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Annual  
Review

June  
2014

# Entering the examination phase

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## Introduction

**Forewind is a consortium of four leading international energy companies – RWE, SSE, Statkraft and Statoil – committed to securing all the necessary consents required for offshore wind development in the Dogger Bank Zone.**

At approximately 8,660 square kilometres (3,343 square miles), the Dogger Bank Zone is so large it is being developed in stages. If fully realised it will be the largest offshore wind development in the world.

The Forewind team comprises around 30 full-time employees seconded from the owner companies, and is supported by a number of specialised consultants and contractors. It is overseen by a Board supported by an 'advisory committee' comprising owner company representatives who are also instrumental in bringing expertise from the shareholders to Forewind.

To identify the sites for the wind farms, Forewind has spent the past four years accumulating a huge amount of data via detailed geophysical (seabed and sub-seabed) surveys; geotechnical testing; meteorological and oceanographic data collection, and wind data collection, including that gathered by the two meteorological masts installed in 2013.

The comprehensive survey work has formed the backbone of the development consent order applications prepared for the Planning Inspectorate to date. This past 12 months can be characterised by the fact that years of work culminated in the submission of two applications, making it the year we truly entered the planning process. These applications, for the first two stages of development on the Zone, each comprise two 1.2 gigawatt (GW) wind farm projects making the total 4.8GW.

This is Forewind's fourth Annual Review and it covers the progress made on the development of the Zone from May 2013 to April 2014.





### Chairman's Report

The UK is clearly the world leader in offshore wind with more installed capacity than the rest of the world put together. There are 4 gigawatts (GW) in operation, another 4GW under construction and 7GW in planning, so the UK is in a very good position to maintain that leadership.

**'While much of the hard work has been done in reaching the milestone of submitting two 2.4GW applications... there is still plenty of work required to ensure Forewind meets its objectives.'**

As chairman of Forewind, one of the development companies at the forefront of this industry, it is encouraging to see first-hand the willingness of developers to bring forward projects and demonstrate their confidence in the industry. Having submitted 4.8GW of offshore wind capacity to the Planning Inspectorate this year, Forewind – with the backing of its four owner companies – represents a flagship for the industry as a whole.

In early 2014 the Dogger Bank Zone capacity was revised to 7.2GW – this can be seen as a sign of maturity in the industry. We have moved from what is physically possible on the site to what is economically achievable within the given timeframe. In terms of the industry, we are seeing more realistic plans emerging, which is ultimately a good thing as it gives more certainty and assuredness, particularly to the budding supply chain.

To submit 4.8GW to the Planning Inspectorate has been a massive task for the Forewind team and congratulations should be passed to everyone involved. To put it in perspective, this is more than the whole capacity now in operation in UK waters. While some key challenges still remain, namely the long-term structure of the levy control framework and what that will mean, as well as certainty about the level of ambition beyond 2020, the offshore wind industry enjoys cross-party political support, an eager supply chain and wide community acceptance.

I should also mention that during these past 12 months Forewind has successfully installed two meteorological masts using an innovative foundation technology and a safer 'hands free' installation method. This demonstrated both a willingness to innovate, which is key for the industry, and the fact that there are still opportunities for technological gains that will improve safety and reduce costs, a vital factor in the industry's long-term success.

We are all very aware of the importance of the Dogger Bank development in supplying the UK's future energy demand, and also of the potential social and economic benefits the projects will bring. Each 1.2GW project on Dogger Bank could generate enough green electricity to power the equivalent of almost one million British homes. So while much of the hard work has been done in reaching the milestone of submitting two 2.4GW applications, with special thanks to the outgoing General Manager, Lee Clarke, there is still plenty of work required to ensure Forewind meets its objectives. Having seen the team in action I have every confidence they will continue to deliver to the full and look forward to supporting incoming General Manager, Tarald Gjerde, as he takes over the leadership role.

**Charles Hendry MP**  
Chairman



### General Manager's Report

Forewind is a unique joint venture bringing together the skills and expertise of four leading energy companies. The organisation has developed a reputation as a leader in the early stage development of offshore wind farms. If constructed, the offshore wind projects on Dogger Bank will be the largest in the world, capable of providing a significant volume of clean, renewable energy for Britain.

