



## Forewind May 2014

## Fact Sheet

### Forewind and Dogger Bank

**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.**

The Dogger Bank Zone is in the North Sea, located between 125 and 290 kilometres (77 to 180 miles) off the east coast of Yorkshire. It is the largest of The Crown Estate's Round 3 zones, extending over approximately 8660 square kilometres (3343 square miles), which is about the same size as North Yorkshire. It is also one of the shallowest with water depths ranging from 18 to 63 metres (59 to 206 feet).

As the Dogger Bank Zone is so large, it is being developed in stages and, if fully realised, will be the largest offshore wind development in the world. 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.

To date Forewind has submitted development consent order applications

for the first two stages, each comprising two 1.2 gigawatt (GW) wind farm projects, to the Planning Inspectorate.


The application for the first stage – Dogger Bank Creyke Beck – is now under examination by the Planning Inspectorate. The application for the second stage – Dogger Bank Teesside A&B – was accepted by the Planning Inspectorate at the end of April 2014.


#### Economic benefits


With its current industrial base, the UK could provide up to 38 per cent of the total content of these four Dogger Bank projects, which equates to an investment of close to **£7 billion**. If new relevant manufacturing facilities are established this could rise to 72 per cent of the content, or an investment of around **£13 billion**.


Delivering these four projects could create more than **4500 new direct and indirect jobs** and generate an additional **£1.6 billion** for the UK economy. With the successful establishment of new relevant manufacturing facilities, this could increase to around **9000 new jobs** giving a **£3.4 billion** boost to the national economy. Together the projects currently with the Planning Inspectorate could generate enough green electricity each year to power the equivalent of around 3.5 million British homes.


### Key facts

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**Size**  
8660 km<sup>2</sup> (3343 square miles)  
Largest of the Round 3 zones
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**Distance from UK coast**  
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
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**Estimated capacity**  
Up to six 1.2 GW wind farm projects
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**CO<sub>2</sub> reduction**  
Each 1.2 GW Dogger Bank wind farm would reduce CO<sub>2</sub> emissions by almost two million tonnes per annum, based on the current UK energy mix and an assumed capacity factor of 40%.

