Lincs Offshore Wind Farm

Environmental Statement
Non-Technical Summary

January 2007

centrica energy

Produced in association with

RES Renewable Energy Systems

amec


Lincs Offshore
Wind Farm
“The Environmental Statement assesses environmental impacts in relation to the existing biological, physical and human environments...”

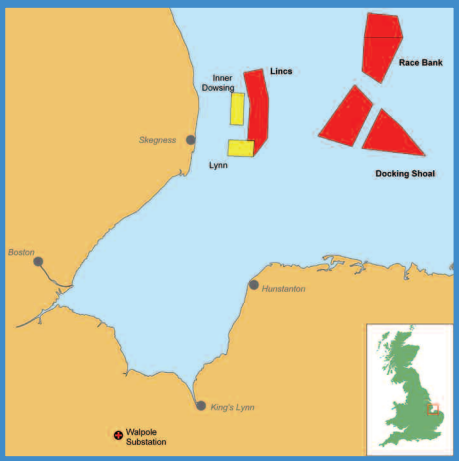
Introduction

This document is a non-technical summary (NTS) of the Lincs Offshore Wind Farm Environmental Statement.

It aims to provide an overview of the key findings of the Environmental Impact Assessment (EIA) undertaken by Centrica as it seeks consent for the proposed Lincs Offshore Wind Farm 8 km off the Lincolnshire coast. This NTS provides the project details, onshore and offshore, including details of the scientific studies undertaken and the assessment of the potential environmental effects of this development. However, for more detailed information you should refer to the main Environmental Statement (ES).

The ES describes in detail the need for the onshore and offshore works, the process of site and cable route selection, and the design, construction, operation and decommissioning of the wind farm.

The ES assesses environmental impacts in relation to the existing biological, physical and human environments, and identifies appropriate measures for mitigation and monitoring.



Location of Centrica's wind farm developments in The Wash

> The Lincs Offshore Wind Farm would have a total installed capacity of up to 250 MW and would supply pollution-free electricity to more than 150,000 homes

Jack-up vessel on site installing offshore wind turbines

Centrica

Centrica (Lincs) Limited, which owns the Lincs Offshore Wind Farm project, is part of Centrica plc, better known to consumers through its British Gas businesses.

Centrica currently owns two consented wind farms in the Greater Wash Strategic Environmental Assessment (SEA) area – Lynn and Inner Dowsing – which are planned for construction during 2007 and 2008. In addition to Lincs, Centrica is also proposing the development of two further offshore wind farms within the Greater Wash SEA area, at Docking Shoal and Race Bank.

Centrica is combining its own knowledge of the offshore energy industry with that of experienced wind farm developers Renewable Energy Systems Ltd (RES) and AMEC Project Investments Ltd (AMEC) to develop these offshore wind farms.

The Lincs Offshore Wind Farm would have a total installed capacity of up to 250 MW and would supply pollution-free electricity to more than 150,000 homes, reducing carbon dioxide emissions by approximately 500,000 tonnes in a year.

The site is located within the Greater Wash SEA area, which is one of three areas that were designated by the UK Government in 2002 for further development of offshore wind farms.

The ES comprises four components; the NTS, Volume 1 (Offshore), Volume 2 (Onshore) and associated Technical Appendices.

The offshore works of the ES include the wind farm site and export cable route to high water (seaward side of the coastal defences).

The onshore works of the ES covers the cable route and substation for the Lincs project. In addition, it includes provisions for the onshore elements of the proposed Docking Shoal and Race Bank Wind Farms.

Separate offshore EIA work is being undertaken for the Docking Shoal and Race Bank Offshore Wind Farms, and further consents will be sought for them subsequently.

Project Details

The proposed development is a 250 MW offshore wind farm comprising up to 83 three-bladed horizontal-axis wind turbines. The Lincs offshore wind farm site has an overall area of 35 km^2, orientated north–south and located in water depths of 8 to 18 m, 8 km from the coast at Skegness.