**'More than £60 million has been spent on surveys with the vast majority of work going to UK-based contractors.'**

I am pleased to present Forewind's latest annual review. The past year has marked a significant milestone for the consortium with the submission into the planning process of 4.8GW of offshore wind capacity.

The planning process rightly challenged the impacts of constructing large infrastructure projects. Our analysis shows that the projects have low environmental impacts during construction and operation. The projects provide the significant benefit of sustainable carbon-free power generation, contributing to national targets for reducing emissions of carbon dioxide. In addition the projects have the potential to generate thousands of jobs, many in the North East and Yorkshire & The Humber regions, adding significant value to the UK economy. This potential will be maximised if new manufacturing facilities are established in the UK, increasing the local content. Recent announcements about investments in Hull for turbine manufacturing facilities are an encouraging sign that this will become a reality. Forewind completed its final Dogger Bank offshore survey in October 2013, marking the end of a four-year campaign. The survey concluded the most extensive study of an offshore area by a wind energy developer ever undertaken. More than £60 million has been spent on surveys with the vast majority of work going to UK-based contractors.

Last year also marked the completion of the installation of two large meteorological masts on Dogger Bank. These used the innovative suction installed Bucket Foundation. I'm pleased that Forewind received recognition for the 'human free' technique adopted for the steel tower placement, which was a first for the offshore wind industry and significantly reduces the safety risk to those working on board. Our priority now is to secure the necessary planning permissions and prepare the projects for the next phase, under which operators will refine the concept for each individual project ahead of a final investment decision. Forewind has worked hard to give these projects the best possible start.

I am hugely proud of the work that the Forewind team has done to get these projects to their current position. On behalf of the management team I'd like to thank the staff for their commitment, energy and passion, which has delivered so effectively. I'd also like to thank the Chairman, Directors and Advisory Committee for their contribution and the support they provide to the team. Finally I'd like to thank the shareholders for their continued financial investment in this amazing project, which I am confident, will play an important role in a sustainable energy future for Britain.

**Lee Clarke**  
General Manager  
and Project Director  
(to end April 2014)



### From the new General Manager

As the incoming General Manager, I would like to thank Lee Clarke for leading the organisation for the past four years and enabling the success we had achieved to date. I am eager to take up the challenge to ensure the positive progress continues and Forewind remains on target to achieve its development objectives.

This coming 12 months is an important time for Forewind, with 4.8GW capacity now under review by the Planning Inspectorate and two application decisions anticipated. I am therefore looking forward to continuing the constructive cooperation and dialogue with all stakeholders with interests and responsibilities concerned with Dogger Bank, and particularly within the local regions of Yorkshire and Teesside.

**Tarald Gjerde**  
General Manager  
and Project Director  
(from May 2014)

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### Mission

- Forewind’s mission is to deliver development consents for safe, viable offshore wind capacity.
- Our priority is to secure the first four projects, each up to 1.2GW, to build momentum and confidence in Forewind.
- We aim to deliver and maximise value in the Dogger Bank development option on behalf of the parent companies.

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### Vision

We aim to be the most admired offshore wind development team in the world.