## Dogger Bank Creyke Beck

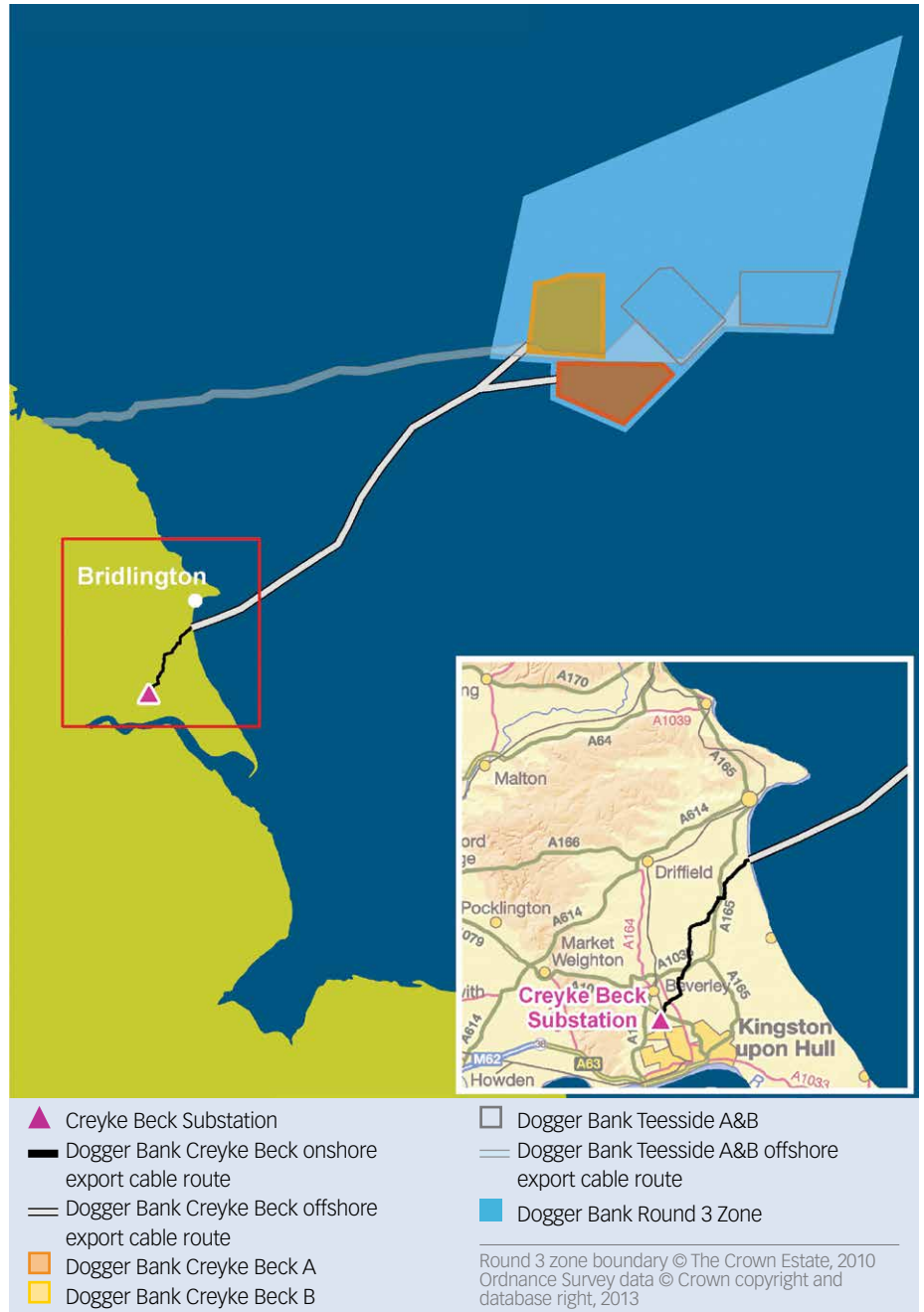
Dogger Bank Creyke Beck will have an installed capacity of up to 2.4 GW and will connect into the existing Creyke Beck substation near Cottingham, in the East Riding of Yorkshire. It will comprise two wind farms, Dogger Bank Creyke Beck A, which is 515 km<sup>2</sup> and Dogger Bank Creyke Beck B which is 599 km<sup>2</sup>, both are 131 kilometres from shore at their closest point.

In total it will generate around eight 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 4750 new direct and indirect jobs and generate more than £1.5 billion for the UK economy.

### Offshore

The boundaries for both Dogger Bank Creyke Bank wind farms were identified in 2012, defining the limits of where the offshore wind farm infrastructure will go. This will include:

- Up to 400 wind turbines with supporting tower structures
- Two offshore converter platforms
- Up to eight offshore collector platforms
- Up to four offshore accommodation or helicopter platforms
- Up to 10 offshore meteorological monitoring stations
- Subsea inter-array cables and subsea inter-platform cables
- Offshore export cables carrying electricity to the Holderness coast.



### Summary of key offshore components

Parameters	Maximum per project	Maximum total for Dogger Bank Creyke Beck
Wind turbines	200	400
Offshore collector substation platforms	4	8
Offshore converter substation platforms	1	2
Offshore accommodation or helicopter platforms	2	4
Offshore meteorological stations	5	10
Indicative length of inter-array cabling (km)	950	1900
Indicative length of inter-platform cabling (km)	320	640
Number of export cable pairs	1	2

### Onshore

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.

