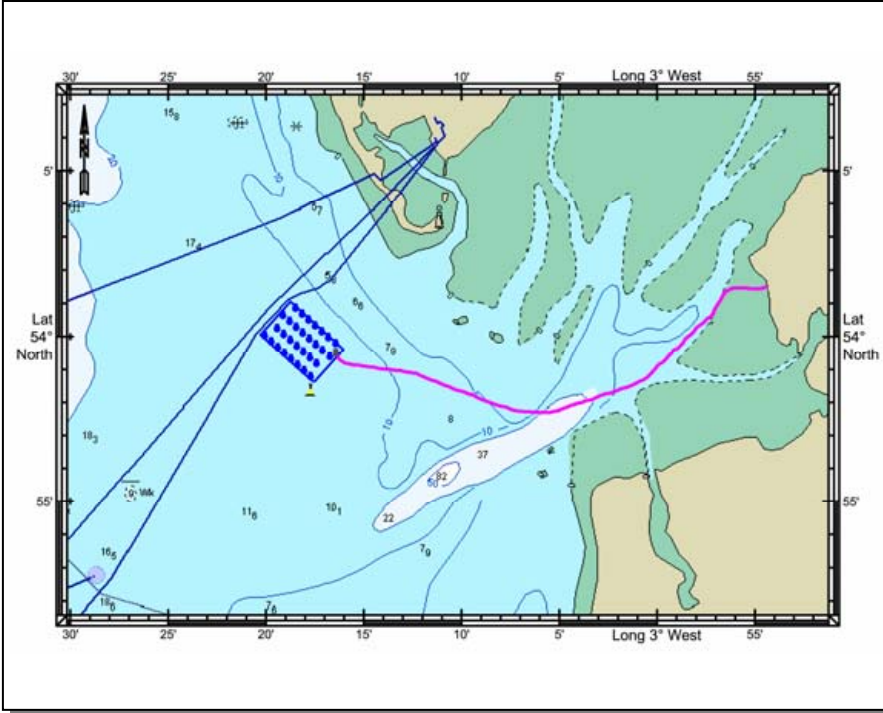




Development Location



Barrow Offshore Wind Farm

The Barrow Offshore Wind farm is located 7 km off Walney island. It will include the installation of 30 Wind turbines and one offshore substation, with interconnecting cables and a single transmission cable extending from the wind farm site to the shore at Heysham. During construction, navigational lighting will be provided by a south cardinal buoy deployed to the south of the wind farm and on each structure yellow lights will flash every 2.5s with a nominal range of 2 nautical miles.

Activity is expected to commence in early to mid May 2005 and be completed by November 2005. Vessels are requested to give a wide berth to the installation and cable laying vessels engaged in the project.

Safety Avoidance Zones

During construction a Safety Avoidance Zone of 500m is requested around the installation vessels and a 50m zone around each Turbine and Substation structure after installation. During installation of the export cable a 500m safety corridor and afterwards a 232m anchorage 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 vessel, the export cables and the Renewable Energy structures (Turbines).

Key Programme Dates

Date	Activity	Vessels
May to August 2005	Installation of Foundations	'Resolution'
August to September 2005	Turbine Erection	'Resolution'
August 2005	Substation Installation	'Matador 3'
July to August 2005	Inter-array cabling	'Pontramaris' or 'Resolution'
June to July 2005	Export cabling	'Pontramaris'

Vessels Involved

<p>'RESOLUTION' Turbine installation vessel Call sign: ZIVB5 Sat B: 0087 0323 553310 Fax Sat B: 0087 0323 553312 Sat M: 0087 0763927761 Bridge KU: 01224 296142</p>	<p>'MATADOR 3' Substation installation vessel Call sign: PBHF Tel: 0031 652608360 Fax: 0031 615049650 e-mail: Matador3@bonn-meess.com</p>	<p>'PONTRAMARIS' Cable laying vessel Call sign: PGUZ Tel: 0031-6-50223760 Mobile: 0031-6-50223761 Fax: 0031-6-55889627</p>
		

