

Dogger Bank News

Met mast construction progresses

The fabrication of the two meteorological masts that will measure and monitor wind and wave conditions at Dogger Bank is almost complete, with installation of the innovative suction bucket foundations scheduled for later this year.

Fred Olsen United AS, was contracted to design, construct and install the two met masts and foundations and has utilised its subsidiary companies including Brighton-based SeaRoc to produce the mast itself and marine engineering specialists, Harland and Wolff, to build the foundations in Belfast.



Brave Tern undergoes a jack-up test.

The foundations are due to be installed on Dogger Bank using a new 132m jack-up vessel, Brave Tern, which is now undergoing its first sea trials in Dubai. The timing of the installation will depend on the completion of the vessel, sailing time to the UK and the weather on Dogger Bank but it is currently due to be in October.

Latest news on Dogger Bank

Welcome to the second edition of Dogger Bank News, a publication aimed at providing the latest news and updating progress on Forewind's development of the Dogger Bank Offshore Wind Zone.

Following on from our previous edition Forewind completed the first phase of what is the most comprehensive bird and marine mammal survey ever undertaken. Since January 2010, vessels have surveyed more than 40,000 kilometres in transects – the same distance as sailing round world – and aerial surveys covered more than 180,000 kilometres in transects, or half way to the moon.



After two and a half years of ongoing aerial and vessel operations Forewind has concluded the first phase of the most comprehensive offshore bird and marine mammal survey ever undertaken.

Forewind has also continued with geophysical and geotechnical surveys as part of the continuing environmental impact assessments needed for the two stages of development – Dogger Bank Creyke Beck and Dogger Bank Teesside.

This newsletter will be published regularly so if you would like to receive a copy electronically, please visit www.forewind.co.uk and register your contact details.



Programming the projects

A project the size and scope of the Dogger Bank development takes a huge effort in terms of planning, coordination and logistics.

Project progress relies heavily on sequential completion of different surveys, reports, agreements, negotiations and consultations. Therefore a number of factors can impact the development programme.

Forewind has recently revised its programme of development and intends to submit its first development consent order application – for Dogger Bank Creyke Beck – in mid-2013. The Dogger Bank Teesside application will follow in early 2014. Although these revisions impact the initial programme, Forewind still intends to achieve development consent for a minimum of 9GW of safe, technically deliverable and economically viable offshore wind capacity on Dogger Bank by 2020.

Dogger Bank Facts

Size: 8660km² (3343 square miles). Largest of the Round 3 zones. Equivalent to size of North Yorkshire.

Distance from shore: 125 to 290 kilometres (77 to 180 miles).

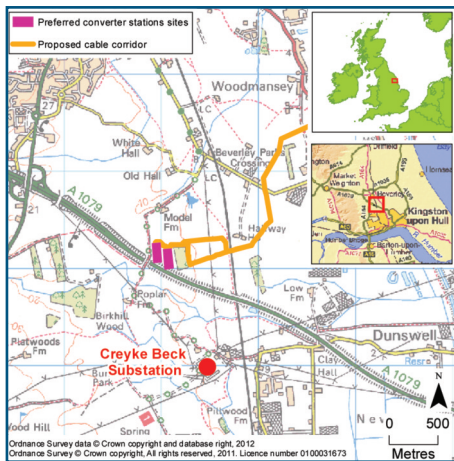
Water depth: 18 to 63 metres (59 to 206 feet). One of the shallowest of the Round 3 zones.

**DOGGER BANK
CREYKE BECK**

Dogger Bank Creyke Beck will be the first stage of development in the Dogger Bank Zone. It will have an installed capacity of up to 2.4GW and will connect into the existing Creyke Beck substation near Cottingham, in the East Riding of Yorkshire. It will comprise up to two offshore wind farms, each with a maximum installed capacity of up to 1.2GW. At 1.2GW, each project's capacity is slightly higher than the 1GW grid connection agreed with the National Grid, to allow for turbine maintenance, transmission losses and variations in wind speed.

Community working group helps micro-site converter stations

The community working group assisting Forewind with the micro-siting of the Dogger Bank Creyke Beck onshore infrastructure has now held two productive meetings and agreed a preferred location for the converter stations.



The community working group has helped define a preferred converter station site. The cable route between the converter stations and Creyke Beck substation is not yet final.

The meetings, with representatives from parish councils, East Riding of Yorkshire Council and community groups, have enabled local people to assist Forewind identify issues and address concerns at this early stage of development.

Micro-siting the converter stations is one key focus but future meetings will also cover selection of the onshore alternating current cable route, environmental impact assessment and mitigation.

One member of the group said, "there has been a collective involvement which will hopefully develop local ownership."

The next meeting is expected in October and anyone with comments to feed into it should contact one of the members of the group. Meeting presentations and minutes are available for download at www.forewind.co.uk.

Indicative development programme

The development programme for Dogger Bank Creyke Beck has recently been revised so the second stage of statutory consultation will now be held early in 2013, rather than late 2012 as previously indicated. The main reason for this revision relates to the ongoing work Forewind has undertaken on identifying where the offshore wind farms are likely to be located within the Dogger Bank Zone.