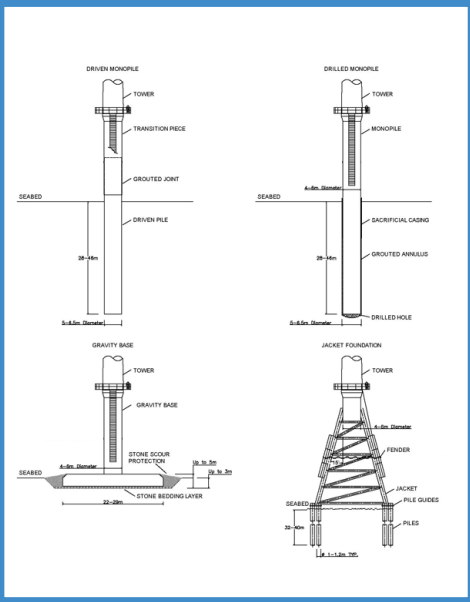
In addition to turbines and foundations, the development would have associated electrical infrastructure comprising sub-sea cables and one or two offshore substations. On land the works would include buried cables and a substation next to an existing substation forming the connection to the National Grid.

Details of foundation design, turbine size, installation methodology, electrical design and cable route would be determined during the detailed design phase. The EIA process has considered the likely design options in order to assess potential impacts.

The layout of the turbines would be designed to maximise the energy yield from the site. In order to meet the total maximum installed capacity of 250 MW, there would be between 41 and 83 turbines, depending on the size of turbine chosen.

The turbine nacelle and hub, complete with three blades, would be mounted on a cylindrical steel tower, which in turn would be supported by a foundation fixed on the sea bed. The maximum height to blade tip would be 170 m, hub height 100 m, with minimum spacing of turbines of 500 m.

The foundations for the turbines and offshore substation(s) would be either monopile, gravity base or steel jacket structures.



Potential foundation designs

Electricity would be transmitted by two 132 kV, 40 km export cables, to a landfall east of the River Nene, on the southern shore of the Wash. The cables would be buried to a depth of between 1 m and 3 m, depending on localised seabed conditions. This would be achieved using ploughing, jetting or a combination of these methods.

Onshore cables would be buried and taken from landfall to a new 132 kV / 400 kV substation located directly adjacent to the existing substation at Walpole, Norfolk. Additional works at Walpole, required by the National Grid in order to accommodate the connections for Lincs, Docking Shoal and Race Bank, have been considered in the ES.

Remotely operated vehicle used for cable burial

The Lincs project is planned to last for 40 years, the term of the Crown Estate lease. Onshore and offshore construction for the wind farm would take place over a period of two to three years. Construction of Docking Shoal and Race Bank would follow, subject to consent.

Regular servicing of turbines would take place throughout the operational life of the project. A full decommissioning plan would be agreed prior to construction, and would include the removal of all offshore structures necessary to conform to regulations at that time.

UK Energy Policy – The Need for Renewable Energy

Current UK Government energy policy has as its central aim the development of a diverse, sustainable and secure supply of competitively priced energy. Fundamental to this central aim is the need to reduce carbon dioxide emissions, with particular focus on developing renewable energy sources.

The UK Government has set a domestic target of obtaining 10 per cent of the UK's electricity supply from renewable sources by 2010, with an extension of this target to 15 per cent by 2015 and an aspiration that, by 2020, the renewables share of the electricity supply will be increased to 20 per cent.

In order to help meet these targets, an obligation has been placed on all energy suppliers, such as Centrica, to source an increasing share of the power they supply each year to customers from renewable sources. The proposed Lincs Offshore Wind Farm has the potential to meet 2.5 per cent of the Government's national target for 2010.

The development of renewable energy is vital to meeting Government's targets, and also provides security of energy supply and economic development benefits to the UK economy.

Consents

A number of regulatory consents are required for the construction and operation of the Lincs project. The Offshore Renewable Consents Unit of the Department of Trade and Industry (DTI) and the Marine Consents and Environment Unit of the Department for Environment, Food and Rural Affairs (Defra) are both responsible for the consents process.

Centrica is applying for the following key consents for the Lincs Offshore Wind Farm:

- Consent under Section 36 of the Electricity Act (1989) to construct and operate the offshore wind farm, including all ancillary infrastructure
- Licence under Section 5 of the Food and Environment Protection Act (1985) to deposit materials on the sea bed such as the turbine foundations and the buried cables
- Consent under Section 34 of the Coast Protection Act (1949) in order to make provision for the safety of navigation in relation to the buried cables
- Deemed planning permission for the onshore works under Section 90 of the Town and Country Planning Act (1990) (sought as part of the Section 36 application)

In addition, safety zones will be requested under the Energy Act (2004) during construction and operation for the areas of seabed directly covered by the turbines and offshore substation(s).