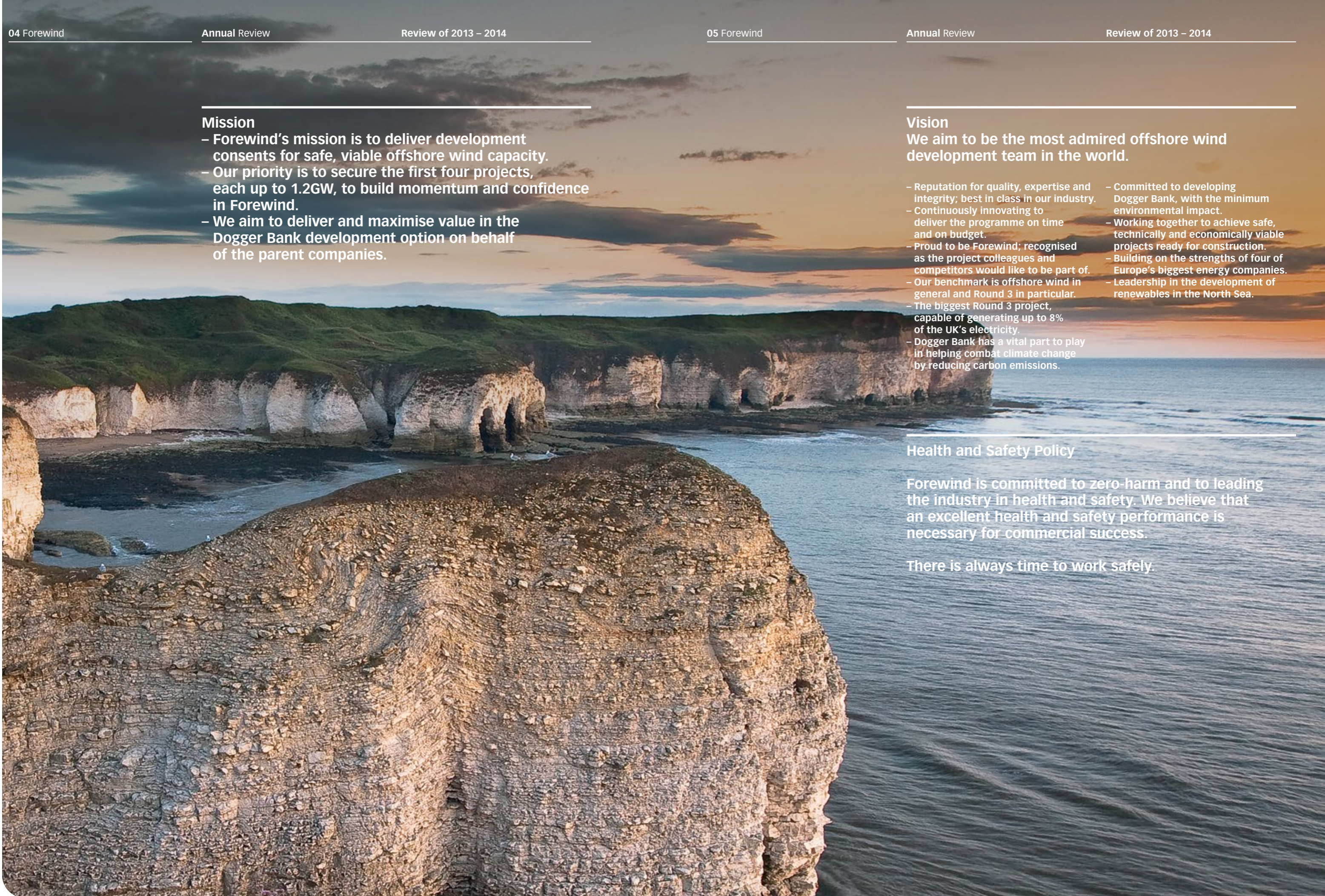
- Reputation for quality, expertise and integrity; best in class in our industry.
- Continuously innovating to deliver the programme on time and on budget.
- Proud to be Forewind; recognised as the project colleagues and competitors would like to be part of.
- Our benchmark is offshore wind in general and Round 3 in particular.
- The biggest Round 3 project, capable of generating up to 8% of the UK’s electricity.
- Dogger Bank has a vital part to play in helping combat climate change by reducing carbon emissions.
- Committed to developing Dogger Bank, with the minimum environmental impact.
- Working together to achieve safe, technically and economically viable projects ready for construction.
- Building on the strengths of four of Europe’s biggest energy companies.
- Leadership in the development of renewables in the North Sea.

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### Health and Safety Policy

Forewind is committed to zero-harm and to leading the industry in health and safety. We believe that an excellent health and safety performance is necessary for commercial success.

There is always time to work safely.



## Progress since May 2013

# Forewind ended the previous 12-month period with the final consultation phase for the Dogger Bank Creyke Beck development.



Almost 300 people attended the public consultation events held at six locations along the proposed cable route of the development and 75 per cent of those who filled in exit questionnaires were supportive of the plans presented.

Written responses were received from statutory consultees such as government departments and agencies, non-governmental organisations and trade associations on topics from coastal erosion, construction traffic and tourism to birds and employment opportunities. Throughout June and July the responses were carefully reviewed and comments considered and incorporated where possible as the Forewind team finalised the development consent order application which ran to 15,177 pages and included the Environmental Statement, Habitats Regulations Assessment Report, Application Plans, Consultation Report and Appendices. The final development consent order application was submitted to the Planning Inspectorate in August 2013 and accepted for examination the following month.

