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
West of St. Ninian’s Isle – Scientific Deployment

Aegir Wave Power has redeployed a waverider buoy around 4km off the coast of St. Ninian’s Isle, southwest Shetland.

The buoy is yellow, 0.7m in diameter and fitted with a yellow flashing light. The buoy is moored by a slack line with underwater floats with allows the buoy to move around a 200m watch circle. Mariners are asked to keep a distance from the buoy.

The buoy will remain onsite for between 1-3 years. NAFC Marine Centre will monitor and maintain the buoy while it’s onsite.

For further information, please contact: R. Hart, Aegir Wave Power, Tel: 0131 5612555, Email: enquiries@aegirwave.com
Dogger Bank Wind Farm – Geophysical Survey

Mariners are advised that the M/V Vigilant and M/V Sea Surveyor shall begin geophysical survey of the Dogger Bank Wind Farm Tranche C area and proposed in-zone cable corridors in the week beginning 01st of April 2013.

<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>Forewind MV Aurelia 9HF18</td>
<td>1. 55°11.812'N 001°31.577'E</td>
<td>07th June 2013 To July 2013 For 2 Weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. 55°34.255'N 002°41.976'E</td>
<td></td>
<td>6. 55°09.987'N 002°42.159'E</td>
</tr>
<tr>
<td></td>
<td>7. 55°06.135'N 001°51.693'E</td>
<td></td>
<td>8. 55°05.905'N 001°30.558'E</td>
</tr>
<tr>
<td></td>
<td>6. 55°06.135'N 001°51.693'E</td>
<td></td>
<td>7. 55°05.905'N 001°30.558'E</td>
</tr>
</tbody>
</table>

For further information, please contact: Callum Duffy, Forewind Ltd, Tel: +44(0)118 9556188 email: callum.duffy@forewind.co.uk

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. 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.

For further information, please contact: Rebecca Radford, Brown & May Marine Ltd, Tel: 01379 870181 email: Rebecca@brownmay.com
### Galloper Offshore Wind Farm Phase 2 – Survey

Mariners are advised that geotechnical surveys will be conducted in the proposed WTG array area at the Galloper Wind Farm site (Site 1). The vessel will be deploying anchors and using dynamic positioning to stay on station during testing.

<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>
| Gardline MV Ocean Discovery 2DAU3 | 1. 51°59.500’N 002°05.583’E  
2. 51°55.617’N 002°08.733’E  
3. 51°57.217’N 002°08.733’E  
4. 51°55.700’N 002°08.233’E  
5. 51°53.233’N 002°00.000’E  
6. 51°58.700’N 002°00.000’E | 31st May 2013 | |

For further information, please contact: Sally Dalrymple, Gardline, Tel: +44(0)1493 845 600  Email: sally.dalrymple@gardline.com

### Westermost Rough Offshore Wind – Fish and Shellfish Survey

<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>
| Dong Huntress 2ETP3 | 1. 53°50.575’N 0°09.615’E  
2. 53°47.982’N 0°12.743’E  
3. 53°46.131’N 0°08.365’E  
4. 53°48.722’N 0°05.235’E | 12th June 2013 – 30th September 2013  
For 2 days per week | |

For further information, please contact: Lasse Hartvig Hirsch, Westermost Rough Ltd, Email: LASHI@dongenergy.dk

### 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.
For ‘live’ Kingfisher updates of all Cable & Wind Farm activities, please visit www.kis-orca.eu

<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. In foggy conditions the fog detection and control system is diverting the primary navigation lights and fog horn to the emergency navigation lights and fog horn. Be extra vigilant when navigating in adverse foggy conditions in the met mast area.

Smart Wind can confirm that the aviation light is operational.

