The shaded blocks below indicate the areas of activity published within this Bulletin.

This Bulletin, along with previous issues, can be viewed at: www.kingfishercharts.org, or you can register for an email alert by contacting: kingfisher@seafish.co.uk

All co-ordinates listed in this Bulletin refer to WGS84 datum
Firth of Forth Wind Farm – Meteorological Mast

Please be advised that Fred Olsen United, on behalf of Seagreen Wind Energy Ltd (Seagreen), will be commencing the installation of a Meteorological Mast in the Firth of Forth Round 3 Offshore Wind Zone from approximately 26th March 2013. The Meteorological Mast will be installed at the location below.

Installation of the Meteorological Mast will be achieved using the jack up vessel Brave Tern operated by Fred Olsen Windcarrier. This vessel has 4 legs which will be lowered to the seabed for the installation operation. Once Brave Tern is secured in position the Meteorological Mast foundation will be installed, followed by the installation of the met mast topsides. Foundation installation is estimated to take up to 4 days and topsides installation and commissioning up to 2 weeks. The Brave Tern will be the only vessel required for the installation.

The Meteorological Mast will support a variety of meteorological data collection equipment, including a vertical array of anemometers for measurement of wind speed and direction, and will extend to a maximum height of 120m above lowest astronomical tide (LAT). The mast will be painted and otherwise marked according to the requirements of the Northern Lighthouse Board and Maritime and Coastguard Agency. Navigation lighting, a fog detection and signalling system and a radar reflector will be fitted. The Meteorological Mast topsides will be secured to a steel suction caisson foundation secured to the seabed. Following installation service visits will be undertaken at approximately 6 month intervals.

Please see the table below for the coordinates of the installation:

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>56° 36.696'N</td>
<td>01° 58.341'W</td>
</tr>
</tbody>
</table>

For further information, please contact: Rebecca Radford, Brown & May Marine Ltd, Tel: 01379 870181, email: Rebecca@brownmay.com

First Published: 01 November 2012 | Latest Update: 15 November 2012

NAREC Offshore Demonstrator Platform – Construction Activities

Installation vessel MPI Adventure is currently jacked up on the NAREC Offshore site, 3NM off Blyth. The foundation jacket has been positioned on the seabed. All 3 piles have been stabbed and drilling operations are currently in progress.

During this period, a 500m safety zone has been established and all vessels are requested to keep clear. Once the foundation is fully installed, MPI Adventure will lift on the platform and tower sections. During these activities, a 500m safety zone will be established and vessels are requested to keep clear. During construction activities, personnel transfer vessels Endurance and Celtic Challenger will be transiting between the Port of Blyth and the construction site.

Installation: NOAH
Position: 55° 08'.775'N 001° 25'.252'W
Markings: NH
Height: 168.5m above chart datum
Colour: Yellow
Lights: All round white light flashing Morse 'U' 15s, 23m, 10M
Sounds: Morse 'U' 30s

For further information, please contact: Jonathan Nuttall, Tel: 07827 933 507, Email: noah.traffic@searoc.com
Greater Gabbard Offshore Wind Farm – Unexploded Ordinance (UXO)

Greater Gabbard Offshore Winds Limited (GGOWL) has been made aware by their Unexploded Ordinance (UXO) contractor, Ramora UK Limited, of one seabed target which is likely to be a UXO.

The potential UXO is located within 15 metres of the following coordinates: 51° 50.890’ N, 001° 55.334’ E in 30 metres of water.

GGOWL and their contractor are currently implementing an investigation and possible disposal strategy. The aim is to remove this object as soon as possible, probably using the MSC Anneka.

The possible UXO is not currently marked.

GGOWL are proposing to carry out protection of export cables by placing concrete mattresses at one remaining site along the export cable.

GGOWL has applied to the Marine Management Organisation under the Marine and Coastal Access Act 2009, Part 4, for a marine licence to carry out this work at the following location between:

001°42.176’E 52°09.350’N and 001°42.219’E 52°09.287’N

Copies of the application and associated information may be viewed online in the public register at www.marinemanagement.org.uk/publicregister.

For further information, please contact: Jonathan Keer, Brown & May Marine Limited; 01379 870181 email: jonathan@brownmay.com

Lincolnshire Offshore Wind Farm – Construction Activity & Survey

Ongoing wind turbine erection is being undertaken at selected locations by the “Resolution”. 500m safety zones will apply around these locations during wind turbine erections, reverting to 50m safety zones once complete. Temporary navigation lights (Fl Y 2.5s with 2nm range) are in place on all installed foundations.

Completion of final cycle of WTG erection and demobilisation of resolution from site.

- Start of geophysical survey (predicted start date 02/04/13) of inter-array cables within main site via MV Chartwell and 2 x export cables via MV Freja (predicted start date 02/04/13). The survey contractor is Osiris Projects and these works are expected to last 1-2 weeks, subject to weather conditions.

- MV Chartwell (call sign MHGV6) is a 26m mono-hull and will be undertaking 24hr operations.

- MV Freja (call sign VSY07) is a 12m mono-hull and will be undertaking 12hr operations.

