

Dogger Bank News

First four project boundaries set

Forewind has finalised the boundaries of the first four offshore wind farm projects to be developed in the Dogger Bank Zone.

The identification of the boundaries for these offshore wind farms, two that will connect into the national grid in Yorkshire and two into Teesside, is a significant step towards completing the site selection and design of the projects.

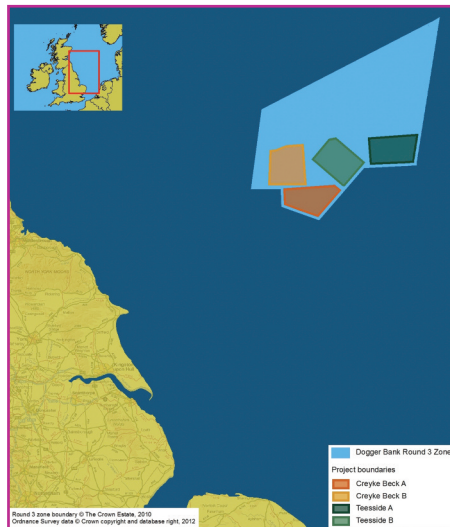
Project boundaries define the limits of where offshore wind farm infrastructure, such as turbines and offshore collector and converter stations, can go as well as the space between projects.

The 8660 km² Dogger Bank Zone is too large to be developed at once so Forewind selected a phased approach. Using the environmental data collected through bird, marine mammal, geotechnical, geophysical and other offshore surveys, Forewind initially refined the zone into tranches, each large enough to house a number of wind farm projects. Tranche A and B were the first to be identified.

With the use of sophisticated modelling techniques, Forewind has now further subdivided the tranches into projects, with engineering, technical and environmental data used as the main considerations for this stage. Health and safety implications, both during construction and in the longer-term operation of the wind farms, were also incorporated.

Each of the four identified projects has a secured grid connection capacity of 1GW however to maximise their efficiency, Forewind has allowed for the capacity of each project to be up to 1.2GW. The boundaries are therefore large enough to cater for all the potential infrastructure requirements.

As the Environmental Impact Assessment process continues for each project there may be revisions to accommodate any



Forewind's first four project boundaries have been announced.

specific environmental, or other, constraints not yet identified.

The four projects are:

Dogger Bank Creyke Beck A, in the southern part of Tranche A, with a size of 515km² and 131km from shore at its closest point;

Dogger Bank Creyke Beck B, in the western part of Tranche A, the largest in area with a size of 599km² and also 131 km from shore;

Dogger Bank Teesside A, located within the eastern part of Tranche B, with a size of 560km² and with closest point from shore at 196km, and

Dogger Bank Teesside B, which straddles Tranche A and Tranche B, with its majority located in Tranche B. It is 593km² and is 165km from shore.

Forewind has agreed with the National Grid a further 2GW of grid connections in Teesside and will continue with surveys and modelling to identify the boundaries for these additional wind farms (Teesside C and D).

Forewind will develop a total of eight offshore wind farms and is working closely with the National Grid to find suitable grid connections for the remaining projects.

Latest news on Dogger Bank

Welcome to the third edition of Dogger Bank News, updating you on the most recent activities relating to the development of the world's largest wind energy project.

Since our previous edition, work has been focused on finalising the boundaries for the first four projects within the Dogger Bank Zone. Having undertaken detailed assessments and calculations on the zone, Forewind has revised its ambition to achieve consent for up to 9.6GW of offshore wind farm projects. This figure is still higher than the original 9GW target zone capacity agreed with The Crown Estate when the Round 3 zones were awarded in 2010 and equates to around 10 per cent of the UK's projected electricity requirements. In total the zone will be developed as up to eight separate similar-sized wind farm projects.



Dogger Bank will be developed as up to eight separate offshore wind farm projects, each around four times the size of Sheringham Shoal (pictured).

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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 two offshore wind farms, each with a maximum installed capacity of up to 1.2GW.

Third community working group meeting

After three community working group meetings, Forewind has almost finalised the preferred siting of the onshore electricity infrastructure for the proposed Dogger Bank Creyke Beck development.

Meetings were held in March, May and October, with each building on work carried out previously and outlining future steps such as the next consultation phase.

At the most recent meeting, Forewind contractors, Land Use Consultants presented an update on the landscape and visual impact assessments for the proposed converter stations, planned to be just north of the A1079. It also featured discussions on options for the two-kilometre alternating current cable route from the proposed converter station to the National Grid Creyke Beck substation, and access during construction.

