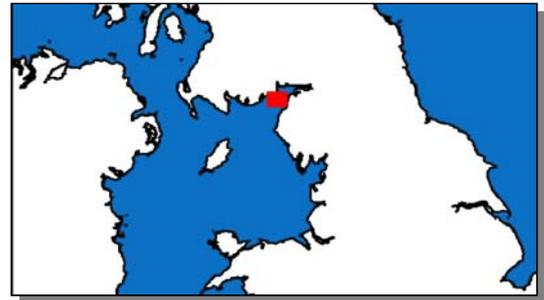
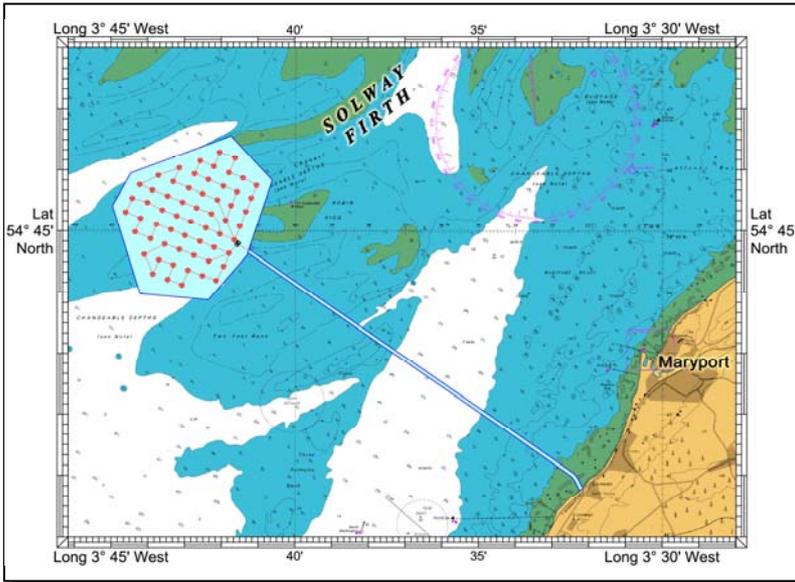


Robin Rigg Offshore Windfarm

- Construction Activities - Phase II - Construction



Development Location



Robin Rigg Offshore Windfarm

The Robin Rigg Offshore Wind Farm is located in the middle of the Solway Firth, approximately 11 km from the Dumfries & Galloway coastline in Scotland and 13.5 km from the Cumbrian coastline in England. The wind farm will consist of 60 three megawatt wind turbines and 2 offshore substations, with interconnecting cables. These substations will be connected to the local electricity distribution system via 2 x 132Kv cables which will come ashore near Seaton, Cumbria.

Activity is expected to commence in May 2008 and be completed by Spring 2009. Vessels are requested to give a wide berth to the installation and cable laying vessels engaged in the project.

Safety Avoidance Zones

At all times, a 1,000m Safety Avoidance Zone is requested around the Cable Lay Barge "AMT Explorer" due to her anchor pattern, with 500m requested around all other installation vessels. A 50m zone will also be in place around each turbine and substation structure after installation. During installation of the export cable a 500m safety corridor and afterwards a 200m anchor exclusion zone is requested. All vessels are requested to respect the safety avoidance zones, which as well as reducing the risk of collision damage will provide protection to the installation vessels, the export cables and the wind turbine structures.

Additional Information

The cable lay vessel will carry out preliminary trials prior to commencing cable lay operations and will also be collecting cables periodically from Liverpool.

Buoyage

During construction, the wind farm perimeter will be marked by the following navigational buoys: 2 Conical Yellow buoys fitted with a yellow multiplication cross and flashing yellow lights every 5 seconds, and 2 yellow can buoys fitted with a yellow multiplication cross and yellow lights flashing 4 times every 12 seconds, the lights have a nominal range of 5 nautical miles.

Key Programme Dates

Date	Activity	Vessels
May 2008 to November 2008	Installation of Foundations	Jack-up Barge "Lisa"
June 2008 to December 2008	Wind Turbine Erection	Jack-up Barge "JB 109"
May 2008	Substation Installation	Sheerleg Crane Vessel "Samson"
July 2008 to December 2008	Inter-array Cabling	Cable Lay Barge "AMT Explorer"
May 2008 to June 2008	Export Cabling	Cable Lay Barge "AMT Explorer"
July 2008 to March 2009	Final Commissioning of Wind Turbine Generators	Various Crew Vessels and Work Boats

Examples of Vessels Involved

Several Tug Boats, e.g. "Smit Bronco"



Jack-up Installation Barges, e.g. "LISA"



Various Cargo Barges, e.g. "Baltic Carrier"



Sheerleg Crane Vessel "Samson"