- These surveys works will require both vessels to tow survey equipment up to 100m astern of the vessel so mariners are advised to maintain a safe working distance from both vessels.

- As advised in previous NTM’s, a Fisheries Liaison Officer (FLO) - Mobile Number 07745 - is now located offshore to deal with any fishing/construction interactions over the next few weeks as commercial fishing activity increases around the site. The FLO should be contacted for any queries relating to site access/vessel movements and/or the geophysical survey.

- Diving works on some of the in-field cables (approximately 80m north of LS02 and 80m north of LS30) within the site.

- Divers will be using the Yorkshire Lady as the dive platform and mariners are advised to maintain a safe (500m) distance from this vessel and her related diving operations at all times.

- Continuation of secondary foundation and commissioning works at selected locations via various vessels.

- Ongoing works around offshore substation
Inter-Array Cables – Main Site
All inter-array cables are now installed, although some exposed cable ends exist near turbines. Mariners are reminded of the 50m Safety Zones in existence around all uncompleted structures.

Export Cables
The Huntress of Grimsby remains on site to provide guard vessel duties between KP8.0 and KP24.0.

Coordinates of Operations
The position and type of these buoys is shown below:

<table>
<thead>
<tr>
<th>Buoy</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Buoy</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Cardinal (VQ (3) 5s)</td>
<td>53°07.540'N</td>
<td>00°29.790'E</td>
<td>Special Mark (F Y 2.5s)</td>
<td>53°13.800'N</td>
<td>00°20.940'E</td>
</tr>
<tr>
<td>East Cardinal (VQ (3) 5s)</td>
<td>53°10.170'N</td>
<td>00°31.460'E</td>
<td>North Cardinal (VQ)</td>
<td>53°15.770'N</td>
<td>00°20.500'E</td>
</tr>
<tr>
<td>Special Mark (F Y 2.5s)</td>
<td>53°10.870'N</td>
<td>00°31.500'E</td>
<td>West Cardinal (VQ (9) 10s)</td>
<td>53°14.670'N</td>
<td>00°27.000'E</td>
</tr>
<tr>
<td>East Cardinal (VQ (3) 5s)</td>
<td>53°12.440'N</td>
<td>00°31.460'E</td>
<td>West Cardinal (VQ (9) 10s)</td>
<td>53°09.450'N</td>
<td>00°28.500'E</td>
</tr>
</tbody>
</table>

For a copy of the Kingfisher Awareness Flyer for the Lincs Offshore Wind Farm, please contact the undersigned. Alternatively, click on the link below, or visit www.kingfishercharts.org

Kingfisher Awareness Flyer: Lincs Offshore Wind Farm

For further information, please contact: Email: Renewables@Centrica.com OR a Fisheries Liaison Officer (FLO) will be aboard the survey vessel for the duration of the proposed works – Mob: 07831705192

First Published: 01 July 2012 | Latest Update: 25 March 2013

London Array Wind Farm – Construction Works

The London Array Offshore Wind Farm is being constructed in the Outer Thames Estuary, it will be situated midway between the Kent and Essex coastlines, more than 20km (12 miles) from each shore. Phase one consist of 175 wind turbines, installed on two sandbanks; Long Sand and Kentish Knock and in the Knock Deep channel.

Current work activities include:

- Cable burial Vessel Sia is on site carrying out the array cable burial. During these operations a 500m safety zone is established, and all vessels are to keep clear.
- The Survey Vessels Line and Sander 2 are carrying out depth of cable surveys on the array cables.
- Construction site guard vessel duties will be covered by the Mary Ann1.
- The Hotel ship Wind Ambition situated in Margate Roads and then back in the Knock Deep anchorage NE of site, acting as accommodation for offshore technicians working on WTG’s.
- The vessel Meriel D conducting site survey work, including the export cable route and array cables.

For a copy of the Kingfisher Awareness Flyer for the London Array Offshore Wind Farm, please contact the undersigned. Alternatively, click on the link below, or visit www.kingfishercharts.org

Kingfisher Awareness Flyer: London Array Offshore Wind Farm

For further information, please contact: Email: londonarraytraffic@dongenergy.dk, Tel: +44(0)7909414690 or +45 31727585
First Published: 27 February 2013 | Latest Update: 20 March 2013

**East Anglia Offshore Wind – Geophysical Survey**

Mariners are advised that Bethnic Survey work will commence at East Anglia Offshore Wind. The survey will involve collecting seabed grabs and carrying out short scientific beam trawls from a number of locations across the survey area. Survey operations will be carried out on a 24 hour basis.

<table>
<thead>
<tr>
<th>Company, Vessel &amp; Call Sign</th>
<th>Area Covered</th>
<th>Start Timeframe &amp; Duration</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emu Limited MV Julie H HP3209</td>
<td>1. 53° 14.737’N 003° 04.168’E 2. 52° 51.721’N 003° 10.693’E 3. 51° 59.771’N 002° 27.113’E 4. 52° 00.509’N 002° 06.860’E 5. 52° 17.373’N 002° 08.422’E</td>
<td>19th April 2012 For 20 Days</td>
<td></td>
</tr>
</tbody>
</table>

For further information, please contact: Martin Whyte, East Anglia Offshore Wind Ltd, Tel: (0) 141 6140424 email: Martin.whyte@scottishpower.com

First Published: 27 February 2013 | Latest Update: 20 March 2013

**Dudgeon Offshore Wind – Geophysical Survey**

Mariners are advised that MV Ocean Seeker will be undertaking geophysical surveys at one site, which is located approximately 33km to 40km offshore from the north Norfolk coastal town of Cromer between the Inner Cromer Knoll and Cromer Knoll.