More information about the examination process can be found on the Planning Inspectorate's website: <http://infrastructure.planningportal.gov.uk/projects/yorkshire-and-the-humber/dogger-bank-creyke-beck/>

### Timetable

The proposal for Dogger Bank Creyke Beck is now in the examination phase and its indicative timetable is:

Date	Activity
Q3 2013	Application for development consent order submitted
Q4 2013	Application accepted. Section 56 consultation phase
Q1 2014	Six-month examination phase starts. Statements of Common Ground finalised in liaison with key stakeholders
Q4 2014	Planning Inspectorate recommendation
Q1 2015	Application decision by Secretary of State
2015 onwards	Pre-construction, construction and operations

# Dogger Bank Teesside A&B

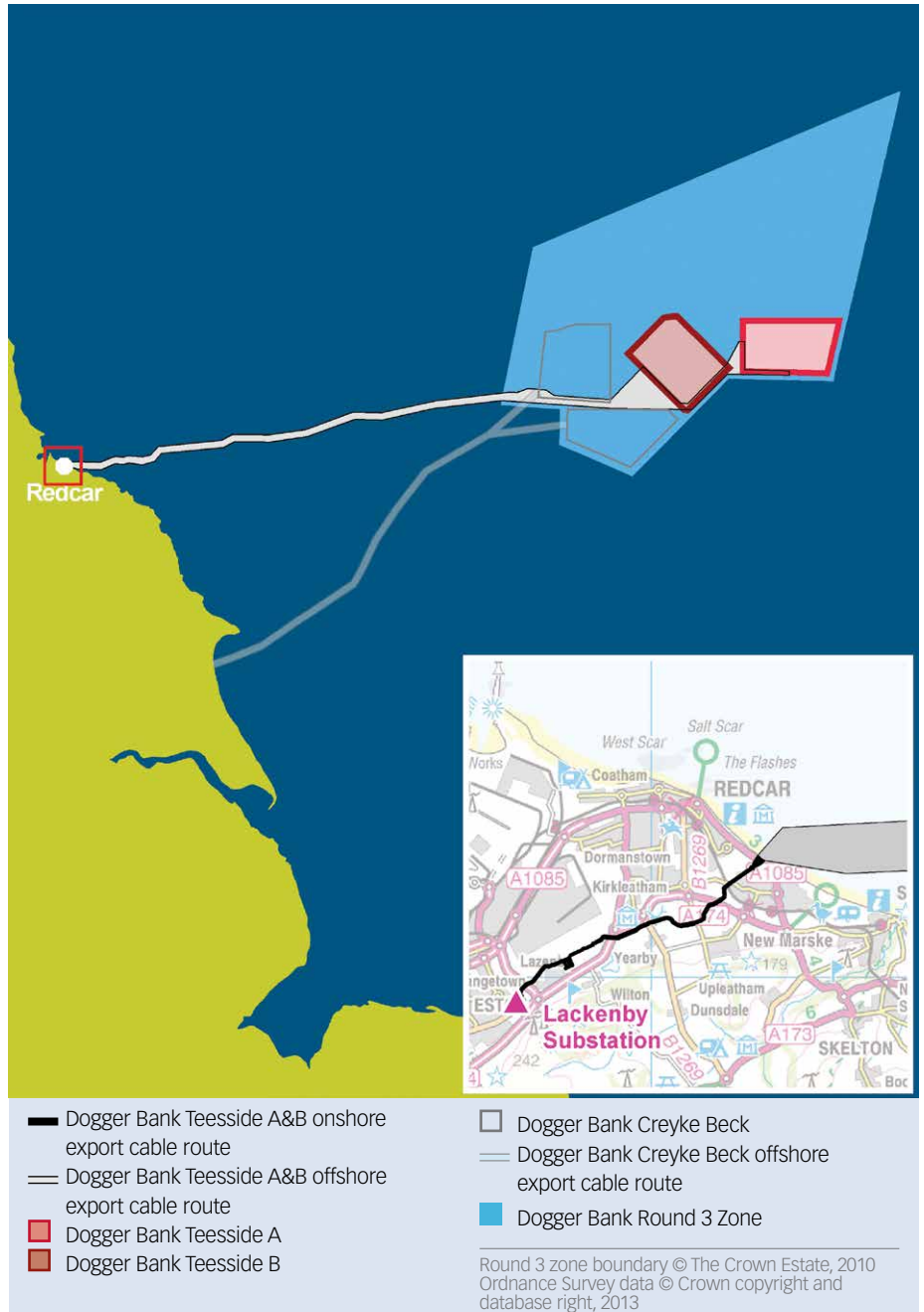
Dogger Bank Teesside A&B is Forewind's second stage of development. It comprises two 1.2 GW wind farms – Dogger Bank Teesside A, with its closest point from shore at 196 km, and Dogger Bank Teesside B, which is 165 km from shore. It will connect into the national grid at the existing Lackenby substation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

In total it will have an installed generating capacity of up to 2.4 GW 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 4750 new direct and indirect jobs and generate more than £1.5 billion for the UK economy.

## Offshore

The boundaries for both Dogger Bank Teesside A and Dogger Bank Teesside B were identified in 2012 to define the limits of where the offshore wind farm infrastructure can go. In total this infrastructure will include:

- Up to 400 wind turbines and associated support and access structures
- Two offshore converter platforms
- Up to eight offshore collector platforms
- Up to four offshore accommodation or helicopter platforms
- Subsea inter-array cables and subsea inter-platform cables
- Up to 10 offshore meteorological monitoring stations
- Offshore export cables carrying electricity to the Teesside coast.



## Summary of key offshore components

Parameters	Maximum per project	Maximum total for Dogger Bank Teesside A&B
Wind turbines	200	400
Offshore collector substation platforms	4	8
Offshore converter substation platforms	1	2
Offshore accommodation or helicopter platforms	2	4
Offshore meteorological stations	5	10
Indicative length of inter-array cabling (km)	950	1900
Indicative length of inter-platform cabling (km)	320	640
Number of export cable pairs	1	2

## Onshore

The offshore export cables will come to shore between Redcar and Marske-by-the-Sea in Teesside. A six-kilometre buried cable will carry the power to two converter stations located on the Wilton Complex east of Middlesborough. A two-kilometre cable will then run underground to the existing National Grid substation at Lackenby, where the power will enter the national grid.

More information about the examination process can be found on the Planning Inspectorate's website: <http://infrastructure.planningportal.gov.uk/projects/yorkshire-and-the-humber/dogger-bank-teesside-ab/>

## Timetable

The proposal for Dogger Bank Teesside A&B is now with the Planning Inspectorate and its indicative timetable is:

Date	Activity
Q1 2014	Application for development consent order submitted
Q2 2014	Application accepted Section 56 consultation phase
Q3 2014	Six-month examination phase begins. Statements of Common Ground finalised in liaison with key stakeholders
Q2 2015	Planning Inspectorate recommendation
Q3 2015	Application decision by Secretary of State
2015 onwards	Pre-construction, construction and operations



#### Forewind owners

As a developer, Forewind's aim is to gain consent for the Dogger Bank wind farms but it will not be responsible for their construction and operations. Instead, each wind farm will have a lead operator, nominally one of Forewind's four owner companies. These are:

#### RWE

RWE Innogy UK is the UK subsidiary of RWE Innogy and one of the UK's leading renewable energy developers and operators. The organisation is committed to developing and operating renewable energy projects to produce sustainable electricity.  
[www.rwe.com](http://www.rwe.com)

#### SSE

SSE is one of the UK's leading energy companies and its largest non-nuclear electricity generator, operating a diverse generation portfolio across the UK and Ireland. It is involved in renewable energy projects covering wind, wave, tide, and hydro electricity.  
[www.sse.com](http://www.sse.com)

#### Statkraft

Statkraft is Europe's largest generator of renewable energy and is the leading power company in Norway. The company owns, produces and develops hydropower, wind power, gas power and district heating. Statkraft is also a major player in European power trading.  
[www.statkraft.com](http://www.statkraft.com)

#### Statoil

Statoil is an international energy company headquartered in Norway, with operations in 34 countries. Building on 40 years of experience from oil and gas production, the company is committed to accommodating the world's energy needs responsibly, applying technology and creating innovative business solutions.

[www.statoil.com](http://www.statoil.com)

#### Contact

For more information about Forewind and the Dogger Bank development visit the website [www.forewind.co.uk](http://www.forewind.co.uk) or contact us via:

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#### Photo captions

##### Front page

Installation of one of the two meteorological masts on Dogger Bank

##### This page

Sheringham Shoal Offshore Wind Farm (photo: CHPV)