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

**Kingfisher Awareness Flyer: Hornsea Offshore Wind Farm**

For further information, please contact: Chris Jenner, Tel: 07889410553, Email: Chris.Jenner@mainstreamrp.com, OR Hornsea Zone Onshore Fisheries Liaison Officer: Nick Garside, NFFO Services Ltd, Tel: 01904 635 432, Email: nick.garside@live.co.uk

First Published: 27 June 2012 | Latest Update: 03 June 2013

**Lincs 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.

- Continuation of commissioning works at selected locations via various vessels

**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>
</tr>
</thead>
<tbody>
<tr>
<td>East Cardinal (VQ (3) 5s)</td>
<td>53° 07.540'N</td>
<td>00° 25.790'E</td>
</tr>
<tr>
<td>East Cardinal (VQ (3) 5s)</td>
<td>53° 09.070'N</td>
<td>00° 31.490'E</td>
</tr>
<tr>
<td>Special Mark (Fl Y 2.5s)</td>
<td>53° 10.970'N</td>
<td>00° 31.500'E</td>
</tr>
<tr>
<td>East Cardinal (VQ (3) 5s)</td>
<td>53° 12.440'N</td>
<td>00° 31.460'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
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 consists 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 Pontra Maris assisted by tugs, Amstelstroom and Claudia B will continue cable burial operations at shallow water locations. Whilst construction is taking place at these positions a 900m safety zone is established, and all vessels are to keep clear.
- The HBC Performer will carry out remedial works on cables. Whilst construction is taking place at these positions a 500m safety zone is established, and all vessels are to keep clear.
- The HBC Tender will carry out remedial works on cables. Whilst construction is taking place at these positions a 500m safety zone is established, and all vessels are to keep clear.
- Construction site guard vessel duties will be covered by the Mary Ann 1.
- Crew boats Sea Rex, MPI Cardenio, Marian Array, Smeaton Array, Ellida Array, Conway Bay, Towyn Bay, Cvind Alliance, Transporter, Distributor, Admiral P, Commodore P, Aberffraw Bay, ECC Topaz, ECC Opal, Sea Ferret & Sea Weasel will take offshore technicians to the installed foundations and construction vessels, and perform personnel transfer duties. Some of these vessels will undertake generator removal duties.
- 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

Dudgeon Offshore Wind – Survey

The Blue Beta will be conducting approximately 20 boreholes within the survey area shown below. The Blue Alpha will be conducting 100 cone penetration tests.

For further information, please contact: Callum Duffy, Forewind, Tel: 07930176656 email: callum.duffy@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:
• Completed assembly of turbine components at Hartlepool ready for load out.
• Continue turbine commissioning offshore.

WARNING: The Following Cardinal Buys are currently Our of Service:

<table>
<thead>
<tr>
<th>Buoy</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Cardinal</td>
<td>54° 39.020’N</td>
<td>01° 07.260’W</td>
</tr>
</tbody>
</table>

For further information, please contact: Simon Prince / Richard Hart, RSS Marine, Tel: 01723 893930, Mob: 07920 273866, Email: sprince@rssmarine.co.uk

East Anglia Offshore Wind – Navigational Fault on Met Mast ZE

The East Anglia Zone is situated in UK territorial waters within the southern North Sea off the coast of North and Suffolk. As part of the development, the met masts are to be installed in the south east of the site and the north east.

Please be advised that the Navigation aid system on EAZE is currently non-operational due to an unknown fault. Guard vessel MFV Edlei GY455 remains in attendance and WGK intends to mobilise a vessel to effect repairs as soon as possible.

Note that the EAZE navaid system is the one which does not feature AIS and Racon; it has lantern and fog signal only.

<table>
<thead>
<tr>
<th>Met Mast</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met Mast ZE (as installed)</td>
<td>53° 10.646’N</td>
<td>02° 59.103’E</td>
</tr>
<tr>
<td>Met Mast 1B</td>
<td>52° 12.863’N</td>
<td>02° 30.111’E</td>
</tr>
</tbody>
</table>

Work Schedule
WOOD GROUP KENNY commenced Phase I operations (installation of foundations) on the 6th May 2013 utilising the HLV STANISLAV YUDIN with AHTs Smit Angola and Bremen Fighter and concluded operations on the 13th May.

WOOD GROUP KENNY is due to commence Phase II operations (installation of transition pieces and lattice towers) between the 1st June 2013 and the 1st September 2013 for a period of approximately seven days (weather dependent) utilising the HLV OLEG STRASHNOV with AHT Union Princess. Installation of additional equipment and instrumentation will follow Phase II operations directly for a period of two weeks (weather dependent) utilising a Crew Transfer Vessel (details TBC). 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.