<table>
<thead>
<tr>
<th>Company, Vessel &amp; Call Sign</th>
<th>Area Covered</th>
<th>Start Timeframe &amp; Duration</th>
<th>Area</th>
</tr>
</thead>
</table>

For further information, please contact: Ian Ashman, Gardline Geosurvey Limited, Tel: +44(0)1493 845600 email: ian.ashman@gardline.com
Dogger Bank Wind Farm – Installation of Meteorological Masts

Mariners are advised that the jack up vessel Brave Tern shall begin installation of two meteorological masts within the Dogger Bank Round 3 wind farm zone.

Once installed, the top height of the masts shall be 113.8m above MSL. The foundation and platform for Met Mast 1 were installed in February (the structure is equipped with fully functional navigational aids). The next two phases of the installation are planned as follows:

Phase 2 – Installation of the lattice tower for Met Mast 1: planned for 20 March – 3 April.
Phase 3 – Installation of the foundation, platform and lattice tower for Met Mast 2: dates to be advised.

Please note the above schedule is subject to weather delays. Any major changes to the completion date will be followed up with further communication.

The vessel and crew will be working on the installation activities 24 hours per day.

Whilst installation of the meteorological masts is in progress, the vessel shall be stationary and unable to manoeuvre. Vessels are advised to keep a distance of at least 1nm away from the vessel.

For further information, please contact: Simon Franey, Forwind Ltd, Tel: 07818598066, email: simon.franey@forewind.co.uk

Teesside Offshore Wind Farm – Safety Zone Cardinal Buoys Out of Service

Teesside Offshore Wind Farm is located within Tees Bay approximately 1.5km off the coast of Redcar in Cleveland. The site will consist of 27 Siemens 2.3 MW Turbines and is connected by two undersea export cables to an onshore sub-station based at Warrenby.

The following activities are continuing:

• Continue assembling turbine components at Hartlepool
• Continue turbine installations and commissioning offshore
• First power output from site
• Complete final works to TP’s

WARNING: The South Cardinal Buoy is currently unlit, the West Cardinal Buoy is currently off location.

For further information, please contact: Simon Prince / Richard Hart, RSS Marine, Tel: 01723 893930, Mob: 07920 273866, Email: sprince@rssmarine.co.uk
Hornsea Offshore Wind Farm – Survey Activities

Buoys
A directional wave rider (DWR) buoy is located at Schooner Field (location 7a) and will be serviced at 6 monthly intervals, and remain in place until further notice.

The DWR buoy is painted to IALA standard and is equipped with a radar reflector and an amber navigation light set to flash 5 times at 1Hz every 20 seconds. The DWR buoy is moored to the seabed through a series of rubber compliant sections at the sea surface and a plaited rope riser line throughout the water column. The result of this mooring configuration is a large excursion of the buoy about its mooring; we ask that passing vessels give the buoy a wide berth of approximately 300m.

<table>
<thead>
<tr>
<th>Location</th>
<th>Name</th>
<th>Equipment</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a</td>
<td>Schooner Field</td>
<td>DWR buoy</td>
<td>53° 53.367’N</td>
<td>01° 59.100’E</td>
</tr>
</tbody>
</table>

Met Mast
A meteorological mast is located at the position: 53°53.143’N 001°59.497’E

The primary and emergency fog horns on the Hornsea Met Mast are not functioning, be extra vigilant when navigating in adverse foggy conditions in the met mast area. SMart Wind is currently experiencing problems communicating electronically with the Hornsea Met Mast. However we can confirm that the Marine Navigation Aids are working correctly but the aviation lights are not. We would therefore like to keep the precautionary notice broadcasted on the 07/02/2013 in place until this issue is resolved.

For a copy of the Kingfisher Awareness Flyer for the Hornsea Offshore Wind Farm, please click on the link below, or visit www.kingfishercharts.org

Dudgeon Wind Farm – Wave Buoy

As part of the Dudgeon wind park development, Fugro GEOS will be deploying a wave buoy on behalf of Statoil for a period of 12 months. The buoy will measure waves, currents and water level and will transmit the data to shore via satellite telemetry.

The wave buoy is a Fugro Oceanor Seawatch Midi. It is approx. 2m in diameter and will be moored to the seabed using a combination of chain, flexible rubber cord and rope. FR 5 20s.

The deployment is planned for 11th March 2013. Service visits are scheduled for July and November 2013, with demobilization expected March 2014. The MV Sheerham will be used.