Centrica is also applying for the following key consent for the Docking Shoal and Race Bank onshore works:

- Planning permission under Section 57 of the Town and Country Planning Act (1990)

The Environmental Impact Process

The term 'Environmental Impact Assessment' (EIA) describes a process to be followed for certain types of development. Existing legislation requires that the Lincs project be subject to a full EIA to support planning and licence applications. The purpose of the EIA process is to provide adequate environmental information to enable decision-makers to understand the environmental effects of the project. This EIA has been undertaken by a number of specialists, including marine biologists, oceanographers, archaeologists, ornithologists and engineers.

The product of the EIA process is the Environmental Statement (ES). The ES identifies and assesses potential impacts associated with the construction, operation and decommissioning of the proposed development. The ES also lists appropriate mitigation and monitoring measures to manage any adverse impacts.

The ES has reported the 'worst realistic case' within clearly defined parameters that would govern or define the full range of development possibilities, and has considered the environmental scenarios likely to cause the greatest impact for every aspect of the project. This process defines clearly the potential boundaries of the development and describes the maximum possible impact.

Scoping and Consultation

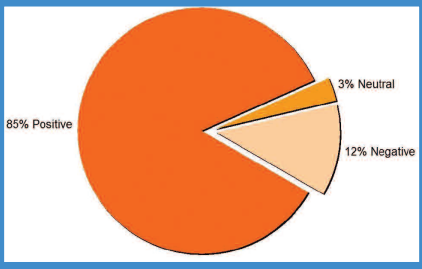
In order to assist in identifying the environmental effects on which to focus the EIA and the methods of study used, a formal scoping exercise was undertaken in which Centrica sought views from more than 130 statutory and non-statutory organisations. This process has helped shape the proposal submitted.

Further consultation with key stakeholders will be carried out by the DTI on the content and findings of this ES.

Public Exhibitions

Details of the early proposals for the development of the Lincs Offshore Wind Farm were initially publicised through the media, a series of exhibitions and a public consultation exercise. An information letter and questionnaire were posted to 22,615 residents within 7 km of the Skegness and Ingoldmells coast seeking their views on the proposed Lincs Offshore Wind Farm. More than 3,000 residents replied, representing a 15 per cent response rate, with an overwhelmingly positive (85 per cent) response to the proposed project.

Exhibitions were held at various 'Wash week' events during the summers of 2005 and 2006. These included presentations at Gibraltar Point, Skegness, Hunstanton and King's Lynn.



Public opinion of proposed Lincs Offshore Wind Farm (based upon questionnaire responses)

As the proposals (including plans for the onshore element of the work) developed, further public exhibitions were publicised and held in Skegness, King's Lynn and Hunstanton in November and December 2005. Shortly after the submission of the planning application for Lincs, further exhibitions will be organised and publicised to give members of the public and interested organisations an opportunity to ask questions about the project and review the outcome of the various environmental studies.

Data Collection and Surveys

Further to the findings of the scoping exercise and consultation process, the following key surveys were undertaken as part of the EIA process:

- Geophysical surveys to understand the characteristics of the seabed
- Marine biological surveys, including analysis of organisms
- Aerial and boat-based bird surveys
- Marine traffic surveys
- Commercial and natural fish resource surveys
- Inter-tidal ecology surveys
- Terrestrial ecology surveys, including birds
- Sampling of water courses in the vicinity of the proposed onshore works
- Baseline noise measurements
- Archaeological surveys
- Visual assessments of landscape and seascape