For further information, please visit: www.bowind.co.uk

Contact Details

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TRANSMISSION CABLE

NODE	LATITUDE	LONGITUDE
1	53° 59.25' N	003° 16.21' W
2	53° 59.13' N	003° 15.84' W
3	53° 59.07' N	003° 15.07' W
4	53° 58.94' N	003° 12.80' W
5	53° 57.71' N	003° 07.35' W
6	53° 57.67' N	003° 05.42' W
7	53° 57.91' N	003° 04.61' W
8	53° 58.33' N	003° 02.28' W
9	53° 58.36' N	003° 02.03' W
10	53° 58.45' N	003° 01.44' W
11	53° 58.49' N	003° 01.28' W
12	53° 58.76' N	003° 00.57' W
13	53° 59.44' N	002° 59.44' W
14	54° 00.70' N	002° 57.10' W
15	54° 01.23' N	002° 56.60' W
16	54° 01.35' N	002° 56.42' W
17	54° 01.45' N	002° 56.19' W
18	54° 01.47' N	002° 55.99' W
19	54° 01.37' N	002° 54.91' W
20	54° 01.46' N	002° 54.71' W
21	54° 01.52' N	002° 54.61' W
22	54° 01.52' N	002° 54.60' W
23	54° 01.52' N	002° 54.59' W
24	54° 01.48' N	002° 54.40' W

WIND TURBINE GENERATORS

TURBINE	LATITUDE	LONGITUDE
WTG30-A1	53°59.482' N	003°16.165' W
WTG29-A2	53°59.660' N	003°16.501' W
WTG28-A3	53°59.838' N	003°16.836' W
WTG27-A4	54°00.016' N	003°17.171' W
WTG26-A5	54°00.193' N	003°17.507' W
WTG25-A6	54°00.371' N	003°17.842' W
WTG24-A7	54°00.548' N	003°18.178' W
WTG23-B1	53°59.086' N	003°16.467' W
WTG22-B2	53°59.264' N	003°16.802' W
WTG21-B3	53°59.442' N	003°17.138' W
WTG20-B4	53°59.619' N	003°17.473' W
WTG19-B5	53°59.797' N	003°17.809' W
WTG18-B6	53°59.974' N	003°18.144' W
WTG17-B7	54°00.152' N	003°18.479' W
WTG16-B8	54°00.330' N	003°18.815' W
WTG15-C1	53°58.868' N	003°17.104' W
WTG14-C2	53°59.045' N	003°17.439' W
WTG13-C3	53°59.223' N	003°17.775' W
WTG12-C4	53°59.400' N	003°18.110' W
WTG11-C5	53°59.578' N	003°18.445' W
WTG10-C6	53°59.756' N	003°18.781' W
WTG9-C7	53°59.934' N	003°19.117' W
WTG8-D1	53°58.471' N	003°17.405' W
WTG7-D2	53°58.649' N	003°17.740' W
WTG6-D3	53°58.826' N	003°18.075' W
WTG5-D4	53°59.004' N	003°18.411' W
WTG4-D5	53°59.182' N	003°18.746' W
WTG3-D6	53°59.360' N	003°19.082' W
WTG2-D7	53°59.537' N	003°19.417' W
WTG1-D8	53°59.715' N	003°19.753' W
SUB STATION	53°59.252' N	003°16.212' W
S. CARDINAL BUOY	53°58.202' N	003°17.403' W

CORNER CO-ORDINATES

LATITUDE	LONGITUDE
①	53°59.711' N 003°19.882' W
②	54°00.712' N 003°18.346' W
③	53°59.265' N 003°15.639' W
④	53°58.264' N 003°17.159' W

KINGFISHER AWARENESS CHART
BARROW WINDFARM
 FIELD LAYOUT LEGEND

- Wind Turbine Base (Not To Scale)
- 300mm 33kV 3 Core with Embedded Fibre Optic Cable
- 120mm 33kV 3 Core with Embedded Fibre Optic Cable
- Transmission Cable to Shore
- Windfarm Boundary Line
- Yellow Flashing Light (2.5 Secs) + Aviation Lights
- Yellow Flashing Light (5 Secs) + Aviation Lights
- Fog Horn + Fog Detectors
- In Use Oil / Gas Pipeline

ALL CO-ORDINATES DATUM : WGS 84

