IPC Infrastructure Planning Commission

SCOPING OPINION
Proposed Dogger Bank Offshore Wind Farm

November 2010

independent impartial inclusive

CONTENTS

Executive Summary

This is the Infrastructure Planning Commission's (the Commission's) Scoping Opinion (the Opinion) in respect of the content of the environmental statement for the proposed Dogger Bank Project One in the North Sea off the east coast of Yorkshire.

This document sets out the Commission's opinion on the basis of the information provided in Forewind's report entitled 'Dogger Bank Project One – Environmental Impact Assessment Scoping Report (October 2010) (the Scoping Report). The Opinion can only reflect the proposals as currently described by the applicant.

The Commission has consulted on the Scoping Report and the responses received have been taken into account in adopting this opinion. The Commission is satisfied that, with the addition of noise and vibration, air quality, waste and socio-economic impacts off-shore; and electric and magnetic fields and waste on-shore, the topics identified in the scoping report encompass those matters identified in Schedule 4, Part 1, paragraph 19 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009. The applicant's attention is drawn to the need to consider the additional potential impacts identified above.

The Commission draws attention both to the general points and those made in respect of each of the specialist topics in this Opinion. At this stage the main potential issues identified offshore for consideration in the ES are:

- scale of the proposals;
- transboundary impacts;
- cumulative impacts with other developments in the area;
- ecological impacts – including disturbance during construction, impacts on birds, impacts on marine ecology;
- construction noise impacts – disturbance of fish and marine mammals;
- socio-economic impacts – not only the displacement of fishing fleets to other fishing areas, but other socio-economic impacts;
- archaeology – disturbance to known and unknown archaeological sites.

The main potential issues identified onshore are:

- escalation of coastal erosion;

- flooding;
- ecological impacts – loss of and disturbance to habitats;
- landscape impacts – from the construction of the proposed substation;
- noise impacts – from construction, including traffic;
- air quality impacts arising from the emission of dust from construction activities;
- archaeology – disturbance to known and unknown archaeological sites.

Matters are not scoped out unless specifically addressed and justified by the applicant and confirmed as being scoped out by the Commission.

INTRODUCTION

Background

1.1 On 13 October 2010, the Commission received a Scoping Report submitted by Forewind (the Applicant) under Regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (the EIA Regs) in order to request a Scoping Opinion for the proposed Dogger Bank Project One (herein known as Project One) in the North Sea off the coast of Yorkshire. This Opinion is made in response to this request and should be read in conjunction with the Scoping Report.

1.2 The EIA Regs enable an applicant, before making an application for an order granting development consent, to ask the Commission to state in writing its formal opinion (a 'scoping opinion') on the information to be provided in an environmental statement (ES).

1.3 The proposals fall within Schedule 2 development under the EIA Regulations as being an installation for the harnessing of wind power for energy production (windfarms). An EIA is not mandatory for Schedule 2 development but depends upon the sensitivity of the receiving environment, the likelihood of significant environmental effects and the scale of the proposals.

1.4 In submitting the information included in the request for a Scoping Opinion, the applicant is deemed to have notified the Commission under Regulation 6(1)(b) of the EIA Regulations that it proposes to provide an environmental statement (ES) in respect of the proposed Project One. Therefore, the proposed development is determined to be EIA development in accordance with Regulation 4.

1.5 Before adopting a Scoping Opinion the Commission (or the relevant authority) must take into account:

- 'the specific characteristics of the particular development;
- the specific characteristics of the development of the type concerned;
- the environmental features likely to be affected by the development'.

(EIA Regs 8 (9))

1.6 This Opinion sets out what information the Commission considers should be included in the ES for the proposed offshore windfarm. The Opinion has taken account of:

i the EIA Regs;
ii the nature and scale of the proposed development;

iii the nature of the receiving environment; and
iv current best practice in the preparation of environmental statements.

1.7 The Commission has also taken account of the responses received from the statutory consultees. It has carefully considered the matters addressed by the applicant and has used professional judgement and experience in order to come to this Opinion. The Commission will take account of relevant legislation and guidelines when considering the ES. The Commission will not be precluded from requiring additional information in connection with the ES submitted with that application when considering any application for a development consent order (DCO).

1.8 This Opinion should not be construed as implying that the Commission agrees with the information or comments provided by the applicant in the request for an Opinion from the Commission. In particular comments from the Commission in this Opinion are without prejudice to any decision taken by the Commission on submission of the application that any development identified by the applicant is necessarily to be treated as part of a nationally significant infrastructure project or associated development, or development that does not require development consent.

1.9 Regulation 8(3) of the EIA Regs states that a request for a Scoping Opinion must include:

i. a plan sufficient to identify the land;
ii. a brief description of the nature and purpose of the development and of its possible effects on the environment;
iii. such other information or representations as the person making the request may wish to provide or make.

1.10 The Commission considers that this has been provided in the Applicant's Scoping Report.

Commission's Consultation

1.11 The Commission has a duty under Regulation 8(6) of the EIA Regs to consult widely before adopting an Opinion. A full list of the consultation bodies is given at Appendix 1. The list of respondents, with copies of those comments is given at Appendix 2, to which reference should be made.

1.12 The ES submitted by Forewind must also demonstrate consideration of points raised by the statutory consultees. It is recommended that a table is provided in the ES summarising the scoping responses from the statutory consultees and how they are considered in the ES.

1.13 Any subsequent consultation responses, received after the statutory deadline for receipt of comments, will be forwarded to the applicant and should be given due consideration by the applicant in carrying out the EIA.

Structure of the Document

1.14 This document is structured as follows:

Section 2 The Proposed Development;

Section 3 EIA Approach and Topic Areas;

Section 4 Other Information;

Appendix 1 Consultees;

Appendix 2 Respondents to Consultation and Copies of Replies;

Appendix 3 Presentation of the Environmental Statement.

2.0 THE PROPOSED DEVELOPMENT

2.1 The following is a summary of the information on the site and surroundings prepared by the applicant. The Commission has not verified this information.

Applicant's Information

Background and Overview of the Proposed Development

2.2 Dogger Bank forms one of the Zones in the Round 3 Offshore Wind Licensing Arrangements announced by the Crown Estate in June 2008. Within the Dogger Bank Zone, four Tranche areas (Tranches A-D) are to be defined for development. Currently only Tranche A has been defined. This comprises the area closest to the UK shore within the Zone (see Figure 1.1 of the Scoping Report). Each Tranche will contain a number of separate wind farm projects and it has been estimated that Tranche A will contain three projects.

2.3 The first of these projects (Project One) is the subject of this Opinion. It comprises an offshore array of wind turbines producing up to 1.4GW, inter-array and export cables and associated onshore developments. The Executive Summary of the Scoping Report refers to capacity of 1.4W, which is assumed to be a typing error.

2.4 Components of the development will include (see sections 2.1.1 and 2.1.2 of the Scoping Report):

Offshore

- offshore wind farm array to generate up to 1.4GW;
- offshore collector and converter substations, foundations and scour protection measures;
- offshore operations and maintenance infrastructure;
- sub-sea inter-array cables;
- sub-sea export cables, carrying power from the wind farm to the shore, or possibly adjacent projects;
- crossing structures over existing subsea cables and pipelines;
- offshore meteorological masts and metocean equipment.

Onshore

- onshore transition pit;
- cable system from onshore transition pit to onshore converter substation and from onshore converter substation to National Grid Electricity Transmission (NGET) substation;
- ancillary cable ducts; and

- up to two converter substations.

Proposed Site and Surroundings – Offshore

2.5 Dogger Bank is the largest Zone identified by the Crown Estate. It lies approximately 125 - 290km east of the coast of Yorkshire and has a generating capacity of 9GW to be achieved by 2020, potentially rising to 13GW by 2023.

2.6 The Dogger Bank Zone is approximately 8660km^2 in area. The proposed Tranche A is 2000km^2 and is located in the south-west part of the Dogger Bank Zone. Two further projects are to be developed within Tranche A.

2.7 Deposits on the seabed across Tranche A tend to be mainly a thin surface veneer of sand and gravely sand without any distinctive bedforms. In the west-central part of Tranche A there is coarser gravel and sandy gravel. Along the cable corridor the majority of the seabed sediments consist of sand.

2.8 There is limited information on tidal current velocity at the development site. Tidal currents mainly occur in a south east and north westerly direction and across Tranche A, tidal currents are thought to be less than 0.5ms^{-1}. Along the cable corridor tidal streams run parallel to the coast and tend to be north to south during the flood tide and south to north during the ebb. There are reported to be moderate currents with peak flows on a spring tide of approximately 0.7ms^{-1}.

2.9 For the area directly south of Tranche A south westerly prevailing winds occur between October and January which tend to reach force 4-6 on the Beaufort Scale, although can reach up to between force 9-12. Calmer winds from the north east occur around April.

2.10 The project site is within an offshore potential Special Area of Conservation (pSAC).

2.11 Spawning grounds and nursery areas for several fish and shellfish species are found within Tranche A and the export cable corridor.

2.12 In terms of marine archaeology, the Tranche A area contains three known ship wrecks and many more in the export cable area. There are no known aircraft wrecks in the study area.

2.13 Commercial shipping across the Dogger Bank Zone is considered to be at quite a low volume. Fishing takes place in the area, with beam trawlers targeting plaice, lemon sole, turbot & skates and rays. Twin rigging for prawns and Danish seine netting for various species is also common in the area.

2.14 To the south and south east of the Dogger Bank Zone there are potential herring and sandeel spawning grounds.

2.15 Statutory designated offshore wildlife sites in the vicinity of the Dogger Bank development include:

- thirteen UK designated Special Protection Areas (SPAs);
- seven UK designated Ramsar sites;
- four UK designated Special Areas of Conservation (SAC);
- one UK designated potential Special Area of Conservation (pSAC);
- four Dutch designated Sites of Community Importance (SCIs) (SAC);
- one Dutch designated potential Site of Community Importance (pSCI) (pSAC);
- two German designated SCIs; and
- four French designated SACs.

2.16 Marine mammals have recently been the focus of several studies within the Dogger Bank Zone. Species spotted include minke whale, white-beaked dolphin, grey seal and common seal.

2.17 There are a wide range of bird species and a number of SPAs and Ramsar sites located along the Holderness coastline.

Proposed Sites and Surroundings – Onshore

2.18 The onshore project area is shown in the Scoping Report in Figure 1.3. It forms a cone shaped area extending along the coast from Skipsea in the north as far south as Easington and inland to Cottingham.

2.19 Figure 1.3 shows three indicative cable corridors together with a fourth area around Creyke Beck substation just north of Cottingham. Of these four potential project areas (named Project Areas A to D) two areas will be used. Project Area A, which is the site of the proposed substation, will definitely be used, whereas only one of the Project Areas B to D will be used as these identify the potential options for the routing of the onshore cable.

2.20 Project Areas A-C and part of D are located within the jurisdiction of East Riding of Yorkshire Council. The remaining part of D is located within the jurisdiction of Kingston upon Hull City Council.

2.21 The general area is mainly a flat low lying agricultural landscape. The geology of the onshore site area is comprised of Flamborough Chalk Formation overlain by drift deposits of till described as stony clay.

2.22 Part of Project Area A is located within the 'Wolds Area of Landscape Protection' (Policy EN3, East Yorkshire Borough Wide Local Plan 1997). Various areas within Project Areas B-D are Landscape

Character Areas identified in East Riding of Yorkshire Council's Landscape Character Assessment (2005).