Also in September, Forewind's second of two planned meteorological masts was erected at Dogger Bank, 150 kilometres from the UK coast, using the innovative suction installed Bucket Foundation and a 'human free' technique for the steel tower placement. Like the first mast installed earlier in 2013, this one – Dogger Bank Met Mast West – will provide essential wind, wave and other weather information, as well as marine traffic data. Installed utilising the newly built 132m jack-up vessel Brave Tern, the operation was completed smoothly and without any accidents or injuries.

In October the final offshore survey, marking the end of an extensive four-year campaign, was completed, although additional onshore surveys have continued, for example at the landfall site of the Dogger Bank Teesside projects.

The year 2013 ended with the consultation for Dogger Bank Teesside A&B, where around 100 people attended three events and provided valuable feedback, which was incorporated into the proposals along with input from statutory stakeholders. The development consent order was finalised over the first three months of 2014 and submitted on March 28, then accepted by the Planning Inspectorate in April.

Forewind now has 4.8GW of offshore wind capacity in the planning system.

**'The submission and subsequent acceptance by the Planning Inspectorate of Dogger Bank Teesside A&B application, ahead of programme, is a significant milestone for Forewind and a result of the positive collaboration between the four project partners, our suppliers and contractors, and due to meaningful and on-going engagement with our stakeholders.'**

**Andy Guyton**  
Consents Manager,  
Dogger Bank Teesside A&B



## Health and safety

Best practice health and safety is fundamental to Forewind's activities and is essential to its success. During the past 12 months more than 250,000 work hours were completed with no lost time incidents. Most of these worked hours involved high-risk activities during the installation of the second meteorological mast, and the operations and maintenance work on both masts. Our close cooperation with contractors, and innovative operational approach combined with our strong focus on health and safety meant that we were able to deliver the work without harm to people or the environment. Forewind aims to be an industry leader in health and safety and the organisation will continue to improve its standards, and those of the industry as a whole, by working closely with contractors and service providers to introduce innovative ideas and approaches to common challenges therefore reducing overall risk levels.

Early in 2014 Forewind, SeaRoc and Universal Foundation Norway were joint runners-up in the Renewable UK and The Crown Estate Health and Safety Award for their innovative 'human free' installation technique used to install the Dogger Bank meteorological masts. Renewable UK said the use of the technique: 'showed the importance of effective safety communications and included invaluable information to enable wider industry learning for all companies operating in the wind, wave and tidal energy supply chain'.

## Fisheries update

The fisheries industry remains a key stakeholder group for Forewind and consultation continued this year with local, national and international fisheries associations as part of Forewind's final stage of pre-application consultation for Dogger Bank Teesside A&B, and post-acceptance consultation for Dogger Bank Creyke Beck. Feedback has helped define the application and will continue to influence the shape of the development.

During the year Forewind published two further editions of the well-received Fisheries Update, and representatives met with relevant local fisheries organisations whose members are likely to be impacted by the development proposals and also with the national fisheries associations including those from Denmark (Danmarks Fiskeriforening), Norway (Fiskebåt), and the Netherlands (VisNed), as well as the UK (National Federation of Fishermen's Organisations). The consultations have also garnered valuable information and opinions from individual fishermen, and from other fishing and marine-related organisations such as the North Sea Regional Advisory Council (NSRAC), Maritime and Coastguard Agency, Trinity House Lighthouse Service and the Marine Management Organisation (MMO).

One outcome of discussion was an agreement to produce a 3D computer-generated simulation of the proposed Dogger Bank offshore development to help offshore stakeholders determine what vessels and rescue helicopters will see once it is constructed. The simulation was rolled out in March and enables users to view what the wind farms would look like at sea height from the bridge of a vessel or at flight height from a helicopter cockpit. It has been positively received by those in groups that have participated in a demonstration of the simulation, and it will continue to be a key consultation tool.