For further information, please contact: James Beale, Wood Group Kenny, Tel: +44(0)1784 417263, email: james.beale@woodgroupkenny.com
**Humber Gateway Offshore Wind Farm – Boulder Removal Operations**

<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>
| EON Red 7 J8B3100           | 1. 53°40.100'N 000°14.810'E  
2. 53°41.030'N 000°19.880'E  
4. 53°35.280'N 000°16.240'E  
5. 53°36.780'N 000°16.280'E | 4. 53°35.830'N 000°16.900'E  
5. 53°35.280'N 000°16.240'E  
6. 53°36.780'N 000°16.280'E | 53°35.830'N 000°16.900'E  
4. 53°35.280'N 000°16.240'E  
6. 53°36.780'N 000°16.280'E | 53°35.830'N 000°16.900'E  
4. 53°35.280'N 000°16.240'E  
6. 53°36.780'N 000°16.280'E |

For further information, please contact: Gordon Bain, Eon Tel:+44(0) 7787241442 or Nigel Proctor (Fisheries Liaison) Tel: +44(0)7702730891

**Greater Gabbard Offshore Wind Farm – Survey**

Mariners are advised of the following:

<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>
| Aire Dirk Marine Ltd        | 1. 51° 43.980'N 001° 56.310'E  
2. 51° 45.960'N 001° 54.984'E  
3. 51° 47.760'N 001° 56.040'E  
4. 51° 48.660'N 002° 00.000'E  
5. 51° 45.240'N 002° 00.000'E  
6. 51° 43.980'N 001° 56.310'E | 20th May 2013 | 1. 51° 58.715'N 001° 56.005'E  
2. 51° 58.715'N 001° 59.992'E  
3. 51° 53.228'N 001° 59.992'E  
4. 51° 51.081'N 001° 52.181'E  
5. 51° 52.316'N 001° 50.679'E  
6. 51° 57.332'N 001° 52.372'E  
7. 51° 57.669'N 001° 53.274'E  
8. 51° 57.685'N 001° 53.601'E  
9. 51° 57.889'N 001° 53.820'E  
10. 51° 58.715'N 001° 56.005'E | 51° 58.715'N 001° 56.005'E  
2. 51° 58.715'N 001° 59.992'E  
3. 51° 53.228'N 001° 59.992'E  
4. 51° 51.081'N 001° 52.181'E  
5. 51° 52.316'N 001° 50.679'E  
6. 51° 57.332'N 001° 52.372'E  
7. 51° 57.669'N 001° 53.274'E  
8. 51° 57.685'N 001° 53.601'E  
9. 51° 57.889'N 001° 53.820'E  
10. 51° 58.715'N 001° 56.005'E | 51° 58.715'N 001° 56.005'E  
2. 51° 58.715'N 001° 59.992'E  
3. 51° 53.228'N 001° 59.992'E  
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5. 51° 52.316'N 001° 50.679'E  
6. 51° 57.332'N 001° 52.372'E  
7. 51° 57.669'N 001° 53.274'E  
8. 51° 57.685'N 001° 53.601'E  
9. 51° 57.889'N 001° 53.820'E  
10. 51° 58.715'N 001° 56.005'E |

For further information, please contact: Jonathan Keer, Brown & May Marine Ltd, Tel: 01379 870181 email: jonathan@brownmay.com
Sheringham Shoal Offshore Wind Farm – Navigation Warning

Please be advised the Fairway Buoy at the wells harbor channel entrance is now a West Cardinal

Latitude: 52° 59.642’N
Longitude: 00° 51.028’E

For further information, please contact: Gary Lorimer, Scira Offshore Energy Ltd, Tel + 44 7557 743799  email: G.Lorimer@scira.co.uk

Dogger Bank Creyke Beck – Section 48, Planning Act 2008

Section 48, Planning Act 2008 Regulation 4, The Infrastructure Planning

Forewind has now published notice of the proposed application for a development consent order to construct and operate the offshore wind development Dogger Bank Creyke Beck, including the onshore infrastructure near Cottingham, East Riding of Yorkshire. Dogger Bank Creyke Beck is the first stage of development of the Dogger Bank Zone in the North Sea. It comprises two offshore wind farm arrays (Dogger Bank Creyke Beck A and Dogger Bank Creyke Beck B), each with a generating capacity of up to 1.2 gigawatts, and associated infrastructure. Forewind’s proposed application to the Secretary of State seeks development consent for the construction and operation of both.