Site Selection and Consideration of Alternatives

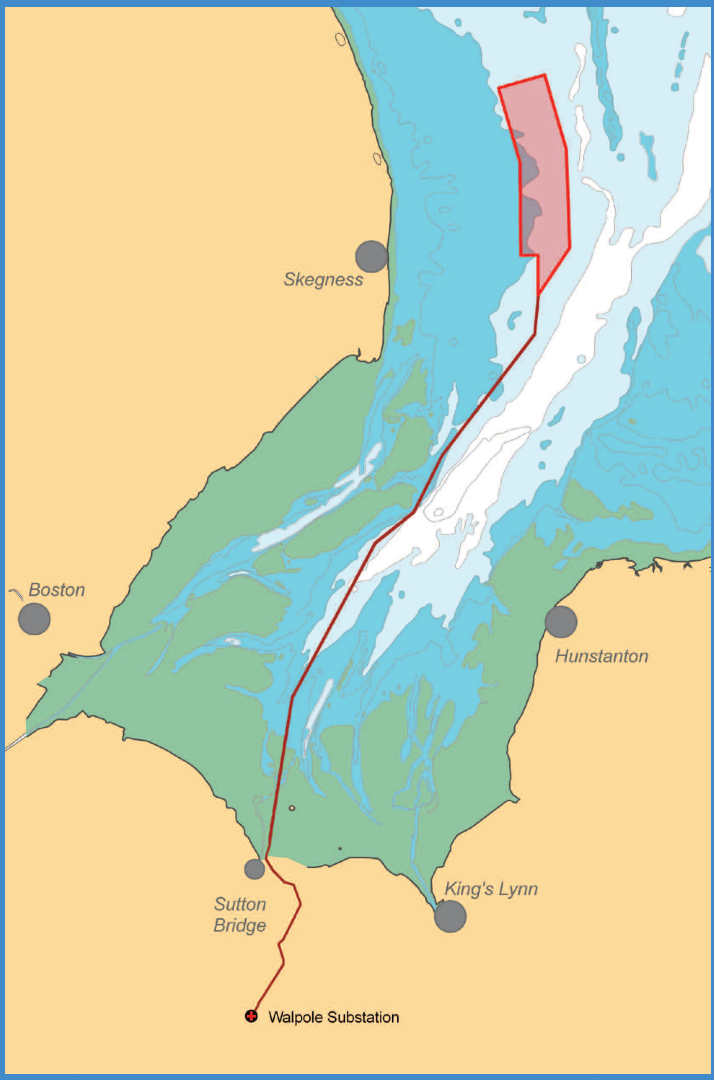
Site Selection

A key part of the overall project to date has been the careful and detailed assessment of all potential locations for the Lincs Offshore Wind Farm site, the route of the export cables to shore and onshore infrastructure. By considering several potential locations within the Greater Wash strategic area, it has been possible to eliminate areas where development would be technically difficult, may adversely affect the natural environment, or would impact other economic or social activities. The choice of site has been based on criteria, including:

- Results of surveys from the Greater Wash strategic area
- Available wind resource
- Geology
- Seabed obstructions and munitions
- Water depth
- Construction limitations
- Operation and maintenance requirements
- Grid connection
- Stakeholder consultations (birds, navigation, fisheries, etc.)

Grid Connection

Considerations of transmission capacity, connection availability, technical limitations, environmental constraints and possible planning issues led to the selection of the Walpole substation as the proposed point of connection. This substation would be sufficient for Centrica's Lincs, Docking Shoal and Race Bank projects.



Proposed cable route from Lincs Offshore Wind Farm site to the substation at Walpole.

Proposed Marine Export Cable Route

Due to the potential environmental sensitivity of the Wash Estuary, selection of an appropriate route for the marine export cables has been a major part of the overall site selection process.

Initial consultation and detailed technical constraint studies investigated a cable corridor study area that included a substantial part of the main navigation channel within the Wash Estuary. Early feedback from the port authorities indicated a preference for the cable route to be in the deeper region of the Wash, where the seabed is more stable. These studies also took into consideration the numerous designations of the estuary, including its status as a Special Area of Conservation (SAC), a Special Protection Area (SPA), a Ramsar Site, a National Nature Reserve (NNR) and a Site of Special Scientific Interest (SSSI).

A potential route running from the northeast to the southwest of the estuary, along the navigation channel, with a landfall location close to the River Nene, is therefore proposed.

Due to the environmental sensitivity of the salt marsh habitat in the inter-tidal area, the export cable would be installed under the salt marsh. This would ensure avoidance of potential habitat loss and physical disturbance.

In order to avoid disturbing this habitat, a technique of horizontally drilling and installing cables beneath the salt marsh will be employed. A cable route within the inter-tidal zone has been selected that reaches shore at a point where the salt marsh strip is sufficiently narrow to allow this to be done.

Proposed Onshore Cable Route

The proposed onshore cable route does not pass through any environmentally designated areas along the 11 km route. The land use along this route consists mainly of agricultural land. For major road crossings, cable installation would be achieved by horizontal directional drilling beneath the road.

Assessment of Potential Effects

The potential environmental impacts associated with the Lincs Offshore Wind Farm through each phase, from construction through to operation and decommissioning, are summarised below. The impacts for the offshore and onshore works are listed separately.