2.23 Ecology and nature conservation, and cultural heritage designations in the areas include:

Project Area A
- ancient woodland at Brikhill wood;
- local nature reserve at Beverly Park;
- Bowl Barrow SAM;
- other SAMs, and listed buildings and registered parks and gardens in Cottingham;

Project Area B
- Leven Canal SSSI;
- Pulfin Bog SSSI;
- Tophill Low SSSI;
- number of County Wildlife Sites;
- SAMs: Skipsea Castle, Barmston Old Hall, Mallgath Medieval Hall and Moat;
- deserted village – Eske;
- listed buildings;

Project Area C
- Hornsea Mere SSSI and SPA;
- Lambwath Meadows SSSI;
- ancient woodlands at Low Wood and Cote Wood;
- local nature reserves at Sigglesthorpe Station and Southorpe at Bilton and Halsham;
- SAM – Meaux Cistercian Abbey;
- listed buildings

Project Area D
- ancient woodland at Bail Wood and Old Wood;
- Burton Constable Hall – Registered Park and Garden;
- Ancient Monument: Hedon Medieval Town;
- listed buildings.

2.24 The main settlement is Kingston upon Hull. Along the coast lie the seaside towns of Hornsea and Withernsea. The town of Beverley lies approximately 5km to the north of the substation area and the village of Cottingham to the south (Figure 1.3 and section 10.2 in the Scoping Report).

Description of the Proposed Development – Offshore

2.25 Project One consists of wind turbines producing up to 1.4GW, with turbine sizes ranging from 3.6MW to 12MW. The precise number, location and spacing of these turbines have yet to be decided. The wind farm array of 1.4 GW may range from 389 x 3.6MW Wind Turbine Generators (WTG) to 117 x 12MW WTGs.

2.26 A number of foundation options have been identified. These could consist of:

- Monopile;
- Multipile (or Jacket);
- Tripod;
- Gravity base structure (GBS); and
- Suction caisson.

2.27 Spoil may be produced during the installation of the foundations through drilling or suction dredging. This could be disposed of on-site or off-site at a licensed spoil disposal area.

2.28 Scour protection may be required. Typical options include: protective aprons; mattresses; flow energy dissipation devices and rock and gravel dumping. The chosen design will depend upon the matters such as structural design, ground conditions and scour assessments.

2.29 Inter-array cabling will be likely to have a diameter of around 90-150mm for 33kV but may be larger for higher voltages. Typically it will be installed below the seabed.

2.30 Each inter-array cable from a string of turbines will be brought to an off-shore collector substation platform. At the platform power generated will be transformed to a higher AC voltage (likely to be between 132kV to 245kV). The number of collector stations is unknown but is likely to be four for the 1.4GW generating capacity. Collector substations are likely to comprise a multiple-type foundation.

2.31 Given the distance off-shore the likely technical solution for grid connection will be Voltage Source Conversion High Voltage Direct Current (VSC HVDC) technology. This reduces the power losses over long distances. There are likely to be up to three converter substations for about 1.4GW of generation capacity, these may be either standalone or associated with the collector substations. The numbers and locations will be determined by a detailed study. Foundations will be similar to the collector substations.

2.32 Export cabling will vary for different components of the project, and include collector to converter export cabling, inter-project export cabling and HVDC export cabling to shore.

2.33 Consideration will be given to existing pipelines or cables that need to be crossed by the inter-array and export cables in collaboration with the owners of the infrastructure.

2.34 Meteorological monitoring stations (masts) will be installed to measure wind and oceanographic data. The masts may include other further equipment. The numbers, final locations and foundation options have not yet been determined.

Description of the proposed development – onshore

2.35 Landfall is expected to be between Hilderthorpe (south of Bridlington) and Holmpton (south of Withernsea).

2.36 The onshore infrastructure comprises a transition pit, a cable system and up to two converter substations.

2.37 The detailed design of the onshore transition pit is still to be determined. It will be located close to the shoreline and below ground level with an area of restricted use around it.

2.38 VCS HVDC technology (see paragraph 2.31 above) will be used to reduce the power loss over the long distance from the offshore wind farm to the shore. The power will then be converted back into HVAC 400kV at an onshore converter substation and then transmitted by cable to the existing National Grid Electricity Transmission (NGET) substation at Creyke Beck near Cottingham.

2.39 To achieve this conversion, two new converter substations of 500MW capacity each are to be constructed onshore to convert the wind farm voltage to 400kV suitable for connection to the national grid. These converter stations are likely to be adjacent to the Creyke Beck substation and connected to it via a buried cable or a short length of overhead line.

2.40 Feasibility studies will be undertaken prior to determining the exact location of the converter substations to consider the land availability, various constraints and landowner negotiations.

2.41 The two proposed converter substations would jointly require an area of about 200m x 150m. It is expected that the substation buildings/apparatus will be about 15-35m high.

2.42 Indicative cable route corridors for the underground onshore cables from the onshore transition pit to the onshore converter substation sites have been identified by the applicant. The chosen corridor is likely to be approximately 20 to 35km long and cables are likely to be buried in

one trench of approximately 1.5m wide and 1.5m deep. During construction the working corridor is likely to be up to 30m wide.

Construction Programme

2.43 It is currently expected that the pre-construction phase for Project One will take place in 2013/14. Construction is anticipated to start in 2015 – 2017, with operation timetabled for 2016 – 2018.

2.44 Offshore construction and installation could take place over several years for Project One. Although often limited to favourable weather conditions some activities could take place throughout the year.

2.45 The type of foundation to be used for the turbines, offshore collector substations and meteorological masts will depend upon the outcome of the ground investigations, detailed design studies and environmental assessment. Foundations will be installed prior to the installation of the turbines.

2.46 Turbines, transitions pieces (if required), meteorological masts, substations and accommodation platforms are expected to be installed pre-erected using a crane barge.

2.47 The extent to which the inter-array cable will be buried will depend upon the detailed cable burial assessment which will be carried out. Cable burial will be by ploughing or trenching/jetting techniques depending on the location.

2.48 Onshore construction is estimated to take 24 months.

2.49 During construction there will be a need for temporary construction compounds, laydown areas, spoil heaps and access tracks. It may also be necessary to temporarily close or divert roads and public rights of way.

Commission's Comment

General

2.50 The Scoping Report numbers only the headings and sub-headings. The Commission recommends that the ES should have all of its paragraphs numbered, as this makes referencing easier as well as accurate. The Applicant should note that IPC Guidance Note 2 on the preparation of application documents states in paragraph 10 that 'in all cases the application documents must be paginated and paragraphs must be numbered'.

Description of the Development

2.51 The proposal site has been identified as lying within Tranche A within the Dogger Bank Zone. At this stage an export cable corridor has been identified and a broad study area for the onshore connections indicating three option routes with some variations within one of these routes. Distance to shore has been provided, although it is not clear as to which shore line this represents. Given the size and location of the proposed Dogger Bank Zone, this should be clarified and reference made as to the distance to the English shore and to other European States' coastlines.

2.52 The scale of the proposals within this Zone are unprecedented and the Commission wishes to ensure that the potential challenges this presents to undertaking an environmental impact assessment are robustly addressed.

2.53 The applicant should ensure that the description of the proposed development that is being applied for is as accurate and firm as possible as this will form the basis of the environmental impact assessment. It is understood that at this stage in the evolution of the scheme the description of the proposals and even the location of the site may not be confirmed. The applicant should be aware however, that the description of the development in the ES must be sufficiently certain to meet the requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations and there should therefore be more certainty by the time the ES is submitted with the DCO.

2.54 Within the draft DCO, the applicant should clearly define what elements of the proposed development are integral to the nationally significant infrastructure project (NSIP) and which is 'associated development' under the Planning Act 2008 or is an ancillary matter.

2.55 Any proposed works and/or infrastructure required as associated development, or as an ancillary matter, (whether on or off-site) should be considered as part of an integrated approach to environmental assessment.

2.56 The Commission recommends that the ES should include a clear description of all aspects of the proposed development, at the construction, operation and decommissioning stages, and include:

- Land use requirements, including the area of the offshore elements;
- Site preparation;
- Construction processes and methods;
- Transport routes;

- Operational requirements including the main characteristics of the production process and the nature and quantity of materials used, as well as waste arisings and their disposal;
- Maintenance activities including any potential environmental or navigation impacts; and
- Emissions (water, air and soil pollution, noise, vibration, light, heat, radiation etc).

2.57 The ES must set out an outline of the main alternatives studied by the applicant and provide an indication of the main reason for the applicant's choice, taking account of the environmental effects (Schedule 4, Part 1, paragraph 18 of the EIA Regs). The reasons for the preferred choice should be made clear and the comparative environmental effects identified in the ES.

2.58 The environmental effects of all wastes to be processed and removed from the site should be addressed. The ES will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off site. All waste types should be quantified and classified.

2.59 The applicant should make every effort in the ES to assess the potential impacts of the proposed development during construction, operation and decommissioning.

Description of the Surrounding Area

2.60 The Commission draws the attention of the applicant to the helpful comments from JNCC regarding the status of designated sites and the proposals for new sites, as well as missing sites.

2.61 The Commission also draws attention to the comments from E.ON Climate and Renewables UK in respect of the proximity of the cable routes to Humber Gateway Offshore Windfarm and the potential technical problems. The Commission advises that these should be addressed in the ES.

2.62 The Commission notes the comments from the Coal Authority regarding the impacts on Underground Coal Gasification (UCG) Projects off the coast and further information is provided in section 3 regarding the assessment of cumulative impacts.

Flexibility

2.63 The Rochdale envelope principle (see *R v Rochdale MBC ex parte Tew (1999) and R v Rochdale MBC ex parte Milne (2000)*) is an accepted way of dealing with uncertainty in preparing development applications. The information provided in the Scoping Report has not yet been fixed on a number of issues: the off-site area; the numbers and size of

turbines; the layout of the turbines, foundation types, the numbers and locations of collector and converter substations; and the route of offshore and onshore cabling. The Scoping Report (see section 3.3) explains 'the final definitive development plan, incorporating all elements of the project, is likely to be defined post consent… as far as is practicable at the time of application, Forewind will provide details of the design envelope options that are known, such as the site location, design and size'.

2.64 The Commission does not consider it appropriate as part of this Opinion to address the content of a proposed draft DCO, since these are matters for applicants, but does draw the attention of the applicant to CLG and the Commission's published guidance and advice on the preparation of a draft DCO and accompanying application documents. The environmental statement should support the application as described.

2.65 The Commission is not able to entertain material changes to a project once an application is submitted.

2.66 The applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the scheme have yet to be finalised and provide the reasons.

2.67 For example, the number of turbines has not yet been determined. Impacts arising from say a smaller number of larger turbines may well be different from a larger number of smaller turbines. Under these circumstances there is a risk that a robust assessment of the likely significant environmental impacts will be difficult.

2.68 Where some flexibility is sought and the precise details are not known the applicant should assess the maximum potential adverse impacts the project could have to ensure that the project as it may be constructed has been properly assessed. The Commission notes the reference to this approach (section 3.3 – 'The Rochdale Envelope' of the Scoping Report) but also notes that this approach should be applied to identify the worst case in terms of consideration of the potential combined impacts and not only as an individual parameter.

2.69 The ES should be able to confirm that any changes to the development within any proposed parameters would not result in significant impacts not previously identified and assessed. The maximum and other dimensions of the proposed development should be clearly described in the ES, with appropriate justification. It will also be important to consider choice of materials, colour and the form of the structures and of any buildings. Lighting proposals should also be described.

2.70 The Commission acknowledges that the process of EIA is iterative and therefore the proposals may change and evolve. For example, there

may be changes to the scheme design in response to consultation. Such changes should be addressed in the ES.

2.71 It should be noted that if the proposed development changes substantially during the EIA process, prior to application submission, the applicant may wish to consider the need to request a new Scoping Opinion.

Grid connection

2.72 The connection of a proposed offshore windfarm into the relevant electricity network is an important consideration. Therefore, the Commission welcomes the intention to include within the proposed DCO application the export cable to shore, the onshore cabling and substation as part of the overall project so that all the effects can be assessed within the accompanying ES. The Commission notes the intent at this stage (see Scoping Report page 24, third paragraph under the first heading) that this will comprise 'a new underground (buried) cable system rather than any new overhead lines'. The Commission would draw the attention of the applicant to the comments from some consultees regarding their concerns in respect of the use of pylons. If, notwithstanding the intention to underground the cables, an alternative means of grid connection is proposed, such connection should also be subject to full EIA and details included in the ES.