Working group members each sit on behalf of a local parish council, East Riding of Yorkshire Council or a community group and have had access to Forewind and other representatives about all the work being planned, including the substation upgrade.

Forewind Stakeholder Manager, Nikki Smith said input from the meetings will be considered in preparing the environmental statement – now being drafted for the next stage of public consultation. “As the working group members all represent important stakeholder groups, they can convey the progress of the project to their wider constituents and bring back any issues likely to have an impact on those living or working nearby,” Miss Smith said.

Details of future meetings will be published on www.forewind.co.uk.

Consultation on draft environmental statement

Forewind’s final round of consultation will be on the draft environmental statement (ES) covering all the relevant issues for the project, from archaeology and marine mammals to ornithology and socio-economic impacts.



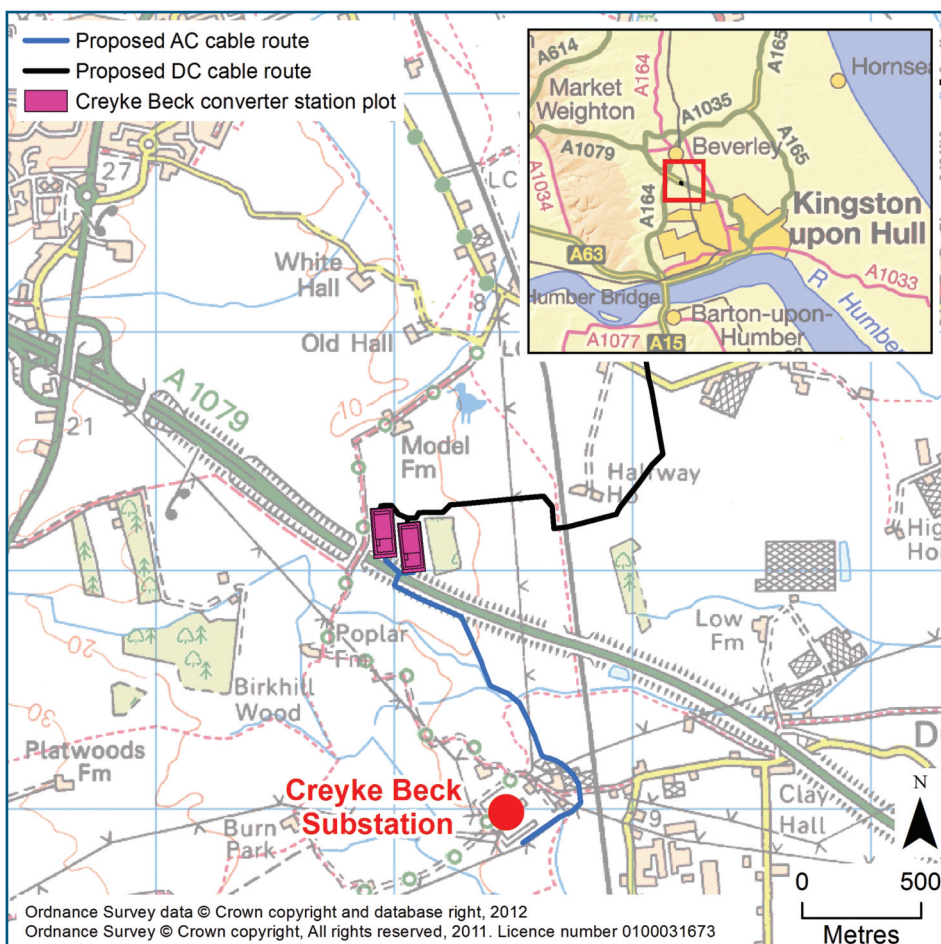
The ES will include data from Forewind’s survey activities.

Forewind intends to consult on the draft ES for this application in spring 2013 and the application date is expected to in the summer.

The draft ES for Dogger Bank Creyke Beck A and B will assess the cumulative impacts with Dogger Bank Teesside A and B. However, it will not consider the cumulative impacts with Dogger Bank Teesside C and D because not enough detail is available about these projects at the current time.

The consultation phase will include five public exhibitions to be held in venues at Ulrome, Cottingham, Bridlington, Beverley and in the area of Brandesburton. Dates for the events will be finalised early in 2013 and published in the next edition of Dogger Bank News as well as in local newspapers and on the website.