<table>
<thead>
<tr>
<th>Buoy</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midi Buoy</td>
<td>53° 17.468’N</td>
<td>01° 23.486’E</td>
</tr>
</tbody>
</table>

For further information, please contact: Mark Jones, Fugro GEOS, Tel: +44(0)1491 820 500 email: m.jones@geos.com
Humber Gateway Offshore Wind Farm – Unexploded Ordnance

E.ON Climate and Renewables (E.ON) are currently undertaking an Unidentified Magnetic & Sonar Anomaly investigation within the project area of the planned Humber Gateway Offshore Wind Farm. The purpose of the investigation is to identify items that have the potential to be Unexploded Ordinance (UXO) or Archaeology prior to the main installation phase of the project. Any positively identified UXO or items of Archaeological significance can then be dealt with in a controlled manner.

E.ON have engaged a professional diving and ROV contractor (Red7Marine) who along with their UXO Contractor (BACTEC International) have significant UXO investigation experience.

Please be advised that E.ON have investigated one target that is likely to be UXO, have marked it with a buoy and are currently implementing an investigation and possible disposal strategy.

Immediate Action

Enhanced Safety Procedures Given that the item is likely to be UXO, it potentially is a hazardous item; however it could only be initiated if there is a significant physical interaction with it. Therefore a vessel and marine activity exclusion zone of 200m radius has been recommended by E.ON's UXO risk consultant. At this stage, the item does not pose any direct hazard to shipping or the local environment. For the purposes of absolute safety, the suspect item is to be avoided, pending further actions by E.ON.

Target Location and Markings

The suspect target is located approximately 8.5km offshore, North-East of Kilnsea, and is located in approximately 15m (LAT) water depth. The target is located within the offshore wind farm project area and has the following coordinates:

UXO Coordinates 53°39.539'N 000°15.124'E
UXO Marker Buoy 53°39.507’N 000°15.139’E

The target has been temporarily marked with a buoy with the following characteristics: Location: 65m South of the target (Bearing 170 Degrees) Size: approx. 750mm diameter Colour: Orange

Buoy - Prior to Installation E.ON are currently sourcing a lighted buoy to replace this temporary buoy. Details will be forwarded accordingly.

For further information, please contact: Nigel Proctor, Fisheries Liaison Officer, Tel: 07702730891, Email: n.proctor@precisionmarine.co.uk

Humber Gateway Offshore Wind Farm – Survey

Mariners are advised that Fugro Subsea Services Ltd will be carrying out cable trenching and burial trials including ROV survey operations approximately 10miles offshore from Spurn Head, on the Yorkshire coastline. Trial operations will involve mechanical cutting and jetting by tracked vehicle via umbilical feed deployed up to 200m port side of the vessel “Havila Phoenix” at pre-defined export substation and wind farm array cable route locations.

In addition, ROVs will provide simultaneous survey support up to 500m in any direction as required. In addition to the trenching trials, the “Havila Phoenix” maybe utilised to carry out remedial works to the existing Met-Mast. “Havila Phoenix” is a 110m x 23m multi purpose offshore DP2 vessel. A wide berth is requested at all times as the vessels will be restricted in her ability to manoeuvre. Vessel will operate on a 24hr basis and will display appropriate day shapes & lights during survey operations, and will actively transmit an AIS signal.
For ‘live’ Kingfisher updates of all Cable & Wind Farm activities, please visit www.kis-orca.eu

<table>
<thead>
<tr>
<th>Company, Vessel &amp; Call Sign</th>
<th>Boundary of Array Works</th>
<th>Boundary of Export Works</th>
<th>Start Timeframe &amp; Duration</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red 7 Marine Offshore Ltd Toisa Vigilant C6UM8</td>
<td></td>
<td>53° 39.937°N 00° 18.163°E</td>
<td>3rd February 2013 2-3 Months</td>
<td></td>
</tr>
<tr>
<td>Red 7 Marine Offshore Ltd Toisa Vigilant C6UM8</td>
<td>53°40.100°N 00°014.810°E 53°38.020°N 00°19.880°E 53°36.780°N 00°16.280°E</td>
<td>53° 39.35°N 00° 15.19°E 53° 39.65°N 00° 15.04°E 53° 38.96°N 00° 10.71°E 53° 38.97°N 00° 08.14°E 53° 38.57°N 00° 08.14°E 53° 38.56°N 00° 10.82°E</td>
<td>2nd February 2013 Aprox 2-3 Months</td>
<td></td>
</tr>
</tbody>
</table>

For further information, please contact: Nigel Proctor, Fisheries Liaison Officer, Tel: 07702730891, Email: n.proctor@precisionmarine.co.uk

First Published: 25 January 2013 | Latest Update: 25 January 2013

Race Bank Offshore Wind Farm – Docking Shoal Meteorological Masts

Centrica Renewable Energy Limited (“Centrica”) has taken the decision to decommission the meteorological masts (“met masts”) for the Race Bank Offshore Wind Farm (“Race Bank”) and Docking Shoal Offshore Wind Farm (“Docking Shoal”) for safety reasons as soon as is practicable. A risk assessment undertaken by Centrica has identified that the methodology used to design the mast structures (prior to installation in 2005) may make them susceptible to early fatigue failure. It is anticipated that the removal of the lattice towers will occur in March / April this year following the granting of consent from the Marine Management Organisation (“MMO”) for this operation.