Nature of the Impacts

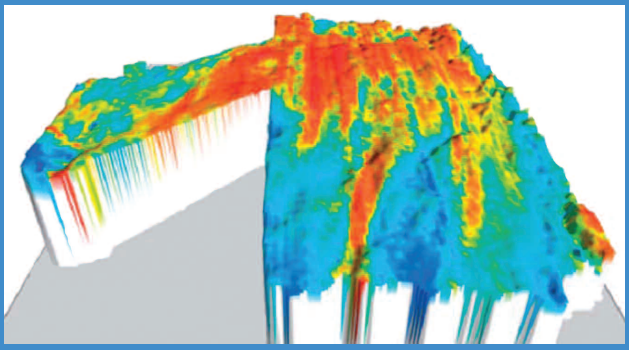
As part of the EIA process, impact identification and assessment was carried out using standard procedures. All potential impacts that were identified were defined with respect to whether they were:

- Local or Regional in extent
- Long-term or short-term
- Adverse or beneficial
- Permanent or reversible

The significance of each impact was also described, using the terms Negligible, Minor, Moderate and Major. As an example, a particular impact could be described as a **minor adverse impact.**

Finally, where appropriate, mitigation measures were suggested. The aim of these measures is to reduce the severity of any impact that may potentially arise.

Offshore Wind Farm and Export Cable Route: Potential Physical Effects



Results of an Acoustic Ground Discriminating Survey of the proposed Lincs Offshore Wind Farm site. Red areas represent hard seabed; blue areas represent sandy/soft seabed

Coastal Processes

Studies have investigated the potential effects of the proposed wind farm on local wave, tide and sediment behaviour. During the construction period, short-term disturbances may occur in relation to turbine foundation installation and cable laying operations. This has the potential to release seabed material into the water column. However, due to the coarse nature of the seabed sediments, any sediment plume would rapidly fall out of suspension, with sediment largely remaining within the project area. In regions where the cable route encounters finer sediments, the material is likely to stay suspended in the water column for a longer period, but only with **minor adverse impacts** that would be short-term and reversible in nature.

Overall, no impacts are predicted on either the Lincolnshire or Norfolk coastlines.

Sediment and Water Quality

The beaches at Cleethorpes and Hunstanton have been awarded the international Blue Flag award for 2006, an award that considers water quality, among other things. Due to the distance of the wind farm from these beaches, the ES predicts a **negligible adverse impact** on water quality.

Offshore Wind Farm and Export Cable Route: Potential Biological Effects

Marine Ecology

During construction, it is predicted that habitat loss and disruption through installation of the turbines and cables would result in **minor adverse impacts** on organisms that live within and upon the seabed. These include species of importance such as the reef-building Ross worm and common mussel.

The 'father lasher' or 'bull rout' from Lincs surveys

Minor adverse impacts on fish and shellfish communities have also been identified, due mainly to small amounts of habitat loss across the site from the installation of the turbines and cables. It is also predicted that increased sediment loads and sedimentation across the site may result in **minor adverse** impacts.

However, it is not predicted that the functional importance of the Wash as a spawning and nursery area for fish would be affected. Finally, noise from the construction works is predicted to result in **minor adverse impacts** upon certain noise-sensitive fish species.

Mitigation of the above issues, by optimising cable route selection, micro-siting turbines and adopting working practices that minimise noise at the beginning of piling operations (soft-starts) would reduce these predicted effects to **temporary localised impacts** with **overall negligible levels.**

The 'reef-building' ross worm

Inter-Tidal Ecology

The marine export cables would pass through the inter-tidal area of the Wash; therefore there would be potential impacts upon species and habitats in these areas from the cable installation works.

The ES reports that although effects upon the ecology of the inter-tidal area will arise, these will be temporary in duration and site-specific in extent, resulting in a **minor adverse impact**.

Marine Mammals

During the construction phase of the scheme, piling noise may lead to the displacement of certain marine mammals in the area. The ES states that, with respect to harbour porpoises, any such impact may be of **moderate adverse significance**, while for seals, only a **minor adverse impact** is predicted. However, at other previously constructed offshore wind farms, marine mammals have been noted to return to areas from where they were displaced within hours of piling ceasing.

Birds

A total of 10,356 individuals of 78 identified species (including subspecies) were recorded from boat-based surveys within the Lincs study area. Aerial surveys of the Greater Wash strategic area recorded a total of 12,446 birds.