All stakeholders are encouraged to take part in this consultation as it will provide the best opportunity to submit comments about the proposals.

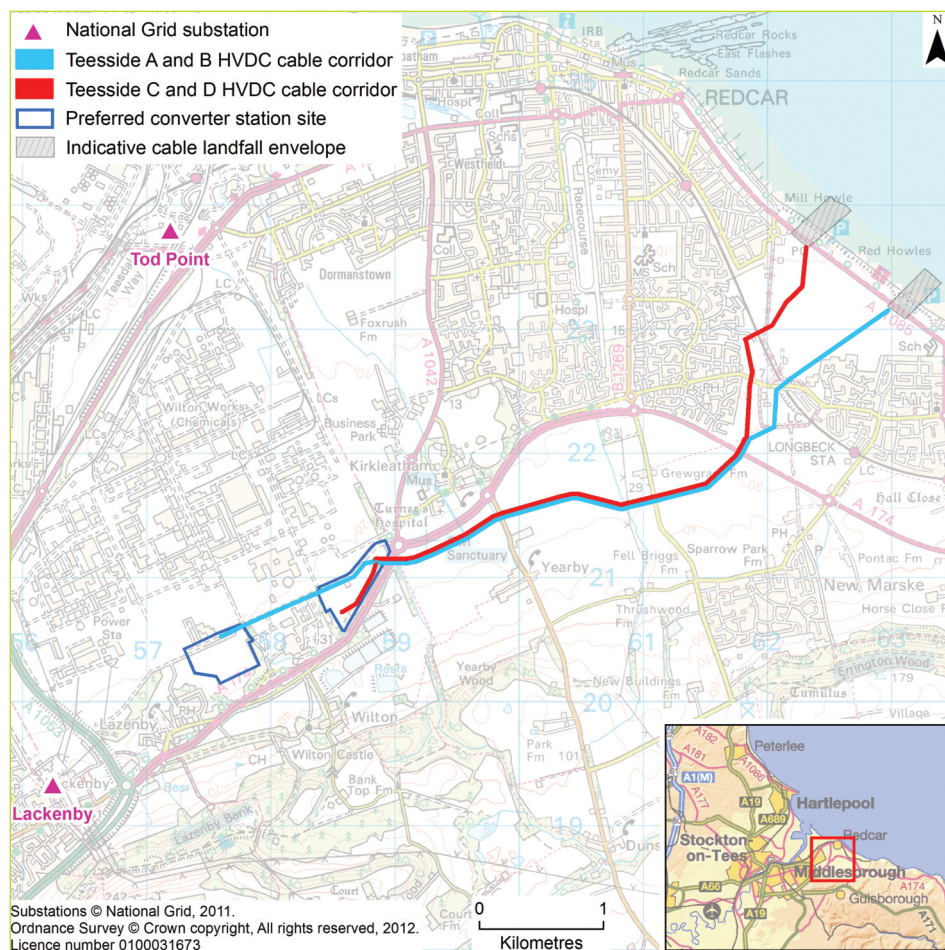


Map of Dogger Bank Creyke Beck complete with proposed AC cable route.

DOGGER BANK TEESSIDE

Dogger Bank Teesside is the second stage of Forewind's development of the Dogger Bank Zone. It will comprise four wind farms (A, B, C and D), 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.

Preferred landfall and converter station sites identified



Map of Dogger Bank Teesside's preferred landfall and converter stations sites.

Forewind has now identified two preferred converter station sites and two preferred landfall sites – one of each for Dogger Bank Teesside A and B and one of each for Dogger Bank C and D.

A significant amount of site selection work and stakeholder engagement has been carried out to finalise the sites since the phase one consultation was held in June 2012.

The two preferred converter station sites are both located within the area of process industries complex, the Wilton International Site, near Redcar, and could each house up to two converter stations.

The two landfall sites are within the landfall

area between Marske and Redcar, and have been chosen following a selection process which looked at both offshore constraints such as gas pipelines, and onshore constraints such as existing buildings as well as planned developments.