The full notice can be viewed at:

Race Bank Offshore Wind Farm – Removal 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.

Removal of the Race Bank Offshore Wind Farm ("Race Bank") and Docking Shoal Offshore Wind Farm ("Docking Shoal") meteorological mast lattice towers ("met masts"). Please note that the foundation piece of both met masts will remain in situ until a later date.

Centrica Renewable Energy Limited ("Centrica") wishes to remind Mariners that, as per the Notices to Mariners which were issued on 7th December 2012 and 25th January 2013, until the met masts are decommissioned it is strongly recommended that they give the met masts a wide
berth of at least 250 metres due to concerns about the safety of the lattice towers. Mariners are advised that the Aid to Navigation ("AtoN") reference N15113 (lighted beacon) on the Race Bank met mast remains extinguished and therefore additional caution should be exercised when in the vicinity of this mast. The AtoN will be repaired during the works outlined below.

Duration of works: Works are expected to take up to approximately 4 days for each met mast, (8 days in total).
Approximate start date: 9th May 2013. Approximate end date: 14th June 2013.

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

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 Ordnance (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 1  53°39.539'N 000°15.124'E
UXO Marker Buoy  53°39.507'N 000°15.139'E

The suspect targets are located approximately 8.5km offshore, North-East of Kilnsea, and is located in approximately 21m water depth. The target is located within the offshore wind farm project boundary. A 400 metre radius exclusion zone has been set around the suspect UXO no 3 & 4 locations.

The targets have been marked with Special Yellow marker buoys with 2-3nm yellow light which flashes 1 sec every 5 seconds. Once the UXO has been retrieved or disposed the buoys will be removed.

UXO Coordinates 3  53°39.383'N 000°16.867'E
UXO Marker Buoy  53°39.367'N 000°16.867'E

UXO Coordinates 4  53°38.383'N 000°17.850'E
UXO Marker Buoy  53°38.350'N 000°17.883'E

For further information, please contact: Nigel Proctor, Fisheries Liaison Officer, Tel: 07702730891, Email: n.proctor@precisionmarine.co.uk
Gordon Bain, Humber Gateway, E.ON. UK Tel +447787241442 email: gordon_bain@yahoo.com
For ‘live’ Kingfisher updates of all Cable & Wind Farm activities, please visit www.kis-orca.eu

Dudgeon Offshore Wind – Geophysical Survey

Geophysical and UXO survey of proposed wind farm site and cable route.

<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: Matt Howell, Fugro EMU Limited, Tel + 44(0) 1489 860 064 email: matt.howell@fugroemu.com

East Anglia Offshore Wind – Metocean Monitoring

Please be advised that the first of the (*)waveriders within the East Anglia Zone has been relocated as it has unfortunately been hit on a couple of occasions.

<table>
<thead>
<tr>
<th>Buoy Type</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waverider</td>
<td>52° 52.415'N</td>
<td>02° 53.680'E</td>
</tr>
<tr>
<td>Waverider</td>
<td>52° 36.320'N</td>
<td>02° 46.490'E</td>
</tr>
<tr>
<td>Waverider</td>
<td>52° 18.620'N</td>
<td>02° 27.560'E</td>
</tr>
<tr>
<td>AWAC</td>
<td>52° 52.390'N</td>
<td>02° 53.730'E</td>
</tr>
<tr>
<td>AWAC</td>
<td>52° 33.350'N</td>
<td>02° 46.430'E</td>
</tr>
</tbody>
</table>

For further information, please contact: Jonathan Keer, Tel: +44(0)1379 870 181, email: jonathan@brownmay.com

Lynn and Inner Dowsing Wind Farm – Notice to Mariners

Planned Power outage at the Lynn and Inner Dowsing Wind Farms.

Update on Back-up Power:
After the main power is switched off, the Aids to Navigation on the Lynn and Inner Dowsing wind turbines will be running on back-up power, which will last from 8 days.

Guard Vessel:
When the back-up power to the Inner Dowsing site runs out, a guard vessel, the “Rachel S”, will patrol the north, west and south boundary of the field, from 22nd April 2013.