Crew Transfer/Secondary Works Vessels, e.g. "Energy 1"



Cable Lay Barge "AMT Explorer"



Contact Details

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TURBINE	CO-ORDINATES
A1	54 46.290 N 03 42.031 W
A2	54 46.195 N 03 41.607 W
B1	54 46.150 N 03 42.560 W
B2	54 46.056 N 03 42.188 W
B3	54 45.955 N 03 41.776 W
B4	54 45.867 N 03 41.394 W
B5	54 45.745 N 03 41.029 W
C1	54 46.035 N 03 43.127 W
C2	54 45.936 N 03 42.714 W
C3	54 45.840 N 03 42.340 W
C4	54 45.733 N 03 41.928 W
C5	54 45.642 N 03 41.558 W
C6	54 45.537 N 03 41.171 W
D1	54 45.911 N 03 43.700 W
D2	54 45.810 N 03 43.297 W
D3	54 45.702 N 03 42.870 W
D4	54 45.607 N 03 42.496 W
D5	54 45.508 N 03 42.093 W
D6	54 45.415 N 03 41.721 W
D7	54 45.314 N 03 41.318 W
E1	54 45.758 N 03 44.207 W
E2	54 45.671 N 03 43.863 W
E3	54 45.571 N 03 43.449 W
E4	54 45.469 N 03 43.041 W
E5	54 45.375 N 03 42.659 W
E6	54 45.279 N 03 42.256 W
E7	54 45.170 N 03 41.870 W
E8	54 45.075 N 03 41.482 W
F1	54 45.534 N 03 44.410 W
F2	54 45.465 N 03 43.995 W
F3	54 45.341 N 03 43.593 W
F4	54 45.244 N 03 43.198 W
F5	54 45.150 N 03 42.816 W
F6	54 45.048 N 03 42.405 W
F7	54 44.947 N 03 42.025 W
F8	54 44.851 N 03 41.632 W
G1	54 45.307 N 03 44.589 W
G2	54 45.205 N 03 44.186 W
G3	54 45.109 N 03 43.750 W
G4	54 45.019 N 03 43.354 W
G5	54 44.924 N 03 42.976 W
G6	54 44.829 N 03 42.569 W
G7	54 44.733 N 03 42.182 W
G8	54 44.638 N 03 41.777 W
H1	54 44.983 N 03 44.333 W
H2	54 44.873 N 03 43.913 W
H3	54 44.786 N 03 43.526 W
H4	54 44.699 N 03 43.130 W
H5	54 44.604 N 03 42.733 W
H6	54 44.509 N 03 42.329 W
H7	54 44.424 N 03 41.925 W
J1	54 44.620 N 03 44.085 W
J2	54 44.530 N 03 43.688 W
J3	54 44.448 N 03 43.292 W
J4	54 44.362 N 03 42.896 W
J5	54 44.272 N 03 42.500 W
J6	54 44.194 N 03 42.128 W
K1	54 44.300 N 03 43.852 W
K2	54 44.210 N 03 43.448 W
K3	54 44.120 N 03 43.060 W
Sub Stations x 2	54 44.793 N 03 41.552 W

CORNER CO-ORDINATES

A	54 46.56N 003 41.73W
B	54 45.83N 003 40.61W
C	54 44.60N 003 41.30W
D	54 43.88N 003 42.35W
E	54 43.98N 003 44.21W
F	54 45.41N 003 44.96W
G	54 45.95N 003 44.46W

BUOY CO-ORDINATES

Conical - FI Y 5s	54 45.878N 003 45.513W
Conical - FI Y 5s	54 47.212N 003 40.242W (Not on chart)
Can - FI Y 5s	54 46.373N 003 38.570W (Not on chart)
Can - FI Y 5s	53 43.639N 003 42.075W



KINGFISHER AWARENESS CHART

PROPOSED ROBIN RIGG OFFSHORE WINDFARM FIELD LAYOUT LEGEND

- Wind Turbine Base (Not To Scale)
- Sub Station (Not To Scale)
- Navigation Lights - Turbines B5, J6 & K1 = (FI(4)Y 12s)
- Navigation Lights - Turbines A1 & G1 = (FI Y 5s)
- Aviation Lights - Turbines A1, B5, D1, F8, G1, J6 & K1
- Fog Signal - Turbine K1 = (Mo(U) 30s)
- Windfarm Construction Area
- Power Cable

ALL COORDINATES DATUM - WGS 84
 WOULD SKIPPERS PLEASE PLOT COORDINATES INTO THEIR FISHING PLOTTERS OR ELECTRONIC CHARTS
 COORDINATE COMPATIBLE WITH GPS SYSTEMS

NOT TO BE USED FOR NAVIGATION