Date	Activity
Q4 2011	First stage of statutory consultation
2011 – 2012	Environmental surveys and reporting
Q1 2013	Second stage of statutory consultation
Q2 2013	Submit application(s) for development consent order(s)
Q4 2014	Application(s) determined
2015 – 2017	Pre-construction phase
2016 – 2021	Construction
2017 onwards	Operation

Cable route updates to parish councils

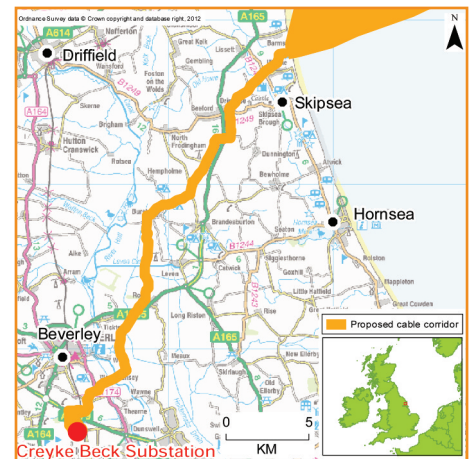
Forewind recently met with nine East Riding of Yorkshire parish councils to introduce the initial plans for the onshore cable route and request comments and feedback on the proposals.

The parish councils cover the area from the proposed cable landfall, located between Barmston and Ulrome, to the converter stations near Cottingham. Issues covered included: the selection of the proposed cable route; proposed routes for vehicles to access the temporary haul road during building works; installation techniques for crossing obstacles such as rivers and roads, and potential traffic increases during construction.

Stakeholder Manager Nikki Smith said that helpful local information was provided which Forewind is now considering in further iterations of the design.

"The meetings raised several issues including the increase in traffic during summer and local congestion hot spots, which will be useful for our traffic impact and other assessments," she said.

The final proposals for the cable route and access ways as well as the results of the impact assessments will be presented to all stakeholders, as part of the next stage of statutory consultation, in early 2013.

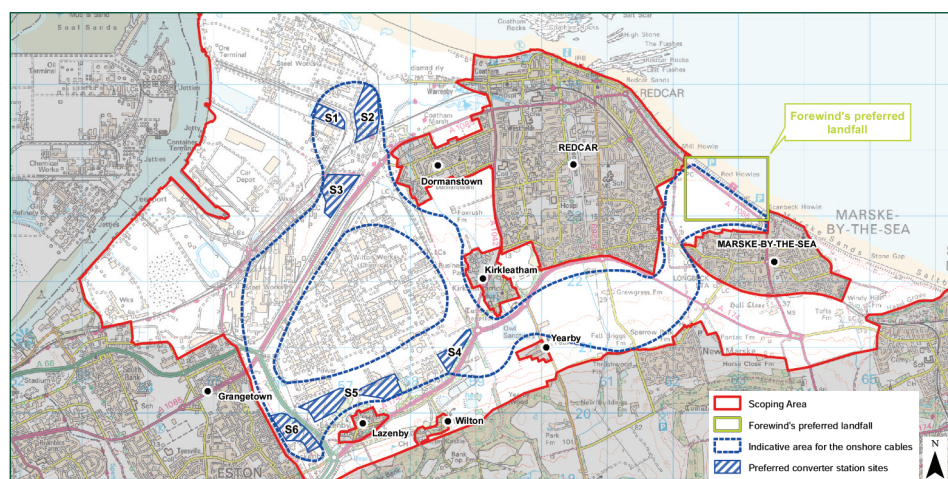


The proposed Dogger Bank Creyke Beck cable route will be further refined before the next consultation phase.

DOGGER BANK TEESIDE

Dogger Bank Teesside is the second stage of Forewind’s development of the Dogger Bank Zone. It will comprise up to four wind farms, each with a maximum installed capacity of 1.2GW. They are expected to connect to the national grid in Teesside, just south of the Tees Estuary. At 1.2GW, each project’s capacity is slightly higher than the 1GW grid connection agreed with the National Grid, to allow for turbine maintenance, transmission losses and variations in wind speed.

Early phase consultation complete



This map shows the preferred landfall, converter station site options and indicative cable area for Dogger Bank Teesside.

Forewind carried out a series of three public consultation events in May with more than 200 visitors coming to hear about this early phase of development of Dogger Bank Teesside.

The events, in Redcar, Kirkleatham and Lazenby, were part of a wider consultation process, which included the publication of initial proposals for the development (Preliminary Environmental Information 1 – PEI1) and meetings with directly affected groups such as local fishermen and landowners.

The proposals included the offshore elements of the wind farm projects but as the project boundaries are yet to be defined, this was a broad presentation of the make up of a wind farm. The project boundaries will be finalised by the end of this year.