**'Open and productive meetings with regional and international fishermen and fisheries representatives have been encouraging – there is a mutual willingness to engage and refine the environmental impact assessments to ensure the potential impacts are identified and, where feasible, reduced. Forewind has entered into statements of common grounds with many of the fisheries groups and is committed to continuing the existing constructive relationship into the post-application phase.'**

**Martin Goff**  
Offshore EIA Manager

*'Health and safety continues to be at the top of our operational agenda and we intend to actively imbed good practices in the way we work, learn from experience and share our knowledge across the industry.'*

**Nachaat Tahmaz**  
HSE Manager

## Activities and achievements



### Surveys and suppliers

Since being awarded the rights to develop Dogger Bank in January 2010, Forewind has undertaken a huge range of ornithological and marine mammal, geotechnical, geophysical, benthic and fish ecology surveys to understand and characterise the seabed, environment and marine conditions of the Zone. The final survey in October 2013 concluded what is believed to be the most extensive study of an offshore area by a wind energy developer ever undertaken. The ornithology and marine mammal surveys comprised more than three years of boat-based surveys by Gardline Environmental covering more than 40,000 kilometres in transects while trained observers recorded their findings. They also included aerial bird surveys by HiDef Aerial Surveying over a total of almost 160,000 kilometres, or nearly four times around the world, in transects, using a bank of four digital video cameras attached to the aircraft.

The geophysical surveys comprised three campaigns, covering more than 50,000 line kilometres and an area of 4,700km<sup>2</sup>, while the geotechnical work has included 84 boreholes and 174 cone penetration tests over three separate offshore campaigns. There has also been a dedicated investigation of seismic anomalies and sophisticated geological modelling in association with the British Geological Survey and Norwegian Geotechnical Institute resulting in the most thorough geological study of the area ever.

The fish ecology surveys acquired more than 850 samples across the areas proposed for wind farm development, as well as nearly 300 samples from the project cable corridors, while the benthic surveys – on the small marine animals living in seabed sediments – comprised more than 423 camera sites, 373 macrofaunal sampling sites and 72 chemical sampling sites. Contractors included Fugro EMU Limited, Brown & May Marine, Precision Marine Survey Limited (PMSL) and Titan Environmental Surveys Limited.

Combined, this is the largest body of work of its kind undertaken for an offshore wind energy development and it provides a wealth of data for not only Forewind and its owners but also for nature conservation organisations, other commercial bodies and statutory authorities in the UK and Europe. After the comprehensive zone optimisation exercise, as well as additional surveys and assessment, the project boundaries for Dogger Bank Teesside C&D, two wind farms of up to 1.2GW each, were finalised in mid-2013. They will connect to an electricity grid substation in Teesside, most likely the National Grid's existing Tod Point substation.

### Dogger Bank Creyke Beck

Dogger Bank Creyke Beck 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 wind farms, Dogger Bank Creyke Beck A, which is 515km<sup>2</sup> and Dogger Bank Creyke Beck B, which is 599km<sup>2</sup>, both are 131 kilometres from shore at their closest point. The offshore cables will come to shore just north of Ulrome on the Holderness coast. From this landfall, onshore underground cables will carry the power approximately 30 kilometres to the two converter stations located between Beverley and Cottingham adjacent to the A1079. A further two kilometres of export cables will run from the converter stations to the National Grid substation at Creyke Beck.

In total it will generate around 8 terawatt hours (TWh) of green electricity per annum, which is almost enough to power all the homes in the Yorkshire and Humber region every year. It could also create up to 4,750 new direct and indirect jobs and generate more than £1.5 billion for the UK economy. A massive effort during 2013 saw the completion of the draft development consent order and its submission to, and acceptance by, the Planning Inspectorate. In an early indication of support, a meeting of the East Riding of Yorkshire Council's Planning Committee resulted in unanimous support for the proposals.

### Cumulative impact work

Detailed ornithological assessments were undertaken for both applications submitted this year, to evaluate any direct impacts on designated sites and species. Data was also gathered from other existing or planned projects that could potentially impact the same sites or species, and a cumulative impact assessment was undertaken.

The development of offshore wind projects is a continuous process and not all project impacts are assessed in the same way. A point has to be reached where changes made to other projects can no longer be incorporated and the applications have to be made.

This situation has led to challenges, for example, in trying to gain agreement with stakeholders on which bird collision model parameters to use. Forewind has provided evidence to support the use of a model called the Extended Band Model, which is now under consideration. If accepted this could be adopted as the industry standard.

