

CASE HISTORY

Application:	Renewables, Offshore Wind Farms
Technology:	PS Logger®, 2000m Marine Winch
Location:	Lillebælt Syd and Jammerland Bugt OWF, Denmark

Lillebælt Syd is a 165 MW offshore wind farm being built in the Little Belt strait near Sønderborg, Denmark, with a planned operational start in 2029. The OWF will consist of 11 x 15MW turbines and is expected to power approximately 148,000 European households. Jammerland Bugt OWF plans to install 16 x 15MW wind turbines for a capacity of 240MW and should be operational in 2029.

Requirement:

Robertson Geo Services (RGS) was contracted by Geo Subsurface Expertise to conduct PS logging on the 13-borehole offshore wind farm project onboard the Sound Prospector jack-up. The boreholes for the Lillebælt Syd prospect were drilled to 50m and for Jammerland Bugt the boreholes were drilled to 40m.

Equipment:

The 2000m Marine Winch with integral depth wheel was deck mounted to convey the PS Logger® probe into the boreholes.

Operations:

The ground investigation included core sampling and CPT while drilling. Once drilling was complete the borehole was made available for the PS logging. The depth interval for the PS Logger® was mostly 1.0m with 0.5m intervals on some parts of boreholes.

Challenges and Solutions:

The geology of the area was predominantly sand interspersed with gravel, silt and clay layers. The main challenge was to keep the boreholes open for logging and incremental casing pulls were necessary to mitigate the potential for borehole collapse.

End value to client:

Operations were successfully completed under variable sea and weather conditions, demonstrating the robustness of Robertson Geo's equipment and RGS data acquisition methods.