As per the previous Centrica Notice to Mariners (“NTM”), dated 7th December 2012, Mariners are strongly advised against accessing the Race Bank and Docking Shoal met masts and are strongly recommended to give them a wide berth of at least 250m.

Further, Mariners are advised that Aid to Navigation (“AtoN”) reference N15113 (lighted beacon) on the Race Bank meteorological mast is extinguished and therefore additional caution should be exercised when in the vicinity of this mast.

Coordinates of Race Bank met mast:

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>53° 18.820°N</td>
<td>00° 44.850°E</td>
</tr>
</tbody>
</table>

Coordinates of Docking Shoal met mast:

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>53° 09.470°N</td>
<td>00° 38.870°E</td>
</tr>
</tbody>
</table>

For further information, please contact: Simon Prince, RSS Marine, Email: sprince@rssmarine.co.uk or aprince@dsml.co.uk
Greater Gabbard Offshore Wind Farm – Exposed Export Cable Areas

Underwater mattress laying operations along the Greater Gabbard Offshore Windfarm export cable commencing 13th January 2013.

- **Mv. “Maersk Recorder”** (Call Sign: OZXK2, MMSI: 219899000) will commence underwater ‘mattress’ laying operations on Sunday 13th January 2013 on the Greater Gabbard Offshore Windfarm export cable between positions: 51° 54’.51N, 001° 56’.35 E at the Inner Gabbard OSP and 52° 09’.20N, 001° 42’.10 E, approx. 12 n.m. to the NW.
- Operations will continue until cancellation of this notice. The guard vessel m/v. “Reliance” will be guarding the export cable between the northern end of the Inner Gabbard wind farm and towards the northwest. The guard vessel m/v “Annette” continues to guard the inshore end of the export cable off Sizewell.

<table>
<thead>
<tr>
<th>Exposed Export Cable Areas</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>South of Concerto</td>
<td>52°09.776’N 001°41.903’E</td>
<td>52°09.760’N 001°41.894’E</td>
</tr>
<tr>
<td>South of Concerto</td>
<td>52°08.751’N 001°42.604’E</td>
<td>52°08.743’N 001°42.599’E</td>
</tr>
<tr>
<td>South of Farland</td>
<td>52°03.655’N 001°47.804’E</td>
<td>52°03.237’N 001°46.972’E</td>
</tr>
<tr>
<td>North of Gabbard</td>
<td>52°00.771’N 001°53.448’E</td>
<td>52°00.748’N 001°53.321’E</td>
</tr>
<tr>
<td>North of Gabbard</td>
<td>51°59.244’N 001°56.845’E</td>
<td>51°59.236’N 001°56.819’E</td>
</tr>
<tr>
<td>Northern Inner Area of Gabbard</td>
<td>51°59.136’N 001°57.203’E</td>
<td>51°59.048’N 001°57.109’E</td>
</tr>
<tr>
<td>North Gabbard</td>
<td>51°57.479’N 001°57.343’E</td>
<td>51°57.355’N 001°57.375’E</td>
</tr>
<tr>
<td>Central Gabbard</td>
<td>51°59.420’N 001°56.470’E</td>
<td>51°59.376’N 001°56.351’E</td>
</tr>
</tbody>
</table>

All these areas will have mattress protection fitted during 2013. Guard vessels monitoring the exposed areas are – Reliance/Anne Scott / Annette.

For further information, please contact: Glynn Fereday, SSE, Tel: +44(0)1502 509210

First Published: 10 September 2012 | Latest Update: 05 December 2012

London Array Wind Farm – HV1/HV4 Subsea Rock Installation

There are a total of four 150kV power cables to be installed from a landfall in The Swale, north of Cleve Hill, Graveney out to the London array wind farm approximately 12 miles from the Kent and Essex coasts.

SRI work consists of post-lay rock installation on the HV1 and HV4 export cables at crossings with Kentish Flats wind farm export cables and a crossing with the BritNed interconnector cable. SRI operations for the London Array windfarm area will be conducted within the area defined by the coordinates below:

<table>
<thead>
<tr>
<th>Location</th>
<th>Position</th>
<th>Location</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shivering Sand anchorage Bulk Carrier 1</td>
<td>51°30.80’N 001°08.50’E</td>
<td>BritNed HVDC Interconnector crossing</td>
<td>51°28.50’N 001°17.50’E</td>
</tr>
<tr>
<td>Shivering Sand anchorage Bulk Carrier 2</td>
<td>51°30.80’N 001°07.00’E</td>
<td>Kentish Flats export cables crossings</td>
<td>51°25.25’N 001°06.00’E</td>
</tr>
</tbody>
</table>

For a copy of the Kingfisher Awareness Flyer for the London Array Offshore Wind Farm, please contact the undersigned. Alternatively, click on the link below, or visit [www.kingfishercharts.org](http://www.kingfishercharts.org)

Kingfisher Awareness Flyer: London Array Offshore Wind Farm

For further information, please contact: Email: londonarraytraffic@dongenergy.dk, Tel: +44(0)7909414690 or +45 31727585
**Lynn and Inner Dowsing Wind Farm – Notice to Mariners**

Faulty Aids to Navigation on four of the Lynn and Inner Dowsing turbines have been removed for repair. The affected turbines, their co-ordinates and the nature of the fault are detailed in the table below.