**'There has been a lot of work involved in taking the project through the examination phase and excellent progress has been made in terms of increasing the areas of agreement with consultees as the Examination has progressed.'**

**Madeline Cowley**  
Project Manager Creyke Beck



Post acceptance by the Planning Inspectorate, Forewind ran a parallel consultation process for individuals who wanted to become an 'interested party' and participate in the examination of the application (Section 56) and also on an ornithology addendum (relating to the cumulative and in-combination assessment). This was produced following the receipt of additional ornithology data relating to other developments in the North Sea and the preparation of further environmental information. Both consultations concluded in December and as a result of the Section 56 process Dogger Bank Creyke Beck received 59 responses, known as relevant representations, which will be included in the examination phase.

The first hearing meeting for the development was held in Hull in February, followed by a set of hearing meetings in March, which enabled the Examiner to focus on specific, as well as general, issues. Stakeholders have also been involved throughout, particularly landowners who receive individual attention due to the potential impact of the projects on their land parcels. In April 2014 Forewind signed its first land agreement, for a section of the onshore cable corridor, which marked a milestone in the project's process.

The hearings will continue into June and July with the six-month examination phase due to conclude in mid-August 2014. The recommendation should be provided to the Secretary of State by the end of the year with the application decision anticipated in the first quarter of 2015.

### Dogger Bank Teesside A&B

Dogger Bank Teesside A&B is Forewind's second stage of development. It comprises two 1.2GW wind farms – Dogger Bank Teesside A, with its closest point from shore at 196km, and Dogger Bank Teesside B, which is 165km from shore. It will connect into the national grid from the existing Lackenby substation near Eston, in the Borough of Redcar & Cleveland.

In total it will have an installed generating capacity of up to 2.4GW and will generate around 8 TWh of green electricity per annum, which is enough to power around 1.8 million British homes. It could also create up to 4,750 new direct and indirect jobs and generate more than £1.5 billion for the UK economy.

Again a huge effort was undertaken by the team over the past 12 months to complete the enormous volume of work required to prepare all the reports, documents and appendices that made up the Dogger Bank Teesside A&B development consent order application. In total it was 17,196 pages long.

At the time of publication Dogger Bank Teesside A&B had been accepted for examination and had entered its Section 56 consultation phase inviting those organisations and individuals wishing to make comments on the application, take part in the examination process or be informed of its progress, to register as an interested party.

### Further projects

In October 2013 Forewind completed all the offshore surveys required for Dogger Bank Teesside C&D however since then, work on these two projects has been slowed while Forewind focuses on the examination phases of the first four projects now with the Planning Inspectorate.

Early in 2014, Forewind agreed with The Crown Estate to revise the development potential for the total capacity of the wind energy projects in the Dogger Bank Zone from 9GW to 7.2GW. The revision was based on the conclusion that the organisation's focus should be on those projects which are most likely to achieve a positive financial investment decision at this time. It also better aligned plans for the Zone with the UK government's aspirations for offshore wind deployment given its current target of between 8 and 15GW of energy projects by 2020.

## Activities and achievements (continued)

### Meteorological masts installation

Dogger Bank Met Mast East was installed in early 2013, followed in September by the installation of Dogger Bank Met Mast West. Together, the masts were an excellent example of collaboration with support by the Carbon Trust's Offshore Wind Accelerator programme, use of an innovative foundation designed by Universal Foundation, project management by Fred. Olsen United (now called Universal Foundation Norway) and installation by Fred. Olsen Windcarrier.

Grimsby-based RES was awarded the contract for the on-going operation and maintenance of the meteorological masts. They will deliver scheduled and unscheduled maintenance for both the structures and the instrumentation systems. An initial inspection in April 2014 successfully borrowed a technique from the oil and gas sector whereby remotely operated aerial vehicles (ROAV) are employed to assess offshore components that are difficult or risky to access.

**'The two met masts are now providing important wind, wave, atmospheric and marine traffic data. This will be used to help assess the technical options and economic viability of the proposed offshore wind projects in the Zone.'**

**David Delamore**  
Project Engineer

### Economic benefits of Dogger Bank

In mid 2013, Forewind commissioned management consultancies GENECON and Parsons Brinckerhoff to undertake a study to identify the potential economic benefits from the development of the Dogger Bank Zone. It looked at the opportunities both for the UK as a whole and for the two most relevant regions, the North East and Yorkshire & the Humber.

The study assessed the potential high and low investment levels, and identified the potential employment and Gross Value Added (GVA)<sup>1</sup> gains based on three development options, namely the delivery of two, four or six 1.2GW wind farm projects in the Zone. It also covered the potential benefits accrued from the project management and development of the wind farms through to the manufacturing, installation, and operation and maintenance phases.