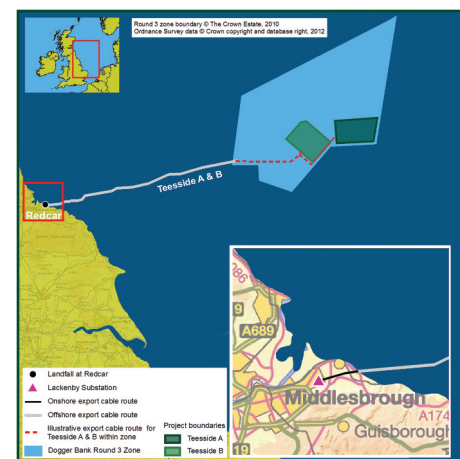
Forewind recently updated more than 20 community representatives – comprising town, ward and parish councilors, as well as neighbourhood officers and managers – from Redcar and Cleveland on the site selection process. Their comments and feedback will be incorporated into Forewind's proposals for the second phase of consultation, which will be later in 2013. If you have any comments on these proposals, please contact us.

Two separate applications for Teesside

Dogger Bank Teesside will be divided into two separate Development Consent Order (DCO) applications, each for two 1.2GW offshore wind projects.

The first DCO application will seek consent for Dogger Bank Teesside A and B which will both connect into the Lackenby substation near Middlesbrough. The plan is currently for this application to be lodged with the Planning Inspectorate in Spring 2014.

The second DCO application will seek consent for Dogger Bank Teesside C and D – whose project boundaries are being finalised. They will also connect to a national grid substation in Teesside, although its location will not be finalised until further assessment by National Grid and Forewind is complete.



The project boundaries for Dogger Bank Teesside A and B have been identified and will be consented as one application.

The second application is scheduled to be lodged with the Planning Inspectorate at least one year after the initial Dogger Bank Teesside application.

As the onshore surveys and works for both stages of development are located next to each other, Forewind aims to reduce the consultation burden on stakeholders by continuing to consult on the four projects together.

However, two separate environmental statements will be produced and Forewind will carry out two separate statutory consultations on draft documents, approximately one year after the other.

Safety in action

Full in-harbour enactments of each activity to be undertaken on vessels during surveys offshore have been introduced to improve the safety of all operations at sea and embed good practice.

During Forewind's earliest surveys, contractors reported a handful of incidents related to either non-compliance or inadequate procedures. To address this, the concept of enacting each full survey process while in the peace and calm of a port or harbour was devised.

Forewind Head of Operations and Safety, Simon Franey said that similar operations may pose different risks and hazards on different vessels.

Initial trials, with just one vessel and the crew, pinpointed hazards and uncovered risks that may have gone unnoticed. For example the incorrect positioning of people, potential lifting issues, possible dropped objects, working too closely to the side of the vessels, housekeeping and manual handling risks.

Following a successful trial period, the requirement for vessel-specific work instructions and risk assessments, and the need to act-out each process at mobilisation, was rolled out to all contractors.

"Every vessel working for Forewind has now implemented the 'run through process' and found it has helped them to identify unforeseen risks, not obvious in generic work process documents. At least eight vessels working regularly on geotechnical and geophysical surveys from east coast



Full harbour enactments can help identify safety issues.

ports such as Scarborough, Sunderland, Hull and Hartlepool have been involved. By adopting this process Forewind has enabled development of extremely robust and appropriate work instructions, tailored for specific operations on specific vessels," he said.

Offshore wind championed in Teesside

Ten teachers from Teesside schools are now offshore wind energy "champions" having been selected to take part in Forewind's careers education initiative to boost local young people's interest in pursuing opportunities in the expanding industry.

Launched together with the Humberside Engineering Training Association (HETA), 'Champions for Wind' was successfully initiated in Hull and East Riding of Yorkshire in early 2012 with more than 600 students involved to date.

It has been extended north and school teachers from Hartlepool, Redcar and Middlesbrough are now busy producing tailored curriculum materials aimed at raising awareness amongst students of the full range of potential careers in, or related to, offshore wind energy.

The teachers – whose subject areas include geography, science, mathematics, design and technology – were chosen from schools near where the Dogger Bank Teesside projects are planned to connect into the national grid.

They took part in a kick-off conference at the National Science, Technology, Engineering and Maths (STEM) Centre in York and now have six months, and a bursary, to develop



Teesside teachers and speakers at the kick-off conference, National STEM Centre in York.

a programme specific to their students before it is delivered in the classroom, then rolled out to other schools in the Teesside catchment area.

Teachers were selected from: St Hilda's, Hartlepool PRU, St Peters Catholic College, Oakfields Community College, Beech Grove Primary, Redcar and Cleveland College, Bydales School, Beverley School for Autism, Unity City Academy and Dyke House Sports and Technology College.

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