<table>
<thead>
<tr>
<th>Turbine Number</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Fault</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID01</td>
<td>53°12.777’N</td>
<td>000°25.959’E</td>
<td>Faulty (East) Lantern</td>
</tr>
<tr>
<td>ID10</td>
<td>53°10.168’N</td>
<td>000°25.964’E</td>
<td>Faulty (West) Lantern</td>
</tr>
<tr>
<td>LN10</td>
<td>53°08.754’N</td>
<td>000°26.360’E</td>
<td>Faulty (East) Lantern</td>
</tr>
<tr>
<td>LN30</td>
<td>53°08.798’N</td>
<td>000°28.691’E</td>
<td>Faulty (East &amp; West) Lanterns Fog Horn Amplifier</td>
</tr>
</tbody>
</table>

These aids will be replaced as soon as possible, and Mariners will be notified of their replacement via another Notice to Mariners in due course.

For further information, please contact: Simon Prince, Tel: 07920 273866, Email: sprince@rssmarine.co.uk; Richard Hart, Tel: 07584 514942, Email: rhart@rssmarine.co.uk
### Barrow Offshore Wind Farm – Operations

- **First Published:** 08 May 2013  |  **Latest Update:** 28 March 2013

Please note, there are exposed sections of cable (or Cable Buried to less than 0.2M). Please refer to KFB 14/2012 for these locations.

Diving operations are expected to start on or around April 2nd 2013 to repair a fault on the infield or Inter-Array Power Cable on the B – ROW.

Divers operating from the Dive Support Vessel ‘HBC Supporter’ will work at Turbine position WTG 23 – B01 where the cable leads in from the Sub-Station.

The Navigation and Aviation Lights on Turbines B1 and B8 are not working although the Navigation and Aviation Lights on all other Turbines as well as the Sub-Station are working as normal.

Temporary NAVIGATION LIGHTS will be fitted on Turbines B1 and B8 until the fault is repaired.

A 500 meter safety exclusion zone is requested around ‘Odin’ and the support vessels at all times when on site. Any vessel engaged on any kind of work at this Wind Farm can be contacted on VHF Channels 16 & 12.

In the interests of safety mariners are requested not to anchor within at least 500 meters of the wind farm perimeter and, because there is a danger of exposed power cable on the seabed close to some of the turbine structures, fishermen are requested to observe the agreed extended safety zone of 100 meters around each turbine and the need to exercise extreme caution when operating in the vicinity of any of the wind farm turbines.

**For further information, please contact:** Tom Watson, Tel: 01253 875565, Mob: 07903 173 624

### Shell Flats Bank – Malfunction to Navigation and Aviation Lighting

The two special marker buoys are still in situ at the 80m mast on the Shell Flats Bank and will remain in position until the Aviation lights on this mast have been repaired. The buoys are deployed approx. 75m either side of the mast on a North and South orientation.

**Positions of the two buoys:**

<table>
<thead>
<tr>
<th>Buoy</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Mast</td>
<td>53°52.423'N</td>
<td>003°12.133'W</td>
</tr>
<tr>
<td>South Mast</td>
<td>53°51.600'N</td>
<td>003°17.663'W</td>
</tr>
</tbody>
</table>

The Navigation Lights at the 80m mast have now been repaired, the aviation lights at this mast are still not working.

**It has been reported that the navigation light on 50m mast are not working.**

Characteristics of the Special Marker Buoys - Flashing sequence: 0.5s ON & 2s OFF. Flash colour: Yellow. The two Metrological Masts are situated at the following positions:

<table>
<thead>
<tr>
<th>Mast</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>80m</td>
<td>53°52.423'N</td>
<td>003°12.133'W</td>
</tr>
<tr>
<td>50m</td>
<td>53°51.600'N</td>
<td>003°17.663'W</td>
</tr>
</tbody>
</table>

**For further information, please contact:** Tom Watson, Tel: 01253 875565, Mob: 07903 173 624

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**For ‘live’ Kingfisher updates of all Cable & Wind Farm activities, please visit www.kis-orca.eu**
West of Duddon Sands Offshore Wind Farm – Construction Works

The West of Duddon Sands offshore windfarm is a joint venture between DONG Energy West of Duddon Sands (UK) Limited and ScottishPower Renewables (WoDS) Limited. The West of Duddon Sands project is located, at its closest point, 14km west of Walney Island, Cumbria in the Irish Sea. The windfarm project covers an area of 66km² and will achieve a total combined capacity of up to 500MW.

Boundary of Location Activities:

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>54°00.15'N</td>
<td>003°33.52'W</td>
</tr>
<tr>
<td>54°01.78'N</td>
<td>003°26.67'W</td>
</tr>
<tr>
<td>53°58.35'N</td>
<td>003°22.80'W</td>
</tr>
<tr>
<td>53°56.64'N</td>
<td>003°25.37'W</td>
</tr>
<tr>
<td>53°56.72'N</td>
<td>003°29.33'W</td>
</tr>
</tbody>
</table>

Further information on the West of Duddon Sands project may be obtained from Ian Renshaw (email address: IANRE@dongenergy.co.uk, telephone number: 0207 811 5395).

