M

Blackwell Site Management:

Contracts Manager:	Phil Holden
Project Manager:	Stephen Graham
Quantity Surveyor:	Aqeel Haque



Services Include:

Civil Engineering **Earthworks** Geotechnical Remediation **Electrical Works**



Background:

Working for Peel Energy, Blackwell carried out the construction of the 5 turbine Bilsthorpe Wind Farm on the site of the former Bilsthorpe Colliery, located east of Mansfield in Nottinghamshire. Site operations began in June 2012 with the construction of the wind farm foundations and access tracks and the turbines were erected in April 2013.

The scope of work on the Bilsthorpe project involved carrying out piling operations on very difficult ground conditions. The western half of the site contained mudstone bedrock measuring from 10m to 25m deep and colliery spoil measuring between 10m and 25m deep, which had accumulated as a result of the site's former use. The ground investigation also revealed that topsoil on the eastern half of the site covered 3.5m of weathered mudstone bedrock below ground level, providing even more challenging conditions for construction.

With a total output of 10MW, the completed wind farm has the capacity to supply 6,000 homes with renewable energy.



Key Processes:

The main elements of the work included the following:

- Earthworks to form new wind farm tracks.
- The widening of existing wind farm tracks.
- The construction of crane hard standing areas to support cranes while the wind turbines were being erected.
- The installation of permanent works drainage.
- Piling works to support the wind turbine bases due to poor ground conditions.
- The construction of reinforced concrete bases to support the wind turbines.
- The construction of transformer bases and met mast foundations.
- The construction of watercourse crossings.
- The construction of permanent access points from the existing highway.
- The upgrading of an existing access road to facilitate turbine deliveries.
- The construction of a wind farm substation.
- The procurement and installation of all electrical equipment.
- The digging of trenches and ductworks to enable the installation of electric and SCADA cables.
- The management of sensitive ecological and programme restrictions.