It was found that with its current industrial base, the UK could provide up to 38 per cent of the total content of the Dogger Bank projects, and for the mid-scenario of four wind farms, this equates to an investment of close to £7 billion. However, if new relevant manufacturing facilities are established here, UK-based companies could secure up to 72 per cent of the content, which equates to an investment of around £13 billion.

With respect to the North East and Yorkshire & the Humber (NE&YH), with its current industrial base, the area could provide up to 36 per cent of the total content of the Dogger Bank projects, equal to an investment of up to £5.5 billion in the four-project scenario. This figure could increase to up to 61 per cent (worth £9.3 billion) with additional relevant manufacturing facilities established in the area.

<sup>1</sup>GVA measures the contribution to the economy of each individual producer, industry or sector. It is the primary measure of productivity in the UK.



Delivering the four Dogger Bank projects currently in the planning process could create more than 4,500 new direct and indirect jobs and generate an additional £1.6 billion for the UK economy (GVA) or more than 4,000 new regional jobs generating an additional £1.3 billion for the NE&YH economies.

With the successful establishment of new manufacturing facilities, however, the UK could see around 9,000 new jobs created, with around 7,000 of those being regional. This could give a £3.4 billion boost to the national economy (GVA), of which £2.2 billion would be created for the NE&YH economies.

The Technical and Headline Reports were published, along with a summary fact sheet, in April 2014 and are available on the Forewind website.

### Champions for Wind

A third group of teachers were selected to take part in the Champions for Wind schools programme this year. The teachers from 13 schools in Hull, East Riding of Yorkshire, North Yorkshire, Redcar & Cleveland and County Durham will develop and implement offshore wind energy careers-related activities for their students as part of the initiative being run in partnership with Hull-based Humberside Engineering Training Association.

When this third cohort is complete, a total of 32 champions from 29 schools and organisations, and more than 3,000 students, will have taken part in some aspect of the programme and be more aware of the wide range of job opportunities to be found in the offshore wind energy industry.

**'As manager of the UK seabed, The Crown Estate welcomed the report on the potential economic benefits of the Dogger Bank projects which highlights the real opportunity they present to help support and bolster the UK and regional economies.'**

**Adrian Fox**  
Programme Manager Supply Chain and Technology at The Crown Estate



#### Champions for Wind – participating schools

- |                                   |  |
|-----------------------------------|--|
| 1. Oases North East               | 15. Scalby School                              |
| 2. Dykehouse School               | 16. Graham School                              |
| 3. Hartlepool Pupil Referral Unit | 17. Headlands School                           |
| 4. Redcar and Cleveland College   | 18. Driffield School                           |
| 5. Zetland Primary                | 19. Ashwell Academy                            |
| 6. St Peters School               | 20. Cottingham High School                     |
| 7. Kirkleatham Hall School        | 21. Malet Lambert                              |
| 8. Ryehills School                | 22. Kelvin Hall School                         |
| 9. Bydales School                 | 23. Boulevard Academy                          |
| 10. Castleton Primary             | 24. Hessle Federation                          |
| 11. Glaisdale Primary             | 25. Act the Facts (educational script writers) |
| 12. St Hedda's Primary            | 26. The Snaith School                          |
| 13. Caedmon School                | 27. Withernsea High                            |
| 14. Eskdale School                | 28. Laurence Jackson School                    |

## Future

**This time in one year, June 2015, it is anticipated that 2.4GW of wind capacity will be consented, with another 2.4GW close to consent. These projects present a real opportunity to help support the UK and regional economies and drive forward the government's agenda for economic growth, energy, security and carbon emissions reduction.**

To maximise the economic benefits from the Dogger Bank development, the UK will ideally attract further manufacturing companies to establish operations here. Dogger Bank is ideally placed to be the cornerstone of a future supply chain cluster, encouraging further investment, particularly within the NE&YH. A coordinated effort will be required at all levels, from public agencies and the private sector, to ensure a high UK content in both Dogger Bank and other large energy infrastructure development.

Both the location of Dogger Bank and the technical requirements for delivery present a particularly substantial opportunity for the North East and Yorkshire & the Humber. Their historic strengths, existing skills in large-scale production and marine support facilities add weight to the locational advantages.