Notice is hereby given that DONG Energy West of Duddon Sands (UK) Limited and ScottishPower Renewables (WoDS) Limited (whose registered offices are at DONG Energy West of Duddon Sands (UK) Limited, 33rd Floor, City Point, 1 Ropemaker Street, London, EC2Y 9UE and ScottishPower Renewables (WoDS) Limited, Cathcart Business Park, Spean Street, Glasgow, Scotland, G44 4BE) will commence construction works on 21st January 2013.

The Start of construction with the installation of the first Turbine Foundation is scheduled to start during the first week in May 2013.

Schedule of Activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Anticipated Dates</th>
<th>Vessel</th>
<th>Call Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Layer Placement</td>
<td>15th February 2013 to 30 May 2013</td>
<td>Sandpiper Rock Piper</td>
<td>3ERG6</td>
</tr>
<tr>
<td>Offshore Substation Installations</td>
<td>May 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export Cable Installation</td>
<td>March – October 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundation Installations</td>
<td>May – November 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Array Cable Installations</td>
<td>June 2013 – March 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation of Turbines</td>
<td>August 2013 – June 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbine Commissioning</td>
<td>August 2013 – October 2014</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Dates are anticipated and are subject to change

In case of emergency, please contact: Dan Torben Christensen, Dong Energy, Tel: +44(0)7528921388 email: danch@dongenergy.dk
**Gwynt y Môr Offshore Wind Farm – Construction Activities**

The Gwynt y Môr Offshore Wind Farm Project is located between 15km to 20km off the coast of North Wales in the Liverpool Bay area of the Irish Sea. It is adjacent to RWE Innogy’s North Hoyle and Rhi Flats offshore wind farms. The consented site covers an area of 124km². The water depth ranges from 12m to 28m LAT with a tidal range of 8.5m.

Activities due to commence:
- The survey of Subsea Export Cable No. 1 has started for approximately 1 week. The survey work will be conducted by the survey vessel Lia, which will be working in the approximate position 53°11'N 03°36'W.
- MV Lia will be towing survey equipment from her stern. Vessels are asked to observe a 500m safety zone around the Lia.
- CTV’s Tremadoc Bay, Penrhos bay, Malltraeth bay, Colwyn Bay, Kinmel bay, Penryn bay, Caernarvon Bay, Chinook & Scirocco will continue to be utilised as CTV’s as required and shall sail from Liverpool Marina and Canada dock.
- DSV Normand Tonjer has carried on with diving ops and installed some pull-in frames ready for cable pulling at GYMOWF.

### Export Cable Jointing Works:

Please be advised that the Stemat 89 assisted by Anchor handling support tugs Nova K and Tessa W, Fenna B, and Towing vessel Coastal Vanguard, will be jointing the Gwynt y Mor wind farm Export cable at a position detailed below, work expected to take approx 1 Month from start date.

<table>
<thead>
<tr>
<th>Location</th>
<th>Buoy Type</th>
<th>Position</th>
<th>Location</th>
<th>Buoy Type</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>GYM'E</td>
<td>West Cardinal VQ(9) 10s</td>
<td>53°29.060N 003°42.129W</td>
<td>GYM'N</td>
<td>North Cardinal VQ</td>
<td>53°29.730N 003°31.710W</td>
</tr>
<tr>
<td>GYM SW</td>
<td>Special Mark FY 2.5s</td>
<td>53°25.870N 003°39.600W</td>
<td>GYM'NE</td>
<td>Special Mark FY 2.5s</td>
<td>53°28.390N 003°29.340W</td>
</tr>
<tr>
<td>GYM W</td>
<td>West Cardinal VQ(9) 10s</td>
<td>53°28.832N 003°40.207W</td>
<td>GYM'E</td>
<td>East Cardinal VQ(3) 5s</td>
<td>53°27.130N 003°27.078W</td>
</tr>
<tr>
<td>GYM NW</td>
<td>West Cardinal VQ(9) 10s</td>
<td>53°28.303N 003°40.772W</td>
<td>GYM'SE</td>
<td>Special Mark FY 2.5s</td>
<td>53°26.010N 003°32.080W</td>
</tr>
<tr>
<td>GYM NNW</td>
<td>North Cardinal Q</td>
<td>53°29.870N 003°36.857W</td>
<td>GYM'N</td>
<td>North Cardinal VQ</td>
<td>53°29.730N 003°31.710W</td>
</tr>
</tbody>
</table>

### WTG Installation Works:

Please be advised that Wind Turbine Generator [WTG] installation works will commence on the 5th April 2013. The Turbine installation vessel Sea Jack will be the first installation vessel on site from the 5th April 2013, and will be joined by another installation vessel the Sea worker at a later date. The Sea Jack will be towed out of Mostyn to the Gwynt y Mor offshore wind farm site on a regular basis, the tugs involved with the Sea Jack will be the Sea Golf and the Bever. These vessel's will be conducting operations within the Gwynt y Mor offshore wind farm site at various locations, and when on location will require a 1000m clearance at all times. During transit to/from the port of Mostyn the vessel should receive the appropriate clearance for a Tug and tow. The vessel will monitor VHF CH 16 at all times.