Of the species recorded, little gull and red-throated diver occurred in nationally important numbers, with common scoter, great northern diver, fulmar, gannet, common gull, lesser black-backed gull, common tern, guillemot and razorbill in regionally important numbers.

The potential impacts on birds include disturbance and displacement effects by the wind farm and its associated vessel traffic and collision risk with turbines. A range of impacts, many of which were either **negligible** or **minor**, were predicted. For some species, these were predicted to be of a greater significance but were considered to be acceptable.

Herring gull calling in flight, photographed during a survey of the proposed Lincs Offshore Wind Farm (Photo credit: ECON)

Nature Conservation of the Export Cable Route

The Wash is an area of international importance for nature conservation. An extensive programme of data collection has been undertaken to identify features of specific importance within all areas likely to be affected by the proposed export cable route.

The cable route has been designed to avoid those areas of known ecological sensitivity and, through pre-construction surveys and further micro-siting, it is predicted that the potential for impacts on such ecologically sensitive features can be completely eliminated.

View of the proposed Lincs Offshore Wind Farm from Mablethorpe beach

View of the proposed Lincs Offshore Wind Farm from Hunstanton

Disturbance to wintering birds within the Wash SPA is not predicted, as installation works would take place during periods when wintering birds are not present. With respect to marine mammals, **no impacts** arising from the installation of the cables are predicted.

Potential impacts from installation of the export cable upon inter-tidal habitats covered by nature conservation designations have also been assessed. The EIA concluded that any disruption to inter-tidal areas would be **insignificant** to the Wash Estuary as a whole and to the conservation objectives for the Wash designated site.

Offshore Wind Farm and Export Cable Route: Potential Human Effects

Seascape and Visual Character

Given the scale and extent of the proposed Lincs Offshore Wind Farm development, it is inevitable that it would impact upon the surrounding seascape and visual environment, even though the wind farm is located approximately 8 km offshore from Lincolnshire at its closest point and 17.5 km offshore from north Norfolk.

Viewed from the Lincolnshire coast, Lincs Offshore Wind Farm would be located behind the consented Lynn and Inner Dowsing Offshore Wind Farms.

Overall, from the Lincolnshire coast, it is predicted that there would generally be **moderate adverse** visual impact. From the Norfolk coast, the visual impact would be less, due to the greater distance offshore, with a **minor to moderate adverse** impact predicted.

Cultural Heritage and Archaeology

The wind farm development and cable route have the potential to impact upon submerged prehistoric sites and landscapes, shipwrecks and associated material. Known and potential wrecks occur within the proposed Lincs site. Specific exclusion zones around these and certain anomalies upon the sea bed would minimise potential impacts.

Further mitigation measures would be detailed within a Written Scheme of Investigation that would be drawn up prior to construction through consultation and national and local heritage bodies. The overall effect of the construction of the Lincs offshore wind farm upon archaeological remains will be **negligible**.

Shipping, Navigation and Safety

The navigation assessment has shown that, because of the low level of shipping in the vicinity, the impact of the site on navigation is **negligible**, with only a small amount of coastal traffic having to re-route. The site boundary was reshaped to mitigate the impact on shipping; in particular, turbines in the southeast corner of the site were removed to reduce potential interference with radar equipment on ships using the main route to or from the Wash. Limited fishing and recreational vessel activity was identified in the area of the site, so therefore any effect on these activities would result in a **minor** adverse impact.

The formal safety assessment undertaken as part of the EIA process concluded that no navigational hazards were identified to be unacceptable.

Commercial Fisheries

Relatively low levels of commercial fishing within the general area of the Lincs wind farm site were identified. Activity is predominantly from locally based vessels deploying either static or mobile gear. Shrimp trawling is one of the major fishing activities within the local area. However, the wind farm site does not fall within the main pink or brown shrimp fishing grounds. The route of the export cable avoids the majority of the recorded Wash cockle and mussel beds.

Commercial fishing vessels at dawn, Kings Lynn

The extensive potting grounds off the Norfolk and Lincolnshire coasts suggest that, if any displacement were to occur, potting could be adequately relocated in adjacent areas. The potential impact of loss or restricted access has therefore been predicted to result in a **minor adverse impact.**

Other Marine Users

An assessment was undertaken to identify the location of any other marine users in the vicinity of the Lincs site, including marine aggregate extraction, navigational dredging, coastal defences, disposal sites, pipelines and cables, oil and gas interests, aviation, recreational sailing, tourism and other wind power interests. No significant conflicts with any of these interests were identified, resulting in an overall assessment of **no adverse impact** upon other marine users.

Socioeconomics and Tourism

The project has the potential to generate some positive economic effects for the region. The operation and maintenance base is likely to be located in one of the regional ports and could provide 15 to 20 direct full-time jobs for the life time of the wind farm.

Welcome to Skegness

The development of wind farms would provide local education opportunities, and may help to attract additional visitors, particularly those with an environmental interest. On a national level, wind turbines and wind farms developed and constructed in the UK would help the establishment of a substantial new UK industry, providing long-term jobs and serving both home and overseas markets.

Electromagnetic Interference and Air Traffic Control

Consultation with the aviation and telecommunications industry as well as the Ministry of Defence (MoD) established that the Lincs Offshore Wind Farm would result in **no adverse impact** upon communications, microwave links, TV or radio reception, civil or military aviation, or air defence radar.

In-Air Noise

The acoustic impact of the proposed Lincs offshore wind farm has been assessed in accordance with the Department for Trade and Industry (DTI) best practice guidance for the industry. In consideration of the existing noise levels and environmental factors such as wind and waves and the predominant wind direction, it is anticipated that there would be a **minor adverse impact** during the period of construction and **no adverse impact** at coastal locations from the operating wind farm.

Onshore Works: Potential Effects

Proposed route for onshore cable.

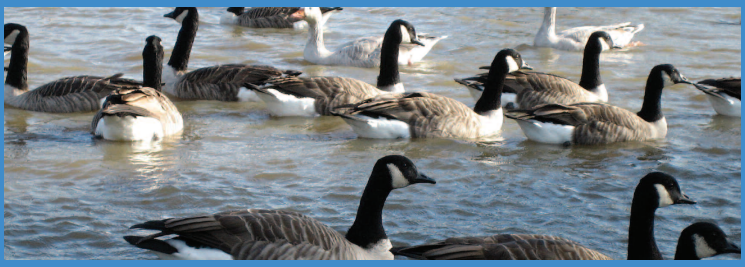
Hydrology, Hydrogeology, Geology and Soils

Construction works may lead to temporary physical alterations to internal drains, alteration to underground water flows and destabilisation of soils. However, these effects are considered to be **minor adverse**.

During the operational phase, effects may arise upon hydrogeology if subsurface flows are altered or if pollutants enter local watercourses. However, the risks of pollution to the internal drains or watercourse are very small during the operational phase. If such impacts did arise, these would be of **minor adverse** significance.

Ecology and Nature Conservation

The onshore cable route does not pass through any designated nature conservation sites, with the majority of the route lying within agricultural land. Surveys of habitats and the wildlife they support (including birds, mammals, amphibians and reptiles) indicate that the area potentially affected by the proposed cable route and substation is not particularly important for wildlife.



Canada Geese, Branta canadensis, 'resting' at a lake next to the Southview Hotel, Skegness

The removal of small sections of species-poor hedgerows would have a **minor adverse impact** on bats and farmland birds that use these hedgerows as flight paths and feeding corridors. However, the implementation of temporary structures would retain connectivity between these hedgerows during construction. The hedgerows would be reinstated on completion of works, ensuring that any effects are temporary and localised.

Landscape and Visual Character

The majority of the study area in connection with the onshore cable route corridor lies within a low-lying, relatively undeveloped, open and simple coastal landscape, which is exposed and remote. The onshore development would be fairly isolated and largely underground, meaning that the landscape and visual effects arising from the proposed works would mainly be temporary during the construction phase. The exception to this would be the extension to the existing substation at Walpole.

This extension would not create any new significant impact on the existing industrial built characteristics of the substation site, and impacts would generally be **negligible** in the long term following completion of construction and appropriate landscaping. All vegetated or open areas that are disturbed would be reinstated following construction.

Cultural Heritage and Archaeology

There are no Scheduled Monuments present within 2 km of the site, and no part of the cable route or substation lies within a designated Conservation Area, Registered Park, Garden of Special Historic Interest or Registered Battlefield. Furthermore, the potential for the presence of previously unidentified archaeological remains within the cable route (and associated construction compounds) is considered to be very low.

There are, however, certain features of archaeological significance along the route. Accordingly, the route corridor and substation layout have been designed to avoid these features. The residual effects, following mitigation measures, are assessed as **minor** to **negligible**.

Socioeconomics and Tourism

Construction activities would be temporary and localised. It is therefore predicted that the onshore works would have a **negligible adverse impact**.

Construction works would not create additional full-time employment, but local businesses would have the opportunity to bid for the supply of services related to construction and specialist contract work associated with the ongoing maintenance of the onshore facilities.

View of the existing onshore substation at Walpole

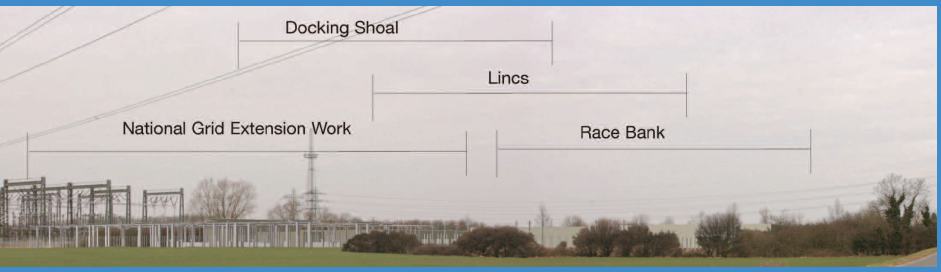
View of the existing onshore substation at Walpole with lines to indicate the proposed extension works for Lincs, Do

Transport and Traffic

The main effects on transport and traffic are likely to be restricted to certain peak periods of the construction programme, when bulk materials such as fill and concrete are being delivered. To mitigate any impacts, a package of standard and site-specific measures to monitor and control the effects of construction traffic would be agreed with the local authority before the commencement of construction. The residual impacts of traffic and transport would be **negligible to minor adverse.**

Noise

During construction, there is potential for noise impacts, arising primarily from trench excavation, on sensitive receivers adjacent to the cable route. The works at any one location would be relatively short in duration and, through the implementation of careful working practices and noise screens, such effects could be minimised.



cking Shoal and Race Bank Offshore Wind Farms

Operational noise generated by transformers and associated electrical equipment at the substation would be reduced to acceptable levels through the use of appropriate screening.

Flood Risk and Coastal Defences

Potential impacts in terms of flood risks and disruption to coastal defences were considered, particularly with respect to increases in hardstanding area at the substation and passing of cables below the existing seawall. Potential adverse effects would be fully avoided through inclusion of appropriate and adequate mitigation in the development, including obtaining all relevant consents.

Conclusions

An EIA has been completed in accordance with EU and UK regulations. In parallel with this, Centrica has carried out detailed and extensive consultation with statutory and non-statutory bodies, interested parties and the public. It is not yet known how the development would be phased or the sizes of turbines that would be used. Therefore, all of the EIA assessments have addressed the scenario that would have the greatest potential effect on the environment.

The proposed Lincs project has the potential to meet 2.5 per cent of the Government's national renewable energy target for 2010. All relevant consents will be obtained, and potential adverse effects would be fully avoided through inclusion of appropriate and adequate mitigation in the development.

Further Information

The Environmental Statement can be viewed during the statutory consultation period at the following locations:

Skegness Library, 23 Roman Bank, Skegness, Lincs PE25 2SA
King's Lynn Library, London Road, King's Lynn, Norfolk PE30 5EZ
King's Lynn West Norfolk Borough Council, King's Court, Chapel Street, King's Lynn, Norfolk, PE30 1EX
South Holland District Council, Council Offices, Priory Road, Spalding, Lincolnshire, PE11 2XE
Boston Borough Council, Municipal Buildings, West Street, Boston, Lincs, PE21 8QR
Lincolnshire County Council, County Offices, Newland, Lincoln, LN1 1YL
Norfolk County Council, County Hall, Martineau Lane, Norwich, Norfolk, NR1 2DH

Requests for copies of the Environmental Statement (priced at £5 on DVD and £250 for hard copy), or additional copies of this Non-Technical Summary (free), should be made in writing to:

Centrica (Lincs) Ltd
Centrica Energy
3 The Square
Stockley Park
Uxbridge
UB11 1BG

A downloadable version of the Non-Technical Summary is also available from the Centrica Energy website: **www.centrica.co.uk/renewables**

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