The temporary buoys surrounding the Lynn wind farm site will continue to mark the Lynn site, and provide navigational aid.
## Dates and Duration of Outage:

<table>
<thead>
<tr>
<th></th>
<th>Lynn Wind Farm</th>
<th>Inner Dowsing Wind Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates of Main Power Outage</td>
<td>20th May to 31st May</td>
<td>15th April to 03rd May</td>
</tr>
<tr>
<td>Dates when permanent Aids to Navigation will be running on back-up power</td>
<td>20th May to 27th May</td>
<td>15th April to 22nd April</td>
</tr>
<tr>
<td>Dates when no permanent Aids to Navigation will be operating</td>
<td>28th May to 31st May</td>
<td>23rd April to 03rd May</td>
</tr>
</tbody>
</table>

Mariners are advised to exert caution in the vicinity of the wind farms during this time and to communicate with the Centrica Marine Coordinator when in the vicinity of the wind farms.

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**For further information, please contact:**
- Centrica Marine Coordinator, Radio Channel: 157.450 MHZ, Tel: 07789 573792 email: CRELMarine.Coordinator@centrica.com
- Simon Prince, Tel: 07920 273866, Email: sprince@rssmarine.co.uk
- Richard Hart, Tel: 07584 514942, Email: rhart@rssmarine.co.uk

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**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. F1 5 20s.

The deployment is planned for 24th April 2013. Service visits are scheduled for August and December 2013, with demobilization expected April 2014. The MV Sheerkham 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°18.521'N</td>
<td>01°23.673'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
Floating Wind Measurement buoy – Liverpool Bay

On behalf of DONG Energy a ‘FLiDAR’ (floating wind measurement buoy) was installed in the Liverpool Bay area of the Irish Sea.

FLiDAR is a floating wind measurement device which consists of an offshore Light Detection And Ranging (LiDAR) device mounted on a standard yellow industrial buoy, powered by an autonomous solar and wind system, moored to the sea bed with anchor blocks and an anchor.

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

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 Rhyl 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:
• Frederich Ernestine will continue with monopile cleaning and TP installation in the windfarm area.
• Stanislav Yudin with continue with monopile installation duties.
• Cable Enterprise will continue with export cable 3 laying operations.
• Sea Jack turbine installation vessel will continue with wind turbine installation.
• Terramare 1 will continue diving operations at the wind farm.
• Penrhyn Bay, Colwyn Bay, Llandudno Bay, Gardian, Galion, Chincok and Scirocco utilised as Crew Transfer Vessels when required sailing from Canada Dock 3.
• Penrhos Bay & Tremadoc Bay will provide 24 hour cover and will be utilised by the Emergency Rescue Team sailing from RWE Pontoon Birkenhead.
• Colwyn Bay and Llandudno Bay utilised as Crew Transfer / Stand by vessel as required and based at Liverpool Marina
• Athenia, Adventure and Buzzard CTVs are sailing from Mostyn.
• Normand Tonjer will continue diving operations including work with the Polar Prince to aid installation of array cables.
• Polar Prince will continue with cable laying operations, F17E-F18E next route.
• Isadale will continue performing guard duties and will be used as the Marine Mammal Observation vessel as and when required.
• JB114 and support vessels will continue OSP commissioning.
• Smit Buffalo and Smit Bulldog will be dedicated to moving barges around the wet basin for loading of components for Stanislav Yudin.
• Union Fighter, UR7 & UR3 will continue to deliver components to the Stanislav Yudin as required.
The new section of cable between Turbine E03 and the Sub-Station inside WALNEY 1 has not been buried and remains exposed on the seabed. This because the seabed in the area between E03 and the Sub-Station has proved to be too soft for the tracked ROV to perform as intended, the energised cable will remain on the seabed until a solution to the Post Lay Burial is found.

The survey vessel 'MS SANDER' will conduct a Multi Beam Echo Sounding Survey of the exposed cable Tuesday 4th June 2013.

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 ‘live’ Kingfisher updates of all Cable & Wind Farm activities, please visit www.kis-orca.eu

Any mariners who do decide to navigate the Wind Farm during this period of maintenance work do so at their own risk and they should keep well clear, and make contact with and communicate with the support vessels on VHF Channel 16 or 12.