### Recommandement of Export Cable Works:

Export Cable works are expected to commence on the 1st April 2013. These works will last until further notice. There will be 4 export cables in total. 2 cables from the beach at Pensarn Leading to the Offshore Sub Station West Platform and 2 cables from Pensarn to the Sub Station East Platform. Cable installation barge “Cable Enterprise” will be installing cables supported by ‘Norne’, MCS Alisa and Forth Jouster. The Cable Enterprise will deploy Anchors, Cables and Buoys. All vessels are requested to keep at least 1200m clear of the Cable Installation Barge at all times when on location. As well as Cable laying operations there will be other operations involved including a PLGR (Pre Lay Grapnel Route Survey) carried out by The Support vessels. All vessels are to give 500m clearance from these vessels at all times. All vessels will be contactable on VHF 16.

For a copy of the Kingfisher Awareness Flyer for the Gwynt y Mor Offshore Wind Farm, please contact the undersigned. Alternatively, click on the link below, or visit www.kingfishercharts.org

**Kingfisher Awareness Flyer: Gwynt y Mor Offshore Wind Farm**

For further information, please contact: Lee Cornwell, RWE npower renewables, Mob: +44 (0) 7557 319473, Email: lee.cornwell@rwe.com
Walney 1, 2 & Extension Offshore Wind Farm – Construction Activity / Consultation

DONG Energy wishes to make you aware that, as a result of recent technical investigations and consultations, an additional cable route option is now being proposed for the Walney Extension Project.

All of the Turbines at the Walney Offshore Wind Farm are operational and switched to automatic and producing power to the National Grid.

All of the power cables are buried (both infield and export) and anybody who is unsure of the Rock Dump positions along the export cable routes should contact .

A programme involving some remedial work to one of the infield, or Inter-Array cables, inside Walney 1 is scheduled for March and notices informing of this work will be issued shortly.

There is now only one Wave Rider Buoy within the perimeter of the Wind Farm

54°01.297'N  |  003°29.402’W

This buoy carries a flashing Yellow Light Fl(5)Y.20s and is visible up to 3 miles

Marker Buoys for Wet Storage Area
The 4 Buoys marking what was the wet storage area inside of Walney 2 are still in place although there are no anchors or obstructions on the seabed.

Position of Wet Storage Buoys

54°04.380'N  |  003°37.480’W

These Buoys are equipped with solar powered quick flash lights and will be removed at some future date. Until notice has been given that these buoys have been removed all mariners, and especially fishermen, wishing to navigate within the Wind Farm for whatever reason are advised to note these positions and enter them on their charts / plotters and keep clear.

For further information, please contact: Tel: 02078 115439 or email walneyextension@dongenergy.co.uk


For a copy of the Kingfisher Awareness Flyers for the Walney Offshore Wind Farms, please contact the undersigned. Alternatively, click on the link below, or visit www.kingfishercharts.org

| Kingfisher Awareness Flyer: Walney 2 Offshore Wind Farm |
| Kingfisher Awareness Flyer: Walney 1 Offshore Wind Farm |

For further information, please contact: Tom Watson, Tel: 01253 875565, Mobile: 07903 173624
Irish Sea Zone – Metocean Equipment

Metocean equipment was deployed in the following locations: 7, 8 and 12 in the Irish Sea Zone.

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>53°25.60’N</td>
<td>004°22.20’W</td>
</tr>
<tr>
<td>53°25.12’N</td>
<td>004°21.13’W</td>
</tr>
<tr>
<td>53°25.30’N</td>
<td>004°17.99’W</td>
</tr>
</tbody>
</table>

For further information, please contact: Laura Lilley, Celtic Array Ltd, Tel: 07557612061 email: Ceri@centrica.com

Robin Rigg Offshore Wind Farm – Hazard / Plotter Files / Operations

An anchor has been lost within the Wind Farm at position: 54°44.52’N 003°42.84’W. Several unsuccessful attempts have been made to retrieve this anchor and therefore it is likely that it will remain at this position for some time.

It has been reported that the Aviation Light on Turbine RRB05 is not working.

Turbine position : 54°45.75’N 003°41.03’W

This fault has been reported to the Northern Lighthouse Board and will be rectified as soon as weather and conditions permit proper inspection and repair. Once the light has been repaired/rectified a further notice will be issued.

A CD of the Robin Rigg layout including Inter-Array or Infield Cables as well as the Export Cable Route is now available. The disk contains fishing plotter files and is compatible with the following plotters: Litton Fish master, Sodena Turbo, Maxsea, TRAX, Transas Navi-Fish, SIS Microplot, Quodfish, TM Planner and Penta plotters.

For a copy of the Kingfisher Awareness Flyer for the Robin Rigg Offshore Wind Farm or Fishing Plotter CD, please contact the undersigned. Alternatively, click on the link below, or visit www.kingfishercharts.org

Kingfisher Awareness Flyer: Robin Rigg Offshore Wind Farm
Kingfisher Fishing Plotter CD: Robin Rigg Offshore Wind Farm

For further information, please contact: Tom Watson, Tel: 01253 875565, Mob: 07903 173 624