Sea Mobility and Scour Assessment for New Offshore Wind Farm in the Irish Sea

RWE Renewables has appointed ABPmer to support the design of the Awel y Môr Offshore Wind Farm in the Irish Sea. The marine consultancy company is assessing the sediment mobility and scour potential at the wind farm site, located in a dynamic area off the north Wales coast.

The work will be used to help support export cable route selection, as well as inform the ongoing wind turbine foundation and array/export cable design process.

To map the behavioural characteristics of the seabed across the wind farm site and export cable corridor, ABPmer will analyse oceanographic data from its SEASTATES metocean database, recent and historic seabed surveys, and geophysical data specifically collected for the project. High-resolution hydrodynamic and sediment transport modelling are also being used to map the detail of long-term regional scale sediment transport pathways.

Seabed Mobility Risk Mapping Tools

Heidi Roberts, ABPmer project director, said: “Building on our local knowledge from Awel y Môr and adjacent wind farms along with OWF expertise around the UK, our specialists are completing detailed statistical analysis, modelling and interpretation of oceanographic and geophysical data.”

“Our seabed mobility risk mapping tools are helping RWE understand present and future bedform migration, providing vital information in support of the cable route selection and design,” she added.

GIS analysis of coastal data will also be undertaken to consider the potential for coastal erosion and vertical change in beach levels at the landfall over the project lifetime, supporting the landfall selection and design process.

The Awel y Môr detailed design will continue through 2022, with the wind farm targeting 2030 to be fully operational.

Combined with the Gwynt y MÃ´r, Awel y MÃ´r will form one of Europe's largest offshore wind farms. (Image courtesy: RWE)