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

First Published: 05 December 2012 | Latest Update: 03 June 2013

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 Sub-Station has been installed and is undergoing cold commissioning work.

TURBINE FOUNDATIONS AND TRANSITION PIECES INSTALLED - A04, A12, E08, G03, G04, G11,

‘PACIFIC ORCA’ has returned to Belfast to re-load and can be expected back on site shortly.

The second installation vessel ‘SEA INSTALLER’ will next jack-up at Turbine position H10 followed by E11.

‘STEMAT SPIRIT’ accompanied by the support vessels ‘COASTAL VANGUARD’ and the workboat ‘ODIN’ are engaged on the second EXPORT CABLE pull in from the Landfall at Middleton Sands and Cable Lay out to KP 9, the unsettled weather has caused delay.

The Guard Vessel ‘HEADWAY’ is on station to guard at the crossing area of the Barrow cable as well as the lay down area for the export cables ends at PK9.

Barrow Export Cable Crossing Area: 54°59.40’N  |  003°01.80’W

The Rock Dump Vessel ‘ROCKPIPER’ is continuing with Filter Stone Laying at Turbine positions

ALL FISHERMEN SHOULD NOTE THAT FILTER STONES HAVE BEEN LAID AT TURBINE POSITIONS WITHIN THE WIND FARM BOUNDARY

The start of construction with the installation of the first Turbine Foundations is scheduled to start during the first week in May and notices concerning this schedule will be issued at a later date.  Please consult the Kingfisher Flyer for the CARDINAL Buoy positions at this Wind Farm as well as the Key Programme Dates.
The existing South Cardinal in position 54°00.67’N 003°31.09’W which forms part of the permanent marking of the Walney Offshore Wind Farm has been permanently discontinued.

Boundary of Location Activities:

<table>
<thead>
<tr>
<th>Latitude (°N)</th>
<th>Longitude (°W)</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>

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:

**Activity** | **Anticipated Dates** | **Vessel** | **Call Sign**
---|---|---|---
Filter Layer Placement | 15th February 2013 to 30 May 2013 | Sandpiper | 3ERG6

**Following Activities** | **Anticipated Dates** | **Following Activities** | **Anticipated Dates**
---|---|---|---
Offshore Substation Installations | May 2013 | Array Cable Installations | June 2013 – March 2014
Foundation Installations | May – November 2013 | Turbine Commissioning | August 2013 – October 2014

*Dates are anticipated and are subject to change*

For a copy of the Kingfisher Awareness Flyer for the West of Duddon Sands 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: West of Duddon Sands Offshore Wind Farm**

**In case of emergency, please contact:** Dan Torben Christensen, Dong Energy, Tel: +44(0)7528921388 email: danch@dongenergy.dk

First Published: 30 June 2012 | Latest Update: 22 May 2013

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

The two special marker buoys are now marking the 50m 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>Latitude (°N)</th>
<th>Longitude (°W)</th>
<th>Buoy</th>
</tr>
</thead>
<tbody>
<tr>
<td>53°51.600’N</td>
<td>003°17.700’W</td>
<td>North Mast Special Mark</td>
</tr>
<tr>
<td>53°51.600’N</td>
<td>003°17.700’W</td>
<td>South Mast Special Mark</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.

**The Navigation and Aviation lights 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>Latitude (°N)</th>
<th>Longitude (°W)</th>
<th>Mast</th>
</tr>
</thead>
<tbody>
<tr>
<td>53°52.423’N</td>
<td>003°12.133’W</td>
<td>80m</td>
</tr>
<tr>
<td>53°51.600’N</td>
<td>003°17.663’W</td>
<td>50m</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

Barrow Offshore Wind Farm – Operations

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.

All of the Turbines at the BARROW OFFSHORE WIND FARM are operational and switched to automatic providing power to the National Grid.

The work to repair the fault on the Inter-Array or Infield Cable is now complete and all Navigation and Aviation Lights are working as normal.

The only vessels engaged on any work inside the Wind Farm at this time are small service vessels operating as and when required (depending on weather) and they can be contacted on VHF Channels 16 & 12 for information relating to vessel movements only.

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