There is a lot of hope and opportunity riding on the achievement of consent for the Dogger Bank projects and the coming 12 months will be critical in taking them to the next step when the first consented projects are handed over to the operators.

The Forewind owners are now reviewing the operator model for the next phases and identifying who will take on the operator role for each project. Those operators will develop more specific plans. This work will be able to take place once there are viable consents along with visibility of a support framework so the significant further investments required to reach final investment decision can be justified.

It is anticipated that first Dogger Bank projects will reach construction stage towards the end of this decade.

**'Partnerships and cooperation with key organisations, including National Grid and The Crown Estate, will be key to enabling soon-to-be consented projects mature towards positive investment decisions.'**

**Ryan Trow**  
Commercial Manager



### Photo captions

#### Front cover

Installation of Dogger Bank Met Mast West

#### Inside front and inside back cover (double page photo):

Sheringham Shoal Offshore Wind Farm photo by: CHPV

#### Page 01

Members of the Forewind Board at a turbine test site in Hunterston, Scotland

#### Page 02

Chairman, Charles Hendry

#### Page 03

General Manager, Lee Clarke  
New General Manager, Tarald Gjerde

#### Pages 04/05

Flamborough Head at sunrise, North Yorkshire

#### Page 06

Top: Consultation event for Dogger Bank Teesside A&B  
Bottom: Deploying offshore camera

#### Page 07

Top: Fisheries survey on Dogger Bank  
Middle: 'Human free' tower installation using guide cones  
Bottom: 3D computer simulation of Dogger Bank

#### Page 08

Jubilee Spirit survey vessel

#### Page 09

Top: Birds on Bempton Cliffs  
Photo by Alastair Mackay  
Middle: Dogger Bank Creyke Beck application folders  
Bottom: Map of Dogger Bank project boundaries

#### Page 10

Top: Photo taken by Cyberhawk during the inspection of the meteorological mast  
Bottom: Cyberhawk inspecting the meteorological mast

#### Page 11

Top: Construction of Gwynt y Môr  
Image supplied courtesy of Gwynt y Môr Offshore Wind Farm Limited  
Bottom: Saltburn beach

#### Page 12

Export cable laying barge, Cable Enterprise at Gwynt y Môr

## Calendar of highlights

### May 2013

Teesside stakeholder communication sessions, including a series of one-to-one consultation meetings, held.

### June

The final statutory consultation phase for Dogger Bank Creyke Beck was completed.

### July

Second cohort of Champions for Wind concluded. More than 2,000 students from Hull, East Riding and Teesside schools have been involved to date.

### August

Second meteorological mast erected at Dogger Bank.

First application for a development consent order submitted to the Planning Inspectorate – Dogger Bank Creyke Beck.

### September

The Planning Inspectorate accepted the development consent order application for Dogger Bank Creyke Beck.

### October

Final Dogger Bank offshore survey starts marking the end of a four-year campaign.

The consultation process on an ornithology addendum (relating to the cumulative and in-combination assessment) for Dogger Bank Creyke Beck starts.

### November

VolkerInfra carry out a borehole survey near the site where the Dogger Bank Teesside cables come to shore.

Public consultation events held as part of the consultation for Dogger Bank Teesside A&B.

Third cohort of Champions for Wind starts with teachers from 13 North East schools.

Forewind Chairman Charles Hendry MP introduced the Share Fair session at the RenewableUK 2013 Annual Conference in Birmingham.

### December

East Riding of Yorkshire Council gave its unanimous support to the Dogger Bank Creyke Beck proposals.

### January 2014

The innovative 'human free' meteorological mast installation technique was runner-up in the RenewableUK and The Crown Estate Health and Safety Award.

### February

Forewind revises Dogger Bank Zone capacity to 7.2GW.

Preliminary meeting starting the six-month examination phase for Dogger Bank Creyke Beck held in Hull.

Forewind Chairman announced as Programme Ambassador for offshore conference.

### March

Dogger Bank Teesside A&B application submitted to Planning Inspectorate.

### April

The Planning Inspectorate accepted the development consent order application for Dogger Bank Teesside A&B.

General Manager Lee Clarke leaves and Tarald Gjerde steps into role.

First land option agreement signed for Dogger Bank Creyke Beck.