Three potential landfall areas were highlighted with the preferred site being a 1.5km stretch of coastline between Redcar and Marske-by-the-Sea, backed by low soft cliffs. Forewind has begun further onshore and nearshore surveys in this area, which together with the stakeholder feedback, will help to further refine landfall locations within that area.

The offshore cable route study area was identified between the Dogger Bank Zone and the onshore study area at Teesside. As the location of the export cables will depend on both the offshore wind farm sites and the

location of the landfall – both of which are not yet finalised – the cable corridors have not yet been identified.

Dogger Bank Teesside will include up to four onshore converter stations to convert the electricity from high voltage direct current to high voltage alternating current to be fed into the UK transmission network. They may be co-located on one site or split over two separate sites and six alternate options were presented during the consultation. These options are now under review taking into account stakeholder feedback.

Forewind is now well underway with surveys for thorough environmental assessment that, in consideration with technical and engineering issues, landowner negotiations and stakeholder consultation, will enable us to refine the locations of the wind farms, cable routes and onshore converter stations.

Forewind will continue to consult Councils and other statutory bodies over the coming months. The PEI1 consultation documents, plus the public exhibition panels and handouts are still available to download from www.forewind.co.uk. Feedback on the proposals is welcome at any time.

The next phase of statutory consultation with all stakeholders – which will present survey and study results and preferred development plans – is scheduled for late in 2013.

Life cycle of a wind farm

One of the main questions asked at the consultation events in May was “what happens at the end of the life of the wind farm?”.

The Crown Estate lease period for Dogger Bank Teesside will be 50 years. As a condition of the lease, at the end of the development’s lifetime it will have to be decommissioned. This is also a statutory requirement through provisions of the Energy Act 2004. The development consent application will include a plan covering proposals, discussions and agreements relating to decommissioning both the onshore and offshore elements of Dogger Bank Teesside.

Other visitors asked if they would be able to see the turbines or hear construction noise however as the Dogger Bank Zone is at its nearest point, 125km from the UK coast nothing will be seen or heard from the mainland.

Indicative development programme

Although there may be some changes to the indicative programme depending on the number of applications to be submitted, this shows the current expected periods for each stage of the Dogger Bank Teesside offshore wind development.

Date	Activity
Q2 2012	First stage of statutory consultation
2012 – 2013	Environmental surveys and reporting
Q3 2013	Second stage of statutory consultation
Q1 2014	Submit application(s) for development consent order(s)
Q2 2015	Application(s) determined
2015 – 2017	Pre-construction phase
2016 – 2021	Construction
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Fisheries liaison – the next steps

Fishermen working both on the Dogger Bank itself and in areas along proposed cable corridors for two development stages, and near the preferred landfalls, are a key stakeholder group for Forewind.

Forewind held three well-attended meetings with nearshore fishermen in Hartlepool, Redcar and Whitby to coincide with the Dogger Bank Teesside public exhibitions in May. The meetings introduced the development, and explained both the rationale for the preferred landfall between Redcar and Marske and the procedure for the nearshore surveys. They were assured there would be minimal disruption to their



Consultation with fishermen remains a priority.

fishing activities when the necessary surveys were underway. Consultation on the Dogger Bank Zone and the offshore

cable corridors will continue with fishermen from the UK and fishing interests of other European countries.

Growing number of wind champions

More than 600 students from Hull and Yorkshire gained an insight into the range of the career opportunities in the growing offshore wind industry, following the completion of the first stage of the teacher-led careers initiative, Champions for Wind.

The first phase of the programme – a careers education initiative launched by Forewind, working together with the Humberside Engineering Training Association (HETA) – has proven such a success that it will be extended to schools in the Teesside area.

A campaign to find Teesside teacher “champions” has now been launched to identify motivated individuals who want to develop their own curriculum-based resources to highlight the range and types of potential job opportunities in the expanding offshore wind industry.

In Hull, North Yorkshire and East Riding, nine teachers from secondary schools were awarded bursaries to develop innovative curriculum materials tailored to their own students and covering a broad range of subjects including humanities, geography, business, science and design and technology.

Utilising their own resources, local networks and relevant specialists, the teachers’ interpretation of the brief has



Teachers present their programmes and student inputs.

yielded a wide range of creative results including: student-produced videos; a series of booklets aimed at lower end learners; a documentary style film; school lessons on ethics linked to environment and culture, and a wind turbine for camping.

Director of Educational Programmes at HETA, Mike Cargill, said the teachers have produced high quality resources that will be rolled out to other schools in the Yorkshire catchment area.

“A series of evaluation tasks have been carried out to measure the impact on teaching and learning and early results show it has been a very well received initiative that has led to a very real improvement in pupil’s understanding of the industry.”

Annual review released

Forewind’s second annual review, covering the progress made with the development of the Dogger Bank Zone in the 12-month period from April 2011, has now been published.

The publication details the major activities over the period including the key achievement of agreeing grid connections with the National Grid to enable the progression of a total of six offshore wind energy projects – two connecting into Creyke Beck near Hull and four into the Teesside area.



It can be downloaded from www.forewind.co.uk.