



1st installed turbine: photo courtesy Centrica Energy

# Lynn & Inner Dowsing Wind Farms

The Lynn & Inner Dowsing project for Centrica is two separate wind farms, built at the same time, 5 km off the Lincolnshire coast of England. The wind farms were consented in 2003. With a total export capacity of 180 MW, the two farms will generate power for more than 130,000 homes. Centrica signed MT Højgaard to be the contractor for the project which faced a special challenge. This would be the first project where monopiles would be driven into hard chalk layers. MT Højgaard called on MENCK to handle

drivability studies. Could piles be driven in this type of soil? MENCK said yes! On April 16th, 2006 MENCK successfully drove a test pile in the hard chalk layer to a depth of 25.5 m. A year later, on April 25th, 2007 installation of the 54 x 4.74 m OD monopiles began and lasted until November. This project was also the debut for MENCK's new MHU 1900S in use with two MHP 1600 power packs and two hose winches. MENCK proved that piles could be driven in such soil conditions!

<b>Project name</b>	Lynn & Inner Dowsing Offshore Wind Farms
<b>Client (end customer)</b>	Centrica Energy
<b>Contractor</b>	MT Højgaard a/s
<b>Location</b>	5 km off the coast of Lincolnshire
<b>Turbines</b>	3.6 MW Siemens
<b>MENCK operational start</b>	Delivery 04/04/07; first pile 21/04/07
<b>MENCK operational end</b>	December 2007
<b>Water depth</b>	6–13 m
<b>Installation vessel</b>	M.V. Resolution
<b>Quantity of piles</b>	54
<b>Pile diameter</b>	4.74 m O.D.
<b>Pile soil penetration</b>	19.5–26 m
<b>Number of blows per pile</b>	830–5,720
<b>Hammer</b>	MHU 1900S; Follower 3.75 – 4.74 m
<b>Power pack</b>	2 x MHP 1600 and 2 x hose winches
<b>Mobilisation/Demobilisation by</b>	MENCK GmbH
<b>Mobilisation harbour</b>	Esbjerg DK + Vlissingen NL
<b>Demobilisation harbour</b>	Hoboken, Belgium
<b>MENCK's scope</b>	Mobilisation/Demobilisation, Rental of MHU 1900S & ass. Equipment
<b>MENCK engineering</b>	Drivability study, design of pile adaptor



MENCK MHU 1900S  
being removed from pile

MENCK 1900S at night

Final driven monopile and  
transition ready for turbine  
installation

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