



North Hoyle Wind Farm

The North Hoyle Wind Farm, located between Rhyl and Prestatyn, 7.9 km off the coast of North Wales, consists of 30 wind turbines with an installed capacity of 2 MW each. The development of the foundation concept for the windmills was challenging due to the soil conditions at this location, comprising mainly condensed sand, sandstone and mudstone. Vestas-Celtic Wind Technology Ltd. selected monopiles of 4.0 m diameter as the most secure and economical solution. The installation method chosen was the

drive-drill-drive technique, a combination of sequential pile driving and relief drilling. MENCK designed and built special equipment, a pile sleeve, an anvil and an anvil adapter ring for the MENCK MHU 600B hammer to meet the special requirements of this project. MENCK service technicians were on site to operate the equipment and assist our customer during the installation. Careful planning and teamwork resulted in the pile driving operations being finished ahead of schedule.

Project name	North Hoyle Wind Farm
Client (end customer)	National Wind Power Ltd.
Contractor	Seacore Ltd., UK
Location	7.9 km off the coast of North Wales
MENCK operational start	April 3rd, 2003
MENCK operational end	July 28th, 2003
Water depth	Up to 15 m (MSL)
Installation vessel	Excalibur
Quantity of piles	30
Pile diameter	4.0 m
Number of blows per pile	4,000
Hammer	MHU 600B
Power pack	MHP1100
Mobilisation/Demobilisation by	Seacore Ltd., UK
Mobilisation harbour	Liverpool, Wales
Demobilisation harbour	Holyhead, Wales
MENCK's scope	Provision and operation of piling equipment
MENCK engineering	Design of 5.2 m pile sleeve, 4.0 m pile adapter, 3.2 m anvil and 4.0 m adapter ring



MENCK MHU 600B with 5.2 m pile sleeve

MENCK GmbH
 Industrial Area Moorkaten
 Am Springmoor 5a
 24568 Kaltenkirchen
 Germany
 Tel. +49 (0) 4191-911-0 or
 +49 (0) 1805-GET MENCK
 Fax +49 (0) 4191-911-100
 info@menck.com
 www.menck.com