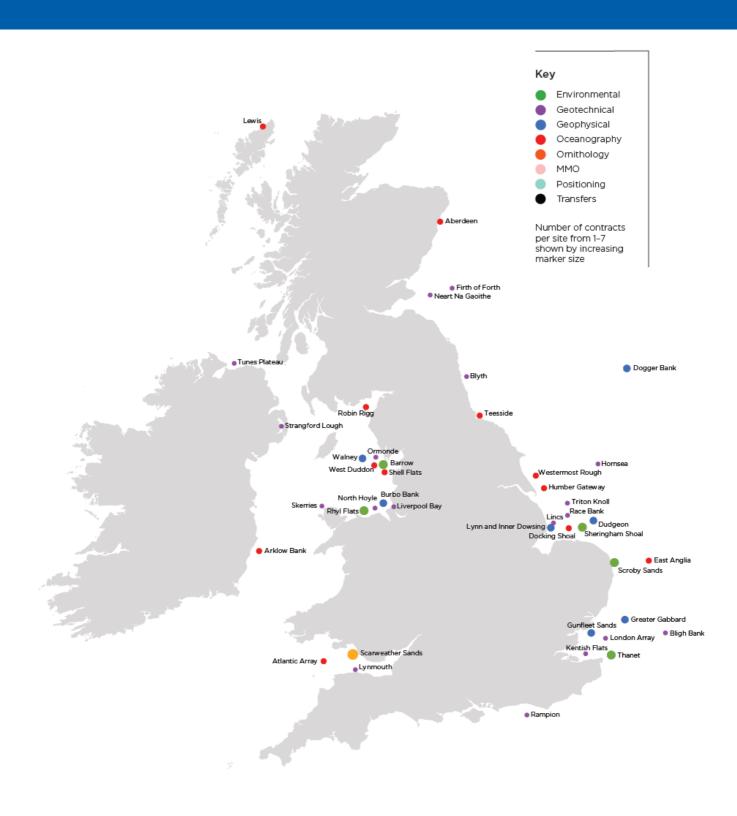


# Offshore Renewables Case studies and experience



### Dogger Bank R3 OWF ornithological survey

Gardline Environmental Ltd has provided one of the company's fleet of offshore survey vessels and ornithological specialists who have been carrying out a long-term pre-consenting environmental study. The company has acquired simultaneous ornithological and geophysical surveys from the vessels.

#### Thanet OWF pre-construction site survey

MESL (a Gardline Group company) used its expertise and excellence in the micro-positioning of both grab samples and wind turbines so as to retain the integrity of conservation species. This work was commended by JNCC, Natural England and Warwick Energy.

## Dogger Bank R3 OWF metocean studies

Gardline Environmental Ltd supplied real time monitoring of metocean conditions site with data transmitted directly to the 'Gardline Real Time' secure website which allows direct access for the client.

#### Neart Na Gaoithe offshore windfarm site

Gardline Geosciences Ltd carried out geotechnical site investigations over several offshore windfarm sites, using the flagship geotechnical vessel, MV Ocean Discovery

#### Robin Rigg Round 1 OWF Positioning Services

Gardline provided positioning services and offshore surveying personnel to a cable laying barge and anchor handling tugs during the construction phase of the OWF. Services included the surface positioning of vessels, the subsurface positioning of divers and cable laying plough as well as an integrated tug management system to all anchor handling vessels on site.

### Atlantic Array R3 OWF geophysical site survey

Gardline Hydro provided a multi-vessel solution to cope with the range of water depths across the site. Two survey vessels were used as depths varied between 40-60m. Titan Environmental Survey Ltd (a Gardline Group company) provided a shallow draft coastal vessel to complete the survey of the export cable route up to the shore.

## East Anglia OWF geophysical survey

The geophysical site survey is currently in progress, managed by Gardline Hydro; two vessels from the Gardline fleet have been involved. MESL is presently undertaking benthic surveys, based on geophysical and geotechnical survey data acquired by Gardline with the assistance of Gardline Environmental Ltd.

### Thanet OWF supply of transfer vessels

Gardline Environmental Ltd provides turbine transfer vessels to transport windfarm technicians during the construction of the site.

# Greater Gabbard OWF – engineering design

SEtech (Gardline Group Consultants) has supported Greater Gabbard with geotechnical engineering input throughout the life of the project since 2005. The focus has been on the risk presented by the seabed conditions. The consultants have collated, interpreted and presented survey data to ensure economic and safe installation of the export and inter-array cabling.

#### Gwynt Mor OWF Positioning Services

Gardline provided diver tracking services and offshore surveying personnel to cable installation and repair operations. The client was provided with real time monitoring of all sub surface activities enabling operations to be undertaken simultaneously with surface operations in a safe and efficient manner.



For more details please contact: renewables@gardline.com

**Gardline Marine Sciences** 

Endeavour House, Admiralty Road, Great Yarmouth, Norfolk NR30 3NG UK Tel: +44 (0)1493 845 600



For more information on our services please scan this QR target