2.73 It is noted that the grid connection onshore will be at the existing Creyke Beck substation (section 2.1.2) where it is likely that the proposed onshore converter stations will also be sited. However, the Scoping Report states that two 500MW converter stations (ie a total capacity 1GW) will be constructed for the wind farm with a stated output of 1.4GW. Therefore the Commission seeks clarification on this anomaly.

2.74 The Commission notes that a specific onshore connection route has not yet been determined and that three indicative broad corridors have been identified. Such uncertainty over the physical extent of the proposed development makes a robust assessment of its potential effects difficult to undertake.

2.75 The Commission suggests that careful consideration should be given as to how the applicant meaningfully consults on, and properly assesses, likely impacts arising from the proposed on-shore cable route. It is hoped that the iterative nature of the assessment work will allow a more defined route for the proposed on-shore cable route corridor to enable the EIA to be carried out on as precisely defined scheme as possible.

2.76 The Commission notes that the applicant intends to provide an outline of the main alternatives that will be addressed in the ES and reasons

for the choice of options taken forward (section 3.3). The applicant should also provide an account of how the alternatives were short listed.

Decommissioning

2.77 In terms of decommissioning, the Commission acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment is to enable the decommissioning of the works to be taken into account in the design and use of materials such that structures can be taken down with the minimum of disruption. The process and methods of decommissioning should be considered and options presented in the ES. The Commission encourages consideration of such matters in the ES.

3.0 EIA APPROACH AND TOPIC AREAS

General Comments on the Scoping Report

3.1 The information provided in the Scoping Report suggests that a thorough approach is being adopted to the preparation of the ES. Whilst early engagement on the scope of the ES is to be welcomed, the Commission notes that the level of information provided at this stage is not always sufficient to allow for detailed comments from either the Commission or the consultees. The Commission would suggest that the applicant ensures that appropriate consultation is undertaken with the relevant consultees in order to agree wherever possible the timing and relevance of survey work as well as the methodologies to be used. The Commission notes and welcomes the intention to finalise the scope of investigations in conjunction with ongoing stakeholder liaison and consultation with the relevant regulatory authorities and their advisors.

3.2 The Scoping Report (section 3.6: Structure of Environmental Statement) sets out the proposed contents list of the ES on which Forewind seeks the Opinion of the Commission. The list of headings differs from that set out in the contents page (page 1 of the Scoping report).

3.3 The list at section 3.6 includes a Non Technical Summary. No information is provided as to whether figures would be provided, whether there would be any appendices or indeed whether other matters such as photographs or photomontages would be provided.

3.4 The Contents sheet considers the assessment under the broad headings of:

- Physical Environment – offshore;
- Biological Environment – offshore;
- Human Environment – offshore;
- Physical Environment – onshore;
- Biological Environment – onshore; and
- Human Environment – onshore;

3.5 The Commission makes further comment on the headings later in this section under the Topic Areas.

3.6 The Commission recommends that the 'Project Description' (Section 2) should include an explanation of the proposed construction programme and methods, including any impacts on the beach and foreshore.

3.7 Section 3 of the Scoping Report refers to 'The Consents Framework and EIA Methodology'. The Commission draws the attention of the applicant to ensuring that at the time of submission, the ES is up to date in terms of any relevant legislation.

3.8 The Commission recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. Scope should also cover the breadth of the topic and the temporal scope, and these aspects should be described and justified.

3.9 The Commission recommends that the baseline data is comprehensive, relevant and up-to-date. Surveys needed to inform the EIA should be up to date. The timing and scope of all surveys should be agreed with the relevant statutory bodies. Consideration should be given to the need to obtain relevant information from other European states and the need to ensure that transboundary issues are identified and addressed, further discussion on this matter is provided in Section 4 of this Opinion. The Commission welcomes the fact that these matters are acknowledged in the Scoping Report.

3.10 The Commission considers that each assessment should consider all phases of use – construction, operation and decommissioning. The methodology of surveys and studies needed to inform the EIA should be fully explained in the ES. The methodology should use up to date regulations and guidance to undertake the assessment and the methodology should be agreed with the relevant consultees. Where this is not possible, a reasoned justification should be given within the ES. The EIA Methodology listed under section 3.2 in the Scoping Report is not comprehensive and the Commission advises consideration of other legislation and guidance and the specific guidance identified by some of the consultation bodies.

3.11 The EIA Regs require the identification of the '*likely significant effects of the development on the environment*' (Schedule 4 Part 1 paragraph 20). The Commission notes the terminology for classifying environmental impacts set out in Table 3.1 of the Scoping Report, with further explanation provided in the text below this Table.

3.12 The Commission is not clear how the definitions as set out in the Scoping Report advance the understanding of the terminology and advises that clearer and more explicit descriptions are provided under each of the topic areas.

3.13 The Commission notes the approach described in the text below Table 3.1 of the Scoping Report and the reference to the probability of an impact occurring. The Commission would wish to see some explanation in the ES as to how probability is to be assessed. 'No impact' is identified in Table 3.1. The Commission recommends that consideration should be given to the identification of 'no change' impacts.

3.14 The Commission recognises that the way in which each element of the environment may be affected by the proposals can be approached in a number of ways but considers that it would be helpful, in terms of ease of understanding and in terms of clarity of presentation, to consider the impact assessment in a similar manner for each of the specialist topics. The Commission recommends that a common format should be applied where possible.

3.15 On the basis that a general methodology and approach has been described which it is assumed will be made applied consistently in the ES, the Commission is satisfied with this approach and format.

3.16 The Commission draws attention to the commentary at Appendix 3 of this Opinion and in particular to the terminology regarding cumulative impacts and inter-relationship between impacts, which suggests a preferred approach to be adopted. The Commission suggests that a clear terminology should be applied such that impacts resulting from a number of impacts on one receptor can be addressed in the ES (termed inter-relationship) and that these are clearly differentiated from any impacts associated with those arising from other proposals in the area (cumulative impacts).

3.17 The inter-relationship between specialist topics is a requirement of the EIA Regulations (see Schedule 4 Part 1). Inter-relationship impacts occur where a number of separate impacts, such as noise and air quality, affect a single receptor, for example people.

3.18 The Commission considers that details should be provided as to how inter-relationships will be assessed in order to address the environmental impacts of the proposal as a whole. This will help to ensure that the ES is not a series of separate reports collated into one document, but rather a comprehensive assessment drawing together the environmental impacts of the proposed development as a whole. This is particularly important in considering these impacts in terms of any permutations or parameters to the scheme proposals.

3.19 The Scoping Report explains that cumulative impacts will be assessed (see section 3.5 (care should be taken, there is a wrong cross reference in the Scoping Report to Section 3.6 for Cumulative Impacts – see top of page 32)). Cumulative impacts should consider both onshore and offshore major and relevant developments. The

Commission recommends that other major developments in the area should be taken into account for the purposes of assessing cumulative impacts through consultation with the local planning authorities and other relevant consenting bodies on the basis of major developments that are:

- built and operational;
- under construction;
- permitted application(s), but not yet implemented;
- submitted application(s) not yet determined;
- projects on the Commission's Programme of Projects;
- identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited; and
- sites identified in other policy documents, as development reasonably likely to come forward.

3.20 The Commission recommends that offshore windfarms should also take account of any offshore licensed and consented activities in the area, (if not already covered in relation to those major developments identified in paragraph 3.16 above) for the purposes of assessing cumulative effects through consultation with the relevant licensing/consenting bodies.

3.21 Therefore the Commission agrees that consideration should be given to other projects but the Commission considers that this should acknowledge the wider potential impacts of the remainder of the Zone's developments. The Commission does not agree with the 'building block' approach set out in Section 3.5 of the Scoping Report. The Commission acknowledges that detailed information may not always be available for every aspect of longer term proposals. Nevertheless the cumulative effects of these proposals should be addressed in the assessment with an explanation provided as to any difficulties encountered having regard to current knowledge and methods of assessment.

3.22 Further discussion on the consideration of cumulative impacts is included in Appendix 3 of this Opinion.

3.23 For the purposes of identifying any cumulative effects with other developments in the area, the applicant should also consult consenting bodies in other EU states to assist in identifying those developments.

3.24 Any proposed mitigation should be discussed and agreed with the appropriate consultees. The Commission notes and welcomes the intention (see page 50 of the Scoping Report) to work closely with the statutory nature conservation bodies 'to determine the most appropriate way forward' to consider potential impacts on distant sites and species

such as the bottlenose dolphin. Only mitigation measures which are a firm commitment or are likely should be identified in the ES and taken into account as part of the assessment.

3.25 Care should be taken in the preparation of the ES to ensure that all publications referred to within the technical reports are cited in the summary reference section of the ES.

Alternatives

3.26 Very little mention is made in the Scoping Report regarding the consideration of alternatives. The Commission advises that an outline of the main alternatives considered for the proposed development should be provided in the ES.

Presentation

3.27 The applicant's attention is drawn to Appendix 3 of this Opinion regarding the presentation of the environmental statement.

Matters Proposed to be Scoped Out by the Applicant

3.28 The applicant has proposed in the text, made suggestions in the Table in section 11.2 and identified on page 165 of the Scoping Report matters to be 'scoped out'. These include:

- impacts on geology offshore;
- landscape impacts from the offshore components;
- impacts on civil aviation; and
- air quality impacts during the operation of the onshore aspects.

3.29 Matters are not scoped out unless specifically addressed and justified by the applicant and confirmed as being scoped out by the Commission.

3.30 The Commission does not agree that the visual impacts of the offshore development on land based receptors can be scoped out. The text in the Scoping Report is unclear regarding the approach to assessing the visual impacts of the cable route as it comes onshore. The Dogger Bank site is large scale and has the potential for wide ranging visual impacts within the offshore environment. The Commission draws the attention of the applicant to the comments from JNCC regarding recreational users, including sailing boats, and passengers on ferries and cruise liners.

3.31 The Commission does not agree that impacts on civil aviation can be scoped out. The Commission would draw the attention of the applicants to the comments from the Civil Aviation Authority set out in Appendix 2.

3.32 The Commission can confirm that the following matters can be scoped out based on the information available at this stage:

- the construction of the wind farm and associated trenching for the cable corridor will not materially change the underlying geology of this area of the North Sea and that potential changes to geology under the North Sea can be scoped out;
- air quality impacts during the operation of the onshore development can be scoped out.

3.33 It should be noted that if information comes to light in the course of carrying out the assessment that indicated that these matters should be included then further information may be sought.

Topic Areas

General Comments

3.34 The EIA Regulations Schedule 4, Parts 1 and 2, set out the information for inclusion in an ES.

3.35 Schedule 4 Part 1 of the EIA Regulations sets out the aspects of the environment likely to be significantly affected by the development which should include '*in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors*' (paragraph 19).

3.36 Part 2 sets out the minimum requirements and is included below for reference:

Schedule 4 Part 2

- a description of the development comprising information on the site, design and size of the development;
- a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;
- the data required to identify and assess the main effects which the development is likely to have on the environment;
- an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects;
- a non-technical summary of the information provided [*under the four paragraphs above*].

3.37 The Scoping Report has considered the environment under the following topics:

- physical environment – offshore;

- biological environment – offshore;
  - nature conservation designations
  - intertidal ecology
  - marine ecology
  - fish and shellfish resource
  - ornithology
  - marine mammals

- human environment – offshore;
  - commercial fisheries
  - seascape and visual character
  - shipping and navigation
  - marine and coastal archaeology and cultural heritage
  - military activities and civil aviation
  - other human activities
  - tourism and recreation

- physical environment – onshore;
  - ground conditions and water resource

- biological environment – onshore;
  - ecology and nature conservation designations

- human environment – onshore;
  - historic environment
  - landscape and visual character
  - soils, agriculture and land use
  - traffic and transport
  - air quality
  - noise and vibration
  - recreation and tourism
  - socio-economics.

3.38 The Commission notes that the Scoping Report sets out the structure of the ES under the following headings:

- nature conservation designations;
- physical processes;
- marine and coastal water quality;
- marine ecology;
- fish and shellfish resource;
- ornithology;
- marine mammals;
- commercial fisheries;
- shipping and navigation;
- military and civil aviation;
- other uses and users of the sea;

- archaeology and cultural heritage;
- landscape, seascape and visual character;
- socio-economic assessment;
- geology, hydrogeology and land quality;
- terrestrial ecology;
- traffic and access;
- noise and vibration;
- air quality;
- local community, land use, tourism and recreation.

3.39 The Commission is satisfied that the topics identified in the Scoping Report encompass most of those matters identified in Schedule 4, Part 1, paragraph 19 of the EIA Regs. However the applicant's attention is drawn to the need to consider noise and vibration, air quality, waste and socio-economic impacts off-shore; and electric and magnetic fields and waste on-shore.

3.40 Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the Commission considers it is an important consideration *per se*, as well as being the source of further impacts in terms of air quality and noise and vibration.

3.41 Each of the specialist topics are considered in turn below in the order and under the headings presented in the Scoping Report. It should be noted that the general points made above and elsewhere in this Opinion are not repeated under each of the specialist topics. However the applicant should ensure that such issues are addressed fully before the ES is submitted to the Commission.

3.42 Consideration should also be given to the scoping responses, copies of which are provided in Appendix 2.

Physical environment – offshore

Geology, Hydrodynamic and meteorological regimes, Geomorphology, Seabed sediments, Water and sediment quality
(Section 5.1 of the Scoping Report)

3.43 The Commission would wish to be assured in the ES that the surveys are all relevant and up to date and as far as possible consistent. Where baseline surveys are not consistent this should be explained. The Commission is not clear as to what is being proposed in the surveys as no information is provided.

3.44 The ES should address the impact on the offshore physical environment of the site and its surroundings including, amongst other matters, impacts related to: the size of the development; the number and density of turbines within the area and the potential use of mixed foundation types.

3.45 The Commission refers the applicant to the detailed comments from the JNCC/NE and the MMO in Appendix 2 regarding, in particular, scour protection, the mobility of tidal sand ridges as well as the methods of landfall – particularly in respect of the potential impacts on the dynamics of the coast. The coast of Holderness is a rapidly changing coastline. The Commission advises that these comments should be addressed in the assessment or a full explanation provided as to why the recommendations were not considered appropriate or possible.

3.46 The assessment should include, *inter alia*, the likelihood of re-suspension and transport of potentially contaminating materials and any environmental impacts due to the construction, operation and decommissioning phases of the proposed project.

3.47 The assessment of environmental impacts should include all aspects of the proposed wind farm in the construction, operation and decommissioning phases of the development.

Biological environment – offshore

Nature conservation designations (Section 6.1 of the Scoping Report)

3.48 The Commission notes the extensive number of statutory designations in and around the proposed site. The location of sites designated by other European Member States (the Netherlands and Germany) is noted.

3.49 The Commission draws the attention of the applicant to the helpful comments from the MMO and JNCC (see Appendix 2) regarding data sources.

Intertidal ecology (Section 6.2 of the Scoping Report)

3.50 The Commission notes that the current potential landfall area is extensive and welcomes the intent to refine this area and to consult with the relevant statutory bodies.

Marine ecology (Section 6.3 of the Scoping Report)

3.51 The Commission welcomes the geophysical and benthic surveys to be carried out as part of the data collection exercise for the ES. The terms of reference for these surveys should be agreed with the MMO and the JNCC/NE.

3.52 The Commission agrees with the comments of the MMO (see Appendix 2) regarding scour. This is a large proposal and the effects of sea bed disturbance; increased suspended sediments and

smothering; changes to water quality; accidental release of contaminants; and noise and vibration disturbance for the operation and maintenance of the proposed wind farm should be included in the ES.

Fish and shellfish resource (Section 6.4 of the Scoping Report)

3.53 The Commission commends the helpful comments from the MMO and the JNCC/NE (see Appendix 2) to the applicant and advises that these comments should be addressed in the ES or a full explanation provided as to why the recommendations were not considered appropriate.

3.54 This section of the ES should be cross-referenced with that on commercial fisheries.

Ornithology (Section 6.5 of the Scoping Report)

3.55 The Commission advises that due to the proximity of several internationally designated sites to Dogger Bank together with the scale of the proposals, the potential impacts on birds should be comprehensively assessed. The Commission refers the applicant to the detailed comments from JNCC/NE regarding ornithology and advises that these comments should be addressed in the assessment or a full explanation provided as to why the recommendations were not considered appropriate.

3.56 The Commission agrees with the applicant that cumulative impacts should be assessed and appropriate mitigation measures identified in the ES.

Marine mammals (Section 6.6 of the Scoping Report)

3.57 The Commission refers the applicant to the detailed comments from JNCC/NE regarding marine mammals and advises that these comments should be addressed in the assessment or a full explanation provided as to why the recommendations were not considered appropriate. In particular the Commission points to the comments regarding the proposed methodology and the consideration of the Joint Cetacean Protocol (JCP) work.

3.58 The ES should set out in full the potential risk to European Protected Species (EPS) and confirm if any EPS licences will be required. The applicant should take into consideration recent changes in legislation with regard to EPS licence procedures.

3.59 The applicant should also be aware that the decision maker under the Planning Act 2008 has, as competent authority, a duty to engage with the Habitats Directive. Before making a decision to grant development consent the competent authority must, amongst other things, address

the derogation tests in Regulation 53 of the Conservation of Habitats and Species Regulations 2010 where development might damage or destroy a breeding site or resting place of a EPS whether or not the decision maker is also licensing the activity. Therefore, the applicant may wish to provide information within the ES which will assist the decision maker to meet this duty.

3.60 The Scoping Report identifies marine mammals as potential sensitive receptors for underwater noise. The Commission welcomes the cross-referencing to the noise and vibration section (see 6.6.3 paragraph four, first bullet point of the Scoping Report) but notes that the section referred to (Section 6.11) does not form part of the Scoping Report. Given that Section 6 goes only to Section 6.6, the Commission wonders whether information has been omitted in error from the Scoping Report.

3.61 The Commission agrees with comments made by JNCC/NE that a noise exposure assessment should be undertaken.

3.62 The Commission recommends that full consultation is undertaken with relevant statutory consultees and that the assessment methodology is agreed (reference is made to mitigation and monitoring to be developed in consultation with JNCC and NE, see page 85 of the Scoping Report).

3.63 The potential environmental impacts of the decommissioning phase on marine mammals (and on fish) and how such impacts may be mitigated should be considered.

Noise and Vibration, Air Quality and Waste (not included in the Scoping Report)

3.64 The Commission would expect noise and vibration impacts to be considered in the EIA. There is potential for noise, vibration and airborne pollution from traffic and plant particularly during the construction stage.

3.65 The assessment of noise and vibration should follow the latest standards, guidelines and best practice approaches. The physical study area and methodology should be discussed and agreed with the relevant statutory consultees. In particular, it should be confirmed whether an underwater noise and vibration survey is required.

3.66 Noise and vibration levels along the foreshore potentially affecting birds and marine mammals should be assessed.

3.67 The potential noise and vibration impacts on possible spawning grounds should be considered in the EIA and potential mitigation measures investigated.

3.68 As the methods of decommissioning cannot be defined at this time, the worst case impacts should be assessed.

3.69 The Commission would expect air quality impacts to be considered in the EIA.

3.70 Consideration should be given to monitoring dust complaints and to appropriate mitigation measures.

3.71 The environmental effects of all wastes to be processed and removed from the proposal site should be addressed. The ES will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off site. All waste types should be quantified and classified.

Human environment – offshore

Commercial fisheries (Section 7.1 of the Scoping Report)

3.72 The Commission wishes to be assured that consultation has been undertaken with appropriate commercial fisheries and, in the light of the number of foreign vessels in the area. The applicant should take account of the comments from MMO in this regard, including the need for a monitoring plan.

3.73 The Commission welcome the assessment coverage would not be limited to the location of the proposed wind turbines and other off-shore infrastructure, but also cover the off-shore cable route corridor.

3.74 The Commission notes the concern of the MMO to safety zones and the impacts on the fishing industry and advises that these impacts should be assessed.

3.75 The loss or restricted access to traditional fishing grounds may have subsequent effects on alternative fishing grounds which are fished by smaller vessels. The impacts on alternative fishing grounds should be assessed.

3.76 Potential cumulative impacts should include the potential impacts of displacing fishing activities on the site and on the region to which fishing would be displaced.

3.77 The attention of the applicant is drawn to the comments from consultees such as Bridlington Harbour Commissioners (see Appendix 2).

Seascape and visual character (Section 7.2 of the Scoping Report)

3.78 The Commission recognises that the wind farm array is unlikely to present an adverse visual impact when viewed from the shore given its considerable distance offshore. The Commission does however recognise that the project could present a potential visual impact to recreational users, including sail boats, cruise line and ferry passengers. The assessment will need to take these into account along with any cumulative impacts on these users. The assessment will also need to consider whether other project components are visible from the shore such as the onshore transition pit. The Commission advises that such matters should be included in the assement.

3.79 The Commission draws the attention of the applicant to the comments from the CAA and Trinity House regarding the need for aviation and navigation warning lights. The applicant should consider night time impacts of any lighting.

3.80 The Commission refers the applicant to the comments from EH regarding their Historic Seascape Characterisation work.

Shipping and navigation (Section 7.3 of the Scoping Report)

3.81 The Commission welcomes collision risk and navigational safety will be assessed. Consideration should be given to the implications of the site on emergency services and draws attention to the comments from the Maritime and Coastguard Agency (MCA) and Trinity House regarding their requirements for the content of the ES (see Appendix 2).

3.82 The impact on navigation and appropriate mitigation measures should cover all potential cable laying construction methods.

3.83 Details should be provided regarding marine vehicular movements during the construction stages.

Marine and coastal archaeology and cultural heritage (Section 7.4 of the Scoping Report)

3.84 The applicant's attention is drawn to the comments from English Heritage (see Appendix 2).

Military activities and civil aviation (Section 7.5 of the Scoping Report)

3.85 The Commission refers the applicant to the comments from CAA (see Appendix 2).

3.86 The applicant should consider the potential effects of the proposed wind farm on the communications, navigation and surveillance

infrastructure and the need to liaise with NATS En-Route Ltd (NERL) and the MoD on the adoption of potential mitigation measures.

Other human activities (Section 7.6 of the Scoping Report)

3.87 The Commission note the comments from the Coal Authority.

3.88 The Commission would draw the applicant's attention to the comments raised by the Health and Safety Executive in relation to HSE-licensed explosive sites which could be impacted upon and recommends that these matters are assessed.

3.89 The assessment should cover construction, operation, maintenance and decommissioning.

Tourism and recreation (Section 7.7 of the Scoping Report)

3.90 The offshore areas are well used. The Commission welcomes the assessment to be made during construction, operation, maintenance and decommissioning.

Socio-Economics (not covered in the Scoping Report)

3.91 The Commission notes that socio-economics is not specifically identified as a separate topic in the Scoping Report under the off-shore environment.

3.92 The Commission recommends that it will be important to demonstrate the positive and negative impacts of the proposals. The types and numbers of jobs generated should be considered in the context of the available workforce in the area. Information should be provided on worker accommodation and include an assessment of the potential impacts of the influx of workers. The cumulative impact of workers on nearby major projects should also be assessed.

3.93 Potential negative impacts on areas such as tourism and fishing should be identified.

Physical environment – onshore

Ground conditions and water resource (Section 8.1 of the Scoping Report)

3.94 The applicant's attention is drawn to the comments from the EA (see Appendix 2) regarding onshore ground and groundwater conditions. Particular attention should be given to the comments relating to the source protection zone as this is a particularly sensitive area.

3.95 The Commission welcomes the provision of a Flood Risk Assessment (FRA). The FRA should form an appendix to the ES.

3.96 Appropriate cross-reference should be made to the soils, agriculture and land use section in the ES in relation to any potential contaminated land and run-off. The Commission advises that the potential impacts of landfall works on coastal erosion and deposition should be addressed with appropriate cross reference made to other technical reports including landscape and visual.

3.97 The baseline description should be up to date, the Commission draws the attention of the applicant to the comments from Keyingham Level Drainage Board; Preston Drainage Board and Winestead Level Drainage Board.

Biological environment – onshore

Ecology and nature conservation designations (Section 9.1 of the Scoping Report)

3.98 The Commission welcomes the consultation proposed by the applicant; this should seek to ensure that the assessment identifies all relevant statutory and non-statutory wildlife sites. Surveys should be relevant and up to date.

3.99 The Commission recommends that need for specific ecological surveys and the methodologies to be followed should be agreed with relevant statutory consultees. In particular the Commission notes the comments raised by JNCC/NE in relation to great crested newts (GCN), bats, breeding birds, otters and water voles.

3.100 The Commission recommends that the ES should address fully the needs of protecting and enhancing biodiversity.

3.101 The Commission recommends that appropriate cross reference is made to other specialist reports in the ES, for example landscape and visual, and that mitigation and enhancement measures are considered overall and not just in relation to a single specialist topic.

Human environment – onshore

Historic environment (Section 10.1 of the Scoping Report)

3.102 Photomontages should be provided in the ES where an initial assessment identifies potentially harmful effects on the setting of the historic environment and heritage assets.

3.103 Consideration should be given to how in-situ archaeology will be recorded and attention is drawn to the comments by English Heritage on unrecorded archaeological remains. Consultation should seek to

agree a programme of investigative works and appropriate mitigation as necessary.

Landscape and visual character (Section 10.2 of the Scoping Report)

3.104 The Commission welcomes the option to underground the cables Cross reference should be made to the biological environment and to soils and agriculture. It is suggested that any mitigation could be developed in association with ecological mitigation. Visual impacts of the coastal works should be assessed.

3.105 In the event that overhead power lines should be used then the Commission recommends that the applicant agrees key viewpoints with statutory consultees and that photomontages are prepared.

3.106 The landscape and visual assessment should include the assessment of any access roads required for permanent access and temporary access during construction. Visual impacts on public rights of way should be assessed.

3.107 Visual impacts as a result of the loss of hedgerows and trees for the cable corridor should be assessed. This is particularly relevant given the open, flat landscape.

Soils, agriculture and land use (Section 10.3 of the Scoping Report)

3.108 The Commission considers that impacts on agriculture and farm businesses during the construction phase should be assessed and also considers that there is potential for sterilisation of land for the easement along the route during the operational phase. This should be assessed. Appropriate cross reference should be made to the socio-economics section.

Traffic and transport (Section 10.4 of the Scoping Report)

3.109 The Commission recommends that the relevant local highways authorities are consulted formally on whether there is a need for a Transport Assessment (TA) to accompany the DCO.

3.110 The transport assessment should include consideration of the potential impact on the rail network. The Commission notes that one operational railway line would be crossed. The assessment should also consider the potential impacts of any construction or diversion activities on public transport.

3.111 The traffic and transport assessment should consider the assessment of the vehicles associated with the construction of the offshore development including both delivery vehicles and personnel vehicles, abnormal loads, if applicable.

3.112 Traffic associated with maintenance will need to be considered in the ES. Assumptions made to derive the traffic forecasts will need to be clearly explained.

3.113 Appropriate cross-reference should be made to the Landscape and Visual section including the potential locations of construction compounds and lay down areas identified during the construction phase. Cross-reference should also be made to the specialist air quality topic including consideration of airborne pollution and dust especially during the construction phase for the entirety of any transportation and access routes. Cross reference should also be made to the noise and vibration section.

Air quality (Section 10.5 of the Scoping Report)

3.114 The Commission considers that the potential impacts associated with increased air emissions particularly PM_{10} and NO_2 should be addressed. The assessment should assess implications on nearby designated sites in particular Ramsar, Special Protection Area (SPA), Special Area of Conservation (SAC) and Special Sites of Scientific Interest (SSSI).

3.115 The Commission advises that the impacts of dust should be considered as the area is predominantly rural and cross reference made to the section on soils and agriculture.

Noise and vibration (Section 10.6 of the Scoping Report)

3.116 The Commission welcomes the statement that the relevant Council Environmental Health Department will be consulted by the applicant regarding the identification of noise receptors to agree the extent of the baseline noise monitoring. Noise levels off-site along roads and public rights of way (PROW) should be addressed.

3.117 The Commission considers that vibration caused by abnormal loads and HGVs should be assessed. Appropriate cross-reference should be made in the ES to the transport section. The noise and vibration assessment should also inform the ecological assessment and historic environment topics where appropriate.

3.118 The Commission welcomes the assessment to determine noise emissions from the permanent apparatus at the substation (see page 156 of the Scoping Report).

3.119 Noise impacts on ecological sites and receptors should be assessed. The sites and receptors will be dependant upon the chosen route for the onshore connection. Route C in particular could present an impact on Hornsea Mere which is a SPA and SSSI.

3.120 Noise impacts on people should be specifically addressed and particularly any potential noise disturbance at night and other unsocial times such as weekends and public holidays.

Recreation and tourism (Section 10.7 of the Scoping Report)

3.121 It is unclear where recreational impacts associated with the beach would fall to be considered in the ES.

3.122 The Commission notes the identification of potential impacts on existing PRoW and welcomes the consultation with the Public Rights of Way officers at the local authority. Cross-reference should be made to any visual impacts on PROW identified in the landscape and visual assessment.

Socio-economics (Section 10.8 of the Scoping Report)

3.123 The Commission considers that the potential impacts on socio-economics should consider both the off-shore and on-shore elements. The on-shore construction programme is scheduled to take place over 24 months (see page 26 of the Scoping Report) and the economic impacts, both positive and negative on the local community should be assessed. The off-shore works could take several years. The operation design life is 25 years, rising to 50 years (see page 161 of the Scoping Report).

3.124 The potential socio-economic impacts are wide ranging and the applicant is advised to ensure that the wider impacts are fully assessed.

3.125 The Commission advises that cross reference should be made to the tourism section and to the soils and agriculture sections.

Electric and magnetic fields (not covered in the Scoping Report)

3.126 The Commission refers the applicant to the HSE comments on electrical safety and the HPA comments on EMF set out in Appendix 2.

4.0 OTHER INFORMATION

Appropriate Assessment

4.1 The Commission notes that reference is made to the Habitats Regulations Assessment (see paragraph 3.1.4 of the Scoping Report). It is recognised that it is the developer's responsibility to provide sufficient information to the competent authority to enable them to carry out a Habitats Regulation Assessment (HRA) should this prove necessary.

4.2 The applicant should note that the competent authority will be either the Commission or the Secretary of State (not, as stated in the Scoping Report, the Planning Inspectorate). This will depend upon the status of legislation at the time.

4.3 The applicant's attention is drawn to the (Applications: Prescribed Forms and Procedure) Regulations 2009 (APFP) and the need to include information identifying European sites to which the Habitats Regulations applies or any Ramsar site which may be affected by a proposal. The information to be submitted should be sufficient to enable the Commission to make an appropriate assessment of the implications for the site if required by regulation 48(1).

4.4 The report to be submitted under Reg 5(2)(g) of the APFP with the application must deal with two issues. The first is to enable a formal assessment by the competent authority, of whether there is likely significant effect and the second, should it be required, is to enable the carrying out of an appropriate assessment by the competent authority. .

4.5 When considering aspects of the environment likely to be affected by the proposed development; including flora, fauna, soil, water, air and the inter relationship between these, consideration should be given to the designated sites in the vicinity of the proposed development.

4.6 Further information with regard to the Habitats Assessment process is provided in the pre-application IPC Guidance Note 2 available via the Commission's website.

Transboundary Effects

4.7 The Commission has noted that the applicant has indicated that the proposal is likely to have significant impacts on another European State, reference is made in the Scoping Report (see pages 32, 34, 52, 79 and 85) to the Espoo Convention.

4.8 Regulation 24 of the EIA Regs., which *inter alia* require the Commission to publicise a DCO application if the Commission is of the

view that the proposal is likely to have significant effects on the environment of another EEA state and where relevant to consult with the EEA state affected. The Commission considers that where Regulation 24 applies, this is likely to have implications for the Commission's examination of a DCO application.

4.9 The Commission notes that the scoping report has acknowledged the potential for transboundary impacts and recommends that the applicant should provide to the Commission as soon as possible any additional available information about potential significant transboundary effects and identify the affected state(s). In order to ensure the efficient and effective examination of applications within the statutory timetable under Section 98 of the Planning Act, it is important that this information is made available at the earliest opportunity to facilitate timely consultations, if required, with other EEA States in accordance with Regulation 24.

4.10 The ES will also need to address this matter in each topic area and summarise the position on transboundary effects of the proposed project, taking into account inter-relationships between any impacts in each topic area.

Applicant's Consultation

4.11 It is recommended that the applicant provides preliminary environmental information[1] to the local authority when presenting it with the draft Statement of Community Consultation (SoCC) for comment under s47 of the Planning Act 2008.

4.12 Consultation with the local community should be carried out in accordance with the SoCC which will state how the applicant intends to consult on the preliminary environmental information. Where consultation responses have resulted in important changes affecting the EIA, such comments could usefully be reported and considered. This reporting could also assist the applicant in the preparation of its consultation report required to be submitted with the application for development consent.

Health Impact Assessment

4.13 The Commission considers that the ES should acknowledge the potential health impact associated with the electric and magnetic fields around the underground cables. The ES should provide an analysis of these impacts.

[1] For an explanation see under 'Interpretation' in the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI2263

4.14 The Commission considers that it would be a matter for the applicant to decide whether or not to submit a stand-alone Health Impact Assessment (HIA) and that an applicant should have particular regard to the responses received from the relevant consultees regarding health. The methodology for the HIA, if prepared, should be agreed with the relevant statutory consultees and take into account mitigation measures for acute risks.

APPENDIX 1

CONSULTEES

APPENDIX 1

LIST OF CONSULTATION BODIES FORMALLY CONSULTED DURING THE SCOPING EXERCISE

CONSULTEE	ORGANISATION
SCHEDULE 1 LIST OF CONSULTEES	
The Relevant Regional Planning Body	Local Government Yorkshire and Humber
The Health and Safety Executive	Health and Safety Executive
The Relevant Strategic Health Authority	CEO Yorkshire and the Humber NHS
Natural England	Natural England Natural England – Yorkshire and Humber office Natural England Offshore Wind Farms
The Historic Buildings and Monuments Commission for England	English Heritage English Heritage – Yorkshire and Humber office
The Relevant Fire and Rescue Authority	Humberside Fire and Rescue Service
The Relevant Police Authority	Humberside Police Authority
The Relevant Parish Council(s) or Relevant Community Council	Aldbrough Parish Council Anlaby with Anlaby Common Parish Council Atwick Parish Council Bainton Parish Council Barmston and Fraisthorpe Parish Council Beeford Parish Council Beswick Parish Council Beverley Town Council Bewholme Parish Council Bilton Parish Council

	Bishop Burton Parish Council Boynton Parish Council Brandesburton Parish Council Brantingham Parish Council Bridlington Parish Council Burstwick Parish Council Burton Agnes Parish Council Burton Constable Parish Council Burton Pidsea Parish Council Carnaby Parish Council Catwick Parish Council Cherry Burton Parish Council Coniston Parish Council Cottingham Parish Council Easington Parish Council East Garton Parish Council Ellerby Parish Council Ellerker Parish Council Elstronwick Parish Council Etton Parish Council Foston Parish Council Halsham Parish Council Hatfield Parish Council Hedon Parish Council Hollym Parish Council Hornsea Town Council Humbleton Parish Council Hutton Cranswick Parish Council Kelk Parish Council Keyingham Parish Council Kirk Ella and West Ella Parish Council Leconfield Parish Council Leven Parish Council Lissett and Ulrome Parish Council Lockington Parish Council Lund Parish Council Mappleton Parish Council Middleton on the Wolds Parish Council Molescroft Parish Council Newbald Parish Council North Frodingham Parish Council Ottringham Parish Council Patrington Parish Council Paull Parish Council Preston Parish Council Rimswell Parish Council Rise Parish Council Riston Parish Council

	Roos Parish Council Rowley Parish Council Rudston Parish Council Seaton Parish Council Sigglesthorne Parish Council Skeffling Parish Council Skidby Parish Council Skipsea Parish Council Skirlaugh Parish Council South Cave Parish Council Sproatley Parish Council Sunk Island Parish Council Swine Parish Council Thorngumbald Parish Council Tickton and Routh Parish Council Walkington Parish Council Watton Parish Council Wawne Parish Council Welton Parish Council Welwick Parish Council Willerby Parish Council Withernsea Parish Council Withernwick Parish Council Woodmansey Parish Council
The Environment Agency	The Environment Agency The Environment Agency Regional Office
The Commission for Architecture and The Built Environment	CABE Design Review
The Relevant Regional Development Agency	Yorkshire Forward
The Equality and Human Rights Commission	Equality and Human Rights Commission
The Commission for Sustainable Development	Sustainable Development Commission
The Homes and Communities Agency	Home and Communities Agency
The Joint Nature Conservation Committee	Joint Nature Conservation Committee The Joint Nature Conservation Committee (Offshore Wind Farms)

The Commission for Rural Communities	The Commission for Rural Communities
The Maritime and Coastguard Agency	Maritime & Coastguard Agency-Navigation Specialist Support
The Marine Management Organisation (English Waters)	Marine Management Organisation (MMO)
The Civil Aviation Authority	Civil Aviation Authority
The Highways Agency	The Highways Agency
The Relevant Highways Authority	Hull City Council Network Management
The Rail Passengers Council	Rail Passenger Council
The Disabled Persons Transport Advisory Committee	DPTAC
The Coal Authority	The Coal Authority
The Office Of Rail Regulation	Office of Rail Regulation
Approved Operator	Network Rail Infrastructure Ltd
Approved Operator	Network Rail (CTRL) Ltd
The Gas and Electricity Markets Authority	OFGEM
The Water Services Regulation Authority	OFWAT
The Relevant Internal Drainage Board	York Consortium of Drainage Boards Beverley & North Holderness Internal Drainage Board Preston Internal Drainage Board Wilberfoss & Thornton Level Internal Drainage Board Keyingham Level Drainage Board Winestead Level Drainage Board
The British Waterways Board	The British Waterways Board
Trinity House	Trinity House

The Health Protection Agency	Health Protection Agency
The Relevant Local Resilience forum	Humber LRF
The Crown Estate Commissioners	The Crown Estate
RELEVANT STATUTORY UNDERTAKERS	
Health Bodies under s.16 of the Acquisition of Land Act 1981	Humber NHS Foundation Trust Hull and East Yorkshire Hospitals NHS Trust Scarborough and North East Yorkshire Health Care NHS Trust Yorkshire Ambulance Service NHS East Riding of Yorkshire PCT NHS Hull Teaching PCT
Railways	BRB Residuary Limited
Canal Or Inland Navigation	Driffield Navigation Ltd
Dock	ABP Hull
Harbour	ABP Statutory Harbour Authority for the Humber The Harbour Master & Chief Executive
Licence Holder (Chapter 1 Of Part 1 of Transport Act 2000)	NATS En Route plc
Universal Service Provider	Royal Mail Group
Water and Sewage Undertakers	Yorkshire Water

Public Gas Transporter	British Gas Pipelines Limited Energetics Electricity Limited Energetics Gas Limited ES Pipelines Ltd ESP Connections Ltd ESP Networks Ltd ESP Pipelines Ltd Fulcrum Pipelines Limited GTC Pipelines Limited Energy House Independent Pipelines Limited Intoto Utilities Limited National Grid Gas Plc (NTS) National Grid Gas Plc (RDN) Northern Gas Networks Limited Quadrant Pipelines Limited Scotland Gas Networks Plc Southern Gas Networks Plc SP Gas Limited SSE Pipelines Ltd The Gas Transportation Company Limited Wales and West Utilities Limited Utility Grid Installations Limited Centrica Plc
Electricity Generators With CPO Powers	E.ON UK Plc International Power Plc
Electricity Distributors With CPO Powers	ECG (Distribution) Limited EDF Energy (IDNO) Limited Independent Power Networks Limited The Electricity Network Company Limited Yorkshire Electricity Distribution Plc National Grid

LOCAL AUTHORITY (S.43)	
	North Yorkshire County Council Kingston upon Hull City Council East Riding of Yorkshire Council Scarborough Borough Council Selby District Council Ryedale District Council Doncaster Metropolitan Borough Council North Lincolnshire Council York City Council
CONSULTATION WITH APPLICANT	
Applicant	Forewind

Note: the Prescribed Consultees have been consulted in accordance with the Commission's Advice Note 3 'Meeting the Commission's Obligations' (March 10)

APPENDIX 2

RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

APPENDIX 2

LIST OF BODIES WHO REPLIED

ABP Grimsby, Immingham, Hull and Goole
ABP Humber
Bainton Parish Council
Beverley & North Holderness Internal Drainage Board
Beverley Town Council
Brandesburton Parish Council
Bridlington Harbour Commissioners
Civil Aviation Authority
Commission for Architecture and the Built Environment
E.ON Climate and Renewables
E S Pipelines Ltd
East Riding of Yorkshire Council (Includes additional comments from Yorkshire Water and Yorkshire Wildlife Trust. Refers to comments sent to the IPC by the Environment Agency and JNCC/NE)
English Heritage
Environment Agency
Fulcrum Pipelines Limited
Health and Safety Executive
Health Protection Agency
Homes and Communities Agencies
Humber Local Resilience Forum
Joint Nature Conservation Committee and Natural England joint response
Keyingham Level Drainage Board
Marine Management Organisation
Maritime and Coastguard Agency
NATS (En Route)
NHS East Riding
NHS Hull
North Lincolnshire Council
North Yorkshire County Council
Preston Drainage Board
Rimswell Parish Council
Rudston Parish Council
Scarborough Borough Council
Selby District Council
Skidby Parish Council
The Coal Authority
The Crown Estate
Trinity House
Watton Parish Council
Wilberfoss & Thornton Level Drainage Board
Winestead Level Drainage Board
York Internal Drainage Board

From: Tom Jeynes
To: IPC Scoping Opinion;
Subject: Proposed offshore wind farm at Dogger Bank - Forewind
Date: 27 October 2010 10:20:32

Your ref: 101012_EN10021_287174

Dear Sirs,

Many thanks for your letters of 14 October to the Port Directors of our Humber ports, Matt Jukes and John Fitzgerald. I am therefore replying from the perspective of ABP's Ports of Grimsby, Immingham, Hull and Goole.

We have looked at the scoping report and are pleased with the extremely thorough approach that Forewind are proposing to adopt when considering any environmental effects. We will of course be very grateful if you could keep us informed of any updates as the proposal develops.

Very best regards,

Tom Jeynes
Sustainable Development Manager
Associated British Ports
HUMBER

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and/or recorded for legal purposes.

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Correspondents should note that all communications to Department for Communities and Local Government may be automatically logged, monitored and/or recorded for lawful purposes.

****

From: Phil Cowing
To: IPC Scoping Opinion;
Subject: Proposed Offshore Windfarm - Dogger Bank (Forewind)
Date: 22 October 2010 16:48:18

Dear Sirs,

I can confirm receipt of your letter of 14 October 2010.
I am responding in my capacity as Harbour Master Humber for Associated British Ports as the Statutory Harbour Authority (SHA).

Having read the scoping report and had a meeting with Mark Thomas of Forewind it would appear that the only issue for us as harbour authority is to ensure that the Offshore Export Cable Corridor does not impinge on the harbour area and does not interfere with safety of navigation or planned/future harbour development. The diagrams within the scoping report appear to indicate that such envelope will lie to the north of our statutory limits.

Yours faithfully,

P.J.Cowing

Capt Phil Cowing | Harbour Master Humber | Humber Estuary Services
| PO Box 1 | Port House | Northern Gateway | Hull | HU9 5PQ |
| Tel: +44 (0)1482 617201 | Fax +44 (0)1482 608432 | Mobile: +44 (0)7718 600538 | Email: pcowing@abports.co.uk

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BAINTON PARISH COUNCIL

CLERK TO THE COUNCIL: Sheila West
5 Station Hill, Wetwang, Driffield, East Riding of Yorkshire,
YO25 9XP; E-mail: sheila_west@btinternet.com
Telephone 01377 236757

8 November 2010

Laura Allen
EIA & Land Rights Advisor
IPC
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Dear Ms Allen

PROPOSED OFF-SHORE WIND FARM, DOGGER BANK

Thank you for your letter dated 14 October, which I put to the parish council at its recent meeting.

The council concluded that it did not have any comment to offer at this stage.

It would however like to be kept informed of any future developments in respect of the project.

Yours sincerely

Sheila West (Mrs)

Parish Clerk

BEVERLEY & NORTH HOLDERNESS INTERNAL DRAINAGE BOARD

(A Member of the York Consortium of Drainage Boards)

WILLIAM SYMONS
CLERK TO THE BOARD
DERWENT HOUSE
CROCKEY HILL
YORK
YO19 4SR

Telephone (01904) 720785
Fax (01904) 720800

Email: bill.symons@yorkconsort.gov.uk

IPC
22 OCT 2010
REF:

Please ask for David Fullwood

Our Ref: DFF/MA

19 October 2010

Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Dear Sir,

Proposed Offshore Wind Farm, Dogger Bank ("the Project")
Proposed by Forewind ("the Applicant")
Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 ("the EIA Regulations")

I refer to your letter dated 14th October 2010 regarding the above project.

I would advise that at this stage the Board/Consortium does not have any comments to make in respect of the EIA.

Yours faithfully,

W Symons
Clerk and Engineer to the Board

From: Beverley Town Council Admin
To: IPC Scoping Opinion;
Subject: Proposed Dogger Bank Wind Farm
Date: 09 November 2010 12:22:32

Thank you for your letter dated 14th October ref 101012_EN010021_287174 in relation to the proposed offshore wind farm.
The Beverley Town Council Planning Committee has considered the information that they would like to see in the environmental statement or detailed application and it is as follows:

1) A proposed route or pair of routes of the cable when on land.
2) Whether or not the cable will be underground or fed via pylons.

Regards,
Helena

Helena Crutchley
Assistant Town Clerk
Beverley Town Council
12 Well Lane
Beverley
East Yorkshire
HU17 9BL
01482 308311

From: MARGARET SLATTERY
To: IPC Scoping Opinion;
Subject: FAO: David Cliff - proposed offshore Wind Farm
Date: 09 November 2010 19:41:42

Mr Cliff

The letter from Mark Thomas, dated 14th October has been received along with the Forewind 'Tranche A and Dogger Bnk Project One' leaflet and letter fom Gareth Lewis. The information through the websites is considerable and comprehensive. As the parish council only meet monthly and some members do not have access to the internet, it is felt there has not been enough time to fully consider the information given in the timescale.

Is it possible to extend the deadline of 11th November

Regards
Margaret Slattery
Clerk to Brandesburton parish council

Bridlington Harbour Commissioners

GUMMERS WHARF, WEST END, BRIDLINGTON, EAST YORKSHIRE, YO15 3AN.
TELEPHONE: (01262) 670148 & 670149, FAX NO. (01262) 602041
EMAIL: harbour@bridlington007.wanadoo.co.uk

For the Attention of Mr. David Cliff,
Infrastructure Planning Commission,
Temple Quay House,
Temple Quay,
Bristol.
BS1 6PN

CJW/WTL

2nd November, 2010

Dear Sir,

Proposed Offshore Wind Farm. Dogger Bank ("the Project")

I write in reply to your letter of 14th October requesting information regarding the above.

The concerns of the Harbour Commissioners and local fishermen are the following:-

1. Dogger Bank is a nursery ground for cod.

2. A wind farm development could affect the movement of fish on the Flamborough Head grounds.

3. Should fishing patterns change because of the development, the local fishermen would not want extra effort of trawling on the offshore shellfish grounds.

We trust these concerns will receive consideration.

Yours faithfully,

C. J. Wright.

C. J. Wright.
Harbour Master & Chief Executive.

Directorate of Airspace Policy

Mr David Cliff
Infrastructure Planning Commission (via e-mail)

11 November 2010

Reference: ERM/DAP/Wind/DoggerBank
Your Ref: 101012_EN010021_287174

Dear Mr Cliff

Proposed Dogger Bank Wind Turbine Development – Scoping Opinion Comment

Thank you for your recent correspondence relating to the proposed Dogger Bank wind turbine development. You sought related Civil Aviation Authority (CAA) scoping opinion comment. I trust the following is useful.

I should initially state that, like any wind turbine development, the proposed subject development has the potential to impact upon aviation-related operations; the Department for Trade and Industry (DTI – now the Department for Energy and Climate Change)-sponsored document 'Wind Energy and Aviation Interests' and Civil Air Publication 764 refer[1]. The related need to establish the scale of the potential impact of the development is evident.

As highlighted in the Scoping Opinion Request there is the potential to impact upon aviation and we would expect the outcomes of discussions with the associated operators and service providers to be in the Environmental Impact Assessment. In particular, we would expect consultation with both the MoD and NATS En-Route Ltd, with a view to identifying and addressing any aviation concerns that they may have. It would also be advisable to seek comment from offshore helicopter operators as to the potential impact on helicopter operations in the area.

Moreover, from a generic perspective, in respect of the offshore development the following aviation issues are also relevant:

- Aviation Warning Lighting. Some or all of the wind turbines will need to be equipped with aviation warning lighting. The legal requirement for aviation obstruction lighting on offshore wind turbines is formally documented within the UK Air Navigation Order 2009 (Article 220 refers). Furthermore, the Directorate of Airspace Policy has published a policy on offshore lighting[2], which highlights the latest developments in this area, including lighting to support helicopter operations within the wind farm if applicable.

- Due to the nature of meteorological masts, they are difficult to acquire visually and consideration should be given to lighting and marking any masts that may be erected for characterization of wind resources.

[1] These documents are available at http://www.bwea.com/pdf/Wind-Energy-and-aviation-interim-guidelines.pdf and http://www.caa.co.uk/docs/33/Cap764.pdf respectively. Please note that after a full review CAP 764 was re-issued on 12 February 2009.
[2] The policy can be found at http://www.caa.co.uk/docs/7/20100728LightingOfOffshoreWindTurbinesWinchLightingIssueDate20100802.pdf

Civil Aviation Authority
CAA House 45-59 Kingsway London WC2B 6TE www.caa.co.uk
Telephone 020 7453 6529 Fax 020 453 6529 paul.askew@caa.co.uk

- Markings / Colour Scheme. International aviation regulatory documentation requires that the rotor blades, nacelle and upper 2/3 of the supporting mast of wind turbines that are deemed to be an aviation obstruction should be painted white, unless otherwise indicated by an aeronautical study. It follows that the CAA advice on the colour of wind turbines would align with these international criteria.

- Aviation Promulgation. The developer should be aware that there would be a requirement for the turbines (and all other similar offshore developments) to be charted for aviation purposes. In addition to the requirements of DfT / ODPM Circular 1/2003, Annex 2, it is recommended that the Defence Geographic Centre be kept fully apprised of the windfarm's development. Appropriate contact details are:

  Defence Geographic Centre
  AIS Information Centre
  Jervis Building
  Elmwood Avenue
  Feltham
  Middlesex
  TW13 7AH

  Telephone: 0208 818 2708

- We also recommend that as and when construction time frames are established specific consultation with the CAA is conducted such that charts can be updated in a timely fashion and the turbines can be collectively promulgated to the aviation community as aviation obstacles.

- There is a CAA perceived requirement for a coordinated regional wind turbine development plan, aimed at meeting renewable energy priorities, whilst addressing aviation concerns and minimising such proliferation issues. It would be helpful to assess the opportunities to work in collaboration with other developments in the region.

In reference to any landfall developments, we would not anticipate needing to make any specific observations other than to highlight any potential need for consultation in accordance with DfT / ODPM Circular 1/2003; this to identify any aerodrome specific safeguarding issues particularly with regard to potential cable routes between landfall and the substation.

The associated ES will need to present the findings of all aviation-related consultation and will accordingly be expected to include the consideration of various potential issues highlighted above. I hope this information and comment is of assistance. Please do not hesitate to get in touch with me if clarification of any point is required.

Yours Sincerely,

{via email}

Paul Askew
Renewable Energy Project Officer

CABE
1 Kemble Street
London WC2B 4AN
T 020 7070 6700
F 020 7070 6777
E info@cabe.org.uk
www.cabe.org.uk

02 November 2010

David Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Our ref: CSE-19802

Dear David Cliff

IPC: PROPOSED OFFSHORE WIND FARM, DOGGER BANK
PLANNING APPLICATION REFERENCE: 101012_EN010021_287174

Thank you for consulting the Commission for Architecture and the Built Environment (CABE) about this proposal.

We do not wish to comment on the Proposed Dogger Bank Offshore Wind Farm.

Yours sincerely

Design Review assistant
DRsubmissions@cabe.org.uk

Climate & Renewables

E.ON Climate & Renewables UK Humber Wind limited
Westwood Way
Westwood Business Park
Coventry
West Midlands
CV4 8LG
eon-uk.com

Kirsty McGuinness
T 024-7618-2829
Kirsty.mcguinness@eon-uk.com

FAO David Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

8th November 2010

Dear David

Proposed Offshore Windfarm, Dogger Bank (the Project) Proposal by Forewind (the Applicant) Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 (the EIA Regulations): Dogger Bank Project One Environmental Impact Assessment Scoping Opinion

Thank you for the opportunity to comment on the above scoping report. E.ON Climate & Renewables UK Humber Wind Limited (HWL) have reviewed this report and set out our response below.

HWL note the proposed on and offshore location of the Project and would consequently like to provide the location of the proposed Humber Gateway Offshore Windfarm (HGOWF). This is presented on the attached plans.

Although it is difficult to ascertain, due to the scale of the maps provided, it appears that the offshore export cable corridor either runs through or in very close proximity to HGOWF. Laying of the main export cable route from Dogger Bank through the HGOWF could potentially lead to a number of technical heating and spacing concerns together with a potential for cable damage during installation. As the Dogger Bank export cable will be HVDC, a set of technical problems will incur if they are brought into close proximity with HGOWF AC cables. The majority of these problems will affect the Applicant's DC cable and overall electrical system such as "coupling" through mutual inductance and capacitance causing "Foreign" voltages to be impressed upon the DC cable.

HWL would request that the Applicant maps the HGOWF onto its constraints maps as a no-build zone.

E.ON Climate & Renewables UK
Humber Wind Limited
Registered in
England and Wales
No 04899318
Registered Office:
Westwood Way
Westwood Business Park
Coventry CV4 8LG

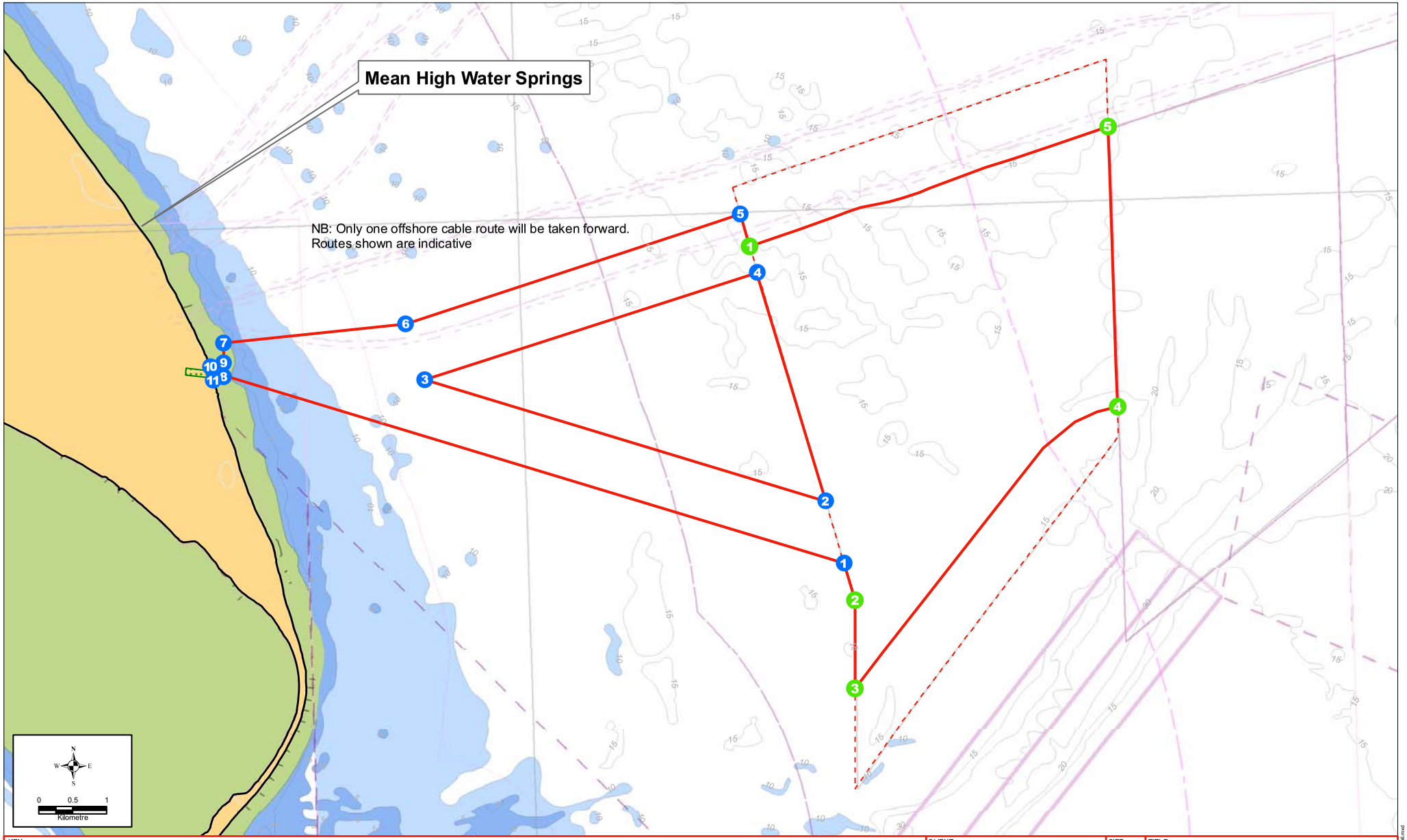
From an onshore perspective, again it appears that the study area for the Project's onshore cable corridor is situated in close proximity to HGOWF onshore cable route for which we have gained planning permission. HWL would request that this is mapped as a constraint by the Applicant and that we are kept informed of the proposed cable route as more detailed work clarifies the optimum route. If the applicant would wish to cross HGOWF onshore cable route, consultation would be required to agree the technical aspects required to enable this.

If you require any further clarification on the above, please do not hesitate to contact me. I would be grateful to be kept informed of the progress of this application.

Yours sincerely

Kirsty McGuinness
Consents Manager – Humber Gateway Offshore

cc. Matthew Swanwick (E.ON)
Ian Johnson (E.ON)
Danny Shaw (E.ON)
Eleri Owen (E.ON)
Vaughan Weighill (E.ON)
Sandra Stephens (E.ON)
Brian Tilley (E.ON)



KEY:

Site Boundary Coordinates

1. WGS84 (00 15.02, 53 39.63)
2. WGS84 (00 16.28, 53 36.78)
3. WGS84 (00 16.24, 53 36.08)
4. WGS84 (00 19.88, 53 38.26)
5. WGS84 (00 19.88, 53 40.49)

Cable Route Corridor Coordinates

1. WGS84 (00 16.15, 53 37.08)
2. WGS84 (00 15.92, 53 37.58)
3. WGS84 (00 10.66, 53 38.64)
4. WGS84 (00 15.11, 53 39.42)
5. WGS84 (00 14.90, 53 39.89)
6. WGS84 (00 10.47, 53 39.13)
7. WGS84 (00 7.92, 53 38.98)
8. WGS84 (00 7.91, 53 38.73)
9. WGS84 (00 7.91, 53 38.83)
10. WGS84 (00 7.73, 53 38.78)
11. WGS84 (00 7.76, 53 38.72)

Application Boundary
Crown Estate Boundary (as per Agreement for Lease)
Final Landfall Area

CLIENT: e·on

SIZE: A3

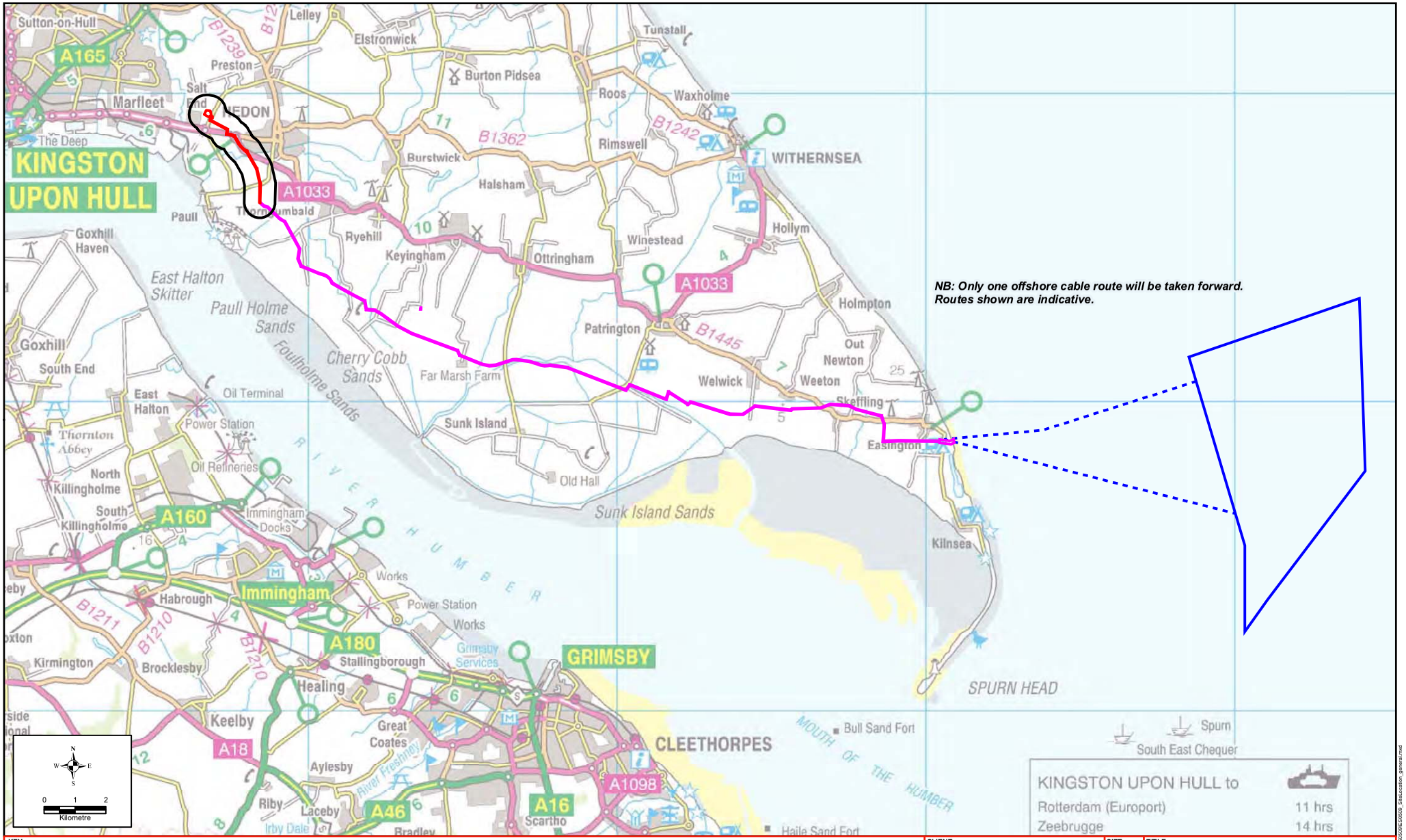
TITLE: **Humber Gateway Offshore Windfarm**
Red Line Boundary

DATE: 05/10/2010 | CHECKED: HB | PROJECT: 0022303
DRAWN: FS | APPROVED: CW | SCALE: as per scale bar
DRAWING: Map6.mxd | REV: 0

ERM

File: 0022303\Humber\Wind\GIS_Offshore\MAPS\MXDs for\Map6.mxd

 PROJECTION: British National Grid



KEY:

- Substation and Cable Spur Application Site Boundary
- Substation and Cable Spur Study Area
- Existing Onshore Application Site Boundary (submitted April 2008)
- Humber Gateway Offshore Application Site Boundary (submitted April 2008)
- Indicative Offshore Cable Route Options (submitted April 2008)

CLIENT: e.on

SIZE: A3

TITLE:

Figure 1.1
Location of the Humber Gateway Offshore Wind Farm Site

DATE: 08-07-2009	CHECKED: HB	PROJECT: 0084766
DRAWN: FS	APPROVED: AB	SCALE: as per scale bar

DRAWING: ES0509_SiteLocation_general.mxd

REV: 0

ERM

From: Alan Slee
To: IPC Scoping Opinion;
Subject: PROPOSED OFFSHORE WIND FARM, DOGGER BANK (101012_EN010021_287174)
Date: 15 October 2010 13:48:29

Dear Laura,

PROPOSED OFFSHORE WIND FARM, DOGGER BANK (Approx E526875, N468250: YO15 1AR) Ref:101012_EN010021_287174

Further to your communication to E S Pipelines Ltd, ESP Networks Ltd, ESP Pipelines Ltd, ESP Electricity Ltd and ESP Connections Ltd dated 14 October 2010 I can confirm that our businesses have no comments at this stage.

Regards,

Alan Slee
Operations Manager

DD 01372 227567
Mobile 07766 802070
Fax 01372 386203

Hazeldean,
Station Road,
Leatherhead
KT22 7AA
☎ 01372 227560 01372 377996

MAP

http://www.espipelines.com

EAST RIDING
OF YORKSHIRE COUNCIL

County Hall Beverley East Riding of Yorkshire HU17 9BA Telephone (01482) 887700
www.eastriding.gov.uk
Peter Ashcroft Head of Planning and Development Management

David Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

10th November 2010

Our Ref:
Your Ref: 101012_EN010021_287174

Contact: Mrs Susan Hunt
Telephone: 01482 393840
E-Mail: susan.hunt@eastriding.gov.uk

Dear Mr Cliff,

Offshore Wind Farm at Dogger Bank

Proposal by Forewind

Infrastructure Planning (Environment Impact Assessment) Regulations 2009 SI 2263

Thank you for your letter dated 14th October 2010.

The Local Planning Authority have studied the Scoping Report and carried out both internal and external consultations and now have the following comments to make:

Comments are made purely in relation to Section C of the scoping envelope (Chapters 8-10 of the Scoping Report); the proposed onshore works including converter substations and cable routes.

The onshore works proposed lie within the administrative boundary of the East Riding of Yorkshire boundary and would have a significant impact upon the area. The Local Planning Authority is generally supportive of the scheme in general and in particular of the contribution it will make to renewable energy. The siting of the converter substations and their final design is a key onshore planning consideration, particularly given their substantial size.

The impacts of the transistion pit and cable system are of less concern, however the construction phase is of particular importance. Impacts on the coastline including erosion and sediment transport should be carefully considered at an early stage. When the indicative cable route is narrowed down more detailed comments can be provided.

The amenities of residents of the dwellings in close proximity to Creyke Beck and the nearby village of Cottingham (and to a lesser extent Dunswell and Woodmansey should be carefully considered both during the construction and operation phases. It is difficult to comment in detail at this stage without sight of plans however the estimated scale of the building is likely to have a significant impact upon the visual amenity of the area and the outlook of some nearby residents. Any noise from the proposed works would also be of concern. Flood Risk is also of some concern and technical solutions should be discussed with the Environment Agency at an early stage.

The proposed contents of the Scoping Report relating to onshore works of the following are considered to be appropriate:

Archaeology and cultural heritage; landscape and visual character; socio-economic assessment; geology, hydrogeology and land quality; ecology; traffic and access; noise and vibration; air quality; and local community, land use, tourism and recreation.

Several consultations have been carried out as part of this scoping response. Some have made comments for further inclusion into scoping. These are all attached and summaries are set out below.

External:

Yorkshire Water – Potential impact on waste water treatment works and pumping stations within the indicative cable corridors and a Source Protection Zone at Cottingham. The area around Cotttingham is highly sensitive in terms of vulnerability to groundwater pollution and it must be demonstrated that there will be no increased risk to quality. The EIA should include a detailed evaluation of the potential risks to public water supply.

Environment Agency – The Scoping Report is comprehensive and appears to follow good practice. Additional comments to consider – should identify at the earliest stage possible any proposed aspects of the development likely to have significant impacts on water bodies; importance of the Source Protection Zone at Cottingham which is the Hull area drinking water supply from groundwater; Preliminary Risk Assessment issues, Flood Risk Assessment needed (in particular land at Creyke Beck is particularly susceptible to surface water flooding); early consultation with the EA recommended regarding satisfactory solution to flood risk and drainage; early engagement with Internal Drainage Boards recommended; Site Waste Management Plan required.

Yorkshire Wildlife Trust – Satisfied that the Scoping Report has taken into account the most likely impacts of the onshore works on the area's wildlife and habitats. Other factors to be taken into account – YWT has several reserves around Cottingham and Hull that have not been included in the scoping report (not formally designated). Identify areas for potential wildlife corridors.

Internal:

Environmental Health – Potential noise and vibration from construction of cable routes and the proposed substation. Happy with broad proposals set out in the scoping report at this stage.

Highway Control – The Highway Authority would prefer to use thrust boring / HDD under major roads for the laying of cables to lessen the disruption to other road users instead of a closure. The base line data that will be used for a Transport Assessment, impact assessment and mitigation measures are robust.

Countryside Access – No comments as long as when the final route is identified the applicants apply and pay for any Temporary Closure Orders to Public Rights of Way.

Humber Archaeology Partnership – The cable routes would pass through extensive areas of archaeological interest. Recommend a staged archaeological scheme of works including geophysical survey of the entire route of the easement corridor and sites of associated compounds.

Conservation and Landscape - Recommend that the applicant obtains latest data in relation to

the Local Authorities' review of Local Wildlife Sites.

Biodiversity/Sustainable Development – Need to consider the potential impacts in terms of coastal erosion and sediment transport on the Holderness Coast. Needs to have regard to the emerging Shoreline Management Plan 2. Non-statutory SINC designations are currently being reviewed and either being deleted or designated as Local Wildlife Sites. Substation Area – this area includes the Beverley and Barmston Drain where water vole activity has been recorded. Grasslands near the substation area may be species rich and should be subject to botanical survey in June to establish a full species list – total area about 1 hectare. Schedule 1 species Barn Owl is relatively widespread in the project areