

## Fugro GeoConsulting Limited

Fugro House  
Hithercroft Road  
Wallingford  
Oxfordshire  
OX10 9RB

# NOTICE TO MARINERS – Geotechnical Investigations at Dogger Bank (02)

Notice is hereby given that Fugro GeoConsulting Limited (Fugro) will be conducting a Geotechnical Investigation within the UK Sector of the Central North Sea on behalf of Forewind, in the Dogger Bank Wind Farm Zone. Fugro currently estimate that the proposed work will take place from late September 2010 through to late October/Early November 2010, and will utilise the Dynamically Positioned Geotechnical Drilling Vessels the MV Fugro Commander, the MV Gargano and the MV Fugro Saltire (see attached vessel information, below).

## 1. INTRODUCTION (SURVEY LOCATION)

The Dogger Bank Wind Farm Zone is located approximately 70 kilometres from Flamborough Head, in the UK Sector of the Central North Sea. The entire survey area will cover an area of approximately 8656km<sup>2</sup> within water depths of between approximately 20 and 60m. The initial Geotechnical Investigation (Phase 1) is anticipated to comprise of forty Geotechnical Boreholes and one hundred Seabed Cone Penetration Tests (CPT's) with the majority of these works being conducted over the south western third of the Zone.

Figure 1 below shows the extents of the Geotechnical Investigation survey area.

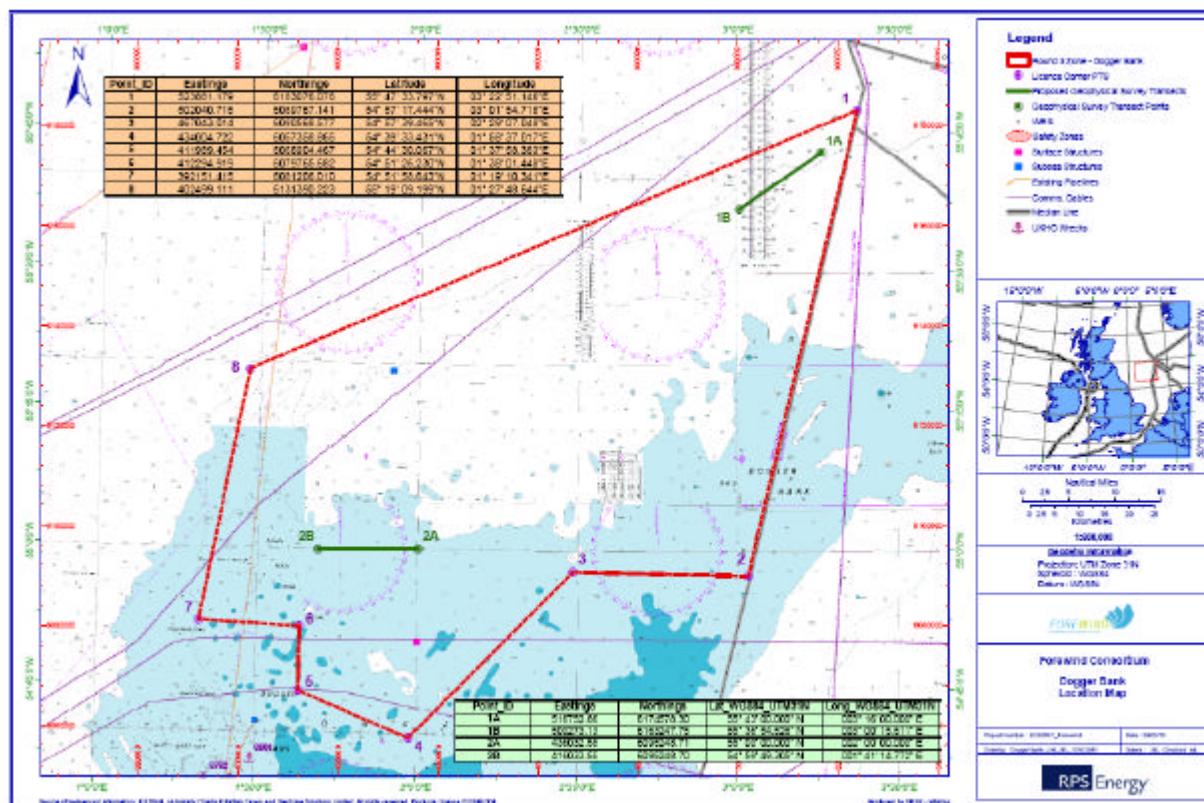


Figure 1. Outline of Dogger Bank Zone

The Dogger Bank co-ordinates are summarised as:

**Table 1-1: Dogger Bank Boundary**

Eastings	Northings	Latitude	Longitude
523881.179	6183076.076	55° 47' 33.797"N	03° 22' 51.146"E
502040.715	6089767.141	54° 57' 17.444"N	03° 01' 54.718"E
467043.014	6090568.577	54° 57' 39.465"N	02° 29' 07.048"E
434004.722	6057358.865	54° 39' 33.431"N	01° 58' 37.017"E
411989.454	6066904.467	54° 44' 30.067"N	01° 37' 58.383"E
412294.919	6079765.682	54° 51' 26.230"N	01° 38' 01.448"E
392151.415	6081206.010	54° 51' 58.643"N	01° 19' 10.341"E
402499.111	6131390.223	55° 19' 09.199"N	01° 27' 48.644"E

(Projected coordinate Ref. system WGS 84 UTM zone 31 N)

## 2. VESSELS

Fugro propose to utilise the following three Dynamically Positioned Geotechnical Drilling vessels, the MV Fugro Commander, the MV Gargano and the MV Fugro Saltire to carry out the required site operations.

*MV Fugro Commander* (Figure 2), a 56m dynamically positioned geotechnical vessel, fitted with a gantry, A frame and marine crane and will be carrying out seabed CPT's through a centrally located moonpool.



**Figure 2. MV Fugro Commander**

Fugro Commander Communications	Details
Call Sign	HO3057
E-Mail	master@fugrocommander.com
SAT M (voice)	00 870 764 667 990
SAT M (fax)	00 870 764 667 992
GSM	00 31 653 635 005
Fleet 77 (Bridge)	00 870 764 821 986

*MV Gargano* (Figure 3), a 72m geotechnical drill ship fitted with an R50 heave compensated drilling rig, will be drilling geotechnical boreholes, through a centrally located moonpool.



**Figure 3. *MV Gargano***

<b>MV Gargano Communications</b>	<b>Details</b>
Call Sign	VSMW5
E-Mail	<a href="mailto:gargane@gtships.com">gargane@gtships.com</a>
SEVSAT-Tel (Bridge)	00 44 20 7858 5704
Inmarsat number V-Sat number SAT-C 1+2 (Bridge)	00 871 323 536 210 / 220
Fax (Bridge)	00 871 323 536 214
Vessel Mobile (Captain)	00 44 7789 178 336

*MV Fugro Saltire* (Figure 4), a 111m (LOA) purpose built dynamically positioned geotechnical vessel complete fitted with an R100 heave compensated drilling rig, will also be drilling geotechnical boreholes, through a centrally located moonpool.



**Figure 4. *MV Fugro Saltire***

<b>Fugro Saltire Communications</b>	<b>Details</b>
Call Sign	LHOD
E-Mail	<a href="mailto:captain@fugrosaltire.fugro.com">captain@fugrosaltire.fugro.com</a>
Telephone (Bridge/Captain)	00 44 8452 419 381
Inmarsat number (fleet 33)	00 87 0764 876 152
Fax (Bridge)	00 44 8452 419 381

Each of the three geotechnical vessels will be operating on a 24 hour basis (weather permitting). Throughout survey operations, the vessels will be displaying the appropriate lights and shapes as required under the COLREGS Rule 27 (b) and requests other vessels maintain a wide berth and pass at slow speed.

### 3. WORK SCHEDULE

The proposed work schedule for the Geotechnical survey is shown below in Table 2.

<b>Vessel</b>	<b>Anticipated number of days on site</b>	<b>Estimated start date (week commencing)</b>	<b>Estimated completion date (week commencing)</b>
<b><i>MV Fugro Commander</i></b>	42	27 <sup>th</sup> September 2010 (mid to end of week 39)	8 <sup>th</sup> November 2010 (week 45)
<b><i>MV Gargano</i></b>	21	20 <sup>th</sup> September 2010 (end of week 38)	11 <sup>th</sup> October 2010 (week 41)
<b><i>MV Fugro Saltire</i></b>	28	4 <sup>th</sup> October 2010 (week 40)	25 <sup>th</sup> October 2010 (end of week 43)

**Table 2. Proposed work schedule**

Please note that the dates specified above are based upon our current vessel planning and is therefore subject to change, if appropriate an updated NTM will be submitted with as much notice as possible.

### 4. DISTRIBUTION LIST

<b>DISTRIBUTION</b>		
<b>Contact</b>	<b>Name</b>	<b>Email</b>
UK Hydrographic Office (UKHO)	n/a	<a href="mailto:hdcfiles@ukho.gov.uk">hdcfiles@ukho.gov.uk</a>
ABP Ports	B Guyton	<a href="mailto:bguyton@abports.co.uk">bguyton@abports.co.uk</a>
Humber Maritime Rescue Sub-Centre	n/a	<a href="mailto:wm.humber@mcga.gov.uk">wm.humber@mcga.gov.uk</a>
Kingfisher Information Services	n/a	<a href="mailto:kingfisher@seafish.co.uk">kingfisher@seafish.co.uk</a>
Kings Lynn Port Authority	n/a	<a href="mailto:harbourmaster@portauthoritykingslynn.fsnet.co.uk">harbourmaster@portauthoritykingslynn.fsnet.co.uk</a>
Marine Coastguard Agency	Paul Townsend	<a href="mailto:paul.townsend@mcga.gov.uk">paul.townsend@mcga.gov.uk</a>
Port of Boston	R Walker	<a href="mailto:rwalker@portofboston.co.uk">rwalker@portofboston.co.uk</a>
Port of Wisbech	C Dorrington	<a href="mailto:cdorrington@fenland.gov.uk">cdorrington@fenland.gov.uk</a>
Skegness Lifeboat Station	n/a	<a href="mailto:Skegness@rnli.org.uk">Skegness@rnli.org.uk</a>
Trinity House	n/a	<a href="mailto:Navigation.Directorates@thls.org">Navigation.Directorates@thls.org</a>
Wells Harbour	n/a	<a href="mailto:harbouroffice@wellsharbour.co.uk">harbouroffice@wellsharbour.co.uk</a>
Wells Life boat	n/a	<a href="mailto:coxswain@wellslifeboat.org">coxswain@wellslifeboat.org</a>
Yarmouth Coastguard	n/a	<a href="mailto:yarmouthcoastguard@mcga.gov.uk">yarmouthcoastguard@mcga.gov.uk</a>



Yarmouth Coastguard	n/a	Wm.yarmouth@mcga.gov.uk
CEFAS	n/a	jon.rees@cefas.co.uk
DEFRA (Eastern Fisheries Inspectorate Lowestoft)	n/a	lowestoft@mfa.gsi.gov.uk
Eastern Sea Fisheries Joint Committee	n/a	mail@esfjc.co.uk
Gt Yarmouth Port Authority	Harbour Master - Pat McNamara	pmcnamara@eastport.co.uk and info@eastport.co.uk
HO Radio Navigational Warnings	n/a	noticestomariners@ukho.gov.uk
The UKHO	n/a	noticetomariners@ukho.gov.uk
Andy Hinton	Andy Hilton	andy.hinton@ukho.gov.uk
Robert Lilly	Robert Lilly	robert.lilly@decc.gsi.gov.uk and correspondence@decc.gsi.gov.uk
Benjamin Lander	Benjamin Lander	benjamin.lander@marinemanagement.org.uk
Humber Maritime Rescue Sub Centre	T Mostyn	WM.HUMBER@mcga.gov.uk
Scottish Fishermen's Federation	n/a	sff@sff.co.uk
Lowestoft Harbour Master	R Musgrove	Rmusgrove@abports.co.uk
National Federation of Fishermen's Organisations	n/a	nffo@nffo.org.uk
Whitby Lifeboat	n/a	whitby@rnli.org.uk
Scarborough Lifeboat	n/a	scarborough@rnli.org.uk
Flamborough Lifeboat	n/a	flamborough@rnli.org.uk
Spurn Head Lifeboat	n/a	humber@rnli.org.uk
Lowestoft Lifeboat	n/a	lowestoft@rnli.org.uk
Southwold Harbour Master	Peter Simmons	petersimmons@waveney.gov.uk
District Marine Officer	Paul Bryan	grimsby@marinemanagement.org.uk
North East Sea Fisheries Committee	Paul Lane	paul.lane@eastriding.gov.uk
Forewind Development Team	Nikki Smith	nikki.smith@rwe.com
Forewind Fisheries Liaison Co-ordinator	Nigel Proctor	n.proctor@precisionmarine.co.uk
Forewind - Survey Manager	Tor-ing Tjelta	tjelta@statoil.com
Forewind - HSEQ Manager	Stein Møller-Nilsen	stmni@statoil.com
Fugro GeoConsulting Limited - Project Manager	Scott McHugh	s.mchugh@fugro.co.uk
Fugro GeoConsulting Limited - Associate Director, Commercial	David Williams	d.williams@fugro.co.uk

## 5. SUMMARY

The contents of this notice are based upon our current understanding of Forewind's project requirements and upon Fugro's planning at the time of submission. It should be noted that Fugro will endeavour to update this notice as required.

Enquiries regarding the contents of this NTM or any other matter should be directed to Fugro GeoConsulting Limited:

Scott McHugh - Project Manager  
Tel: (+44)1491 820 865; e.mail: [s.mchugh@fugro.co.uk](mailto:s.mchugh@fugro.co.uk)

### On Behalf of Forewind:

Nigel Proctor - Fisheries Liaison Co-ordinator  
Tel: (+44)1964 624423; e.mail: [n.proctor@precisionmarine.co.uk](mailto:n.proctor@precisionmarine.co.uk)

Tor-ing Tjelta - Survey Manager  
Tel: (+44)1189 001927; e.mail: [tjelta@statoil.com](mailto:tjelta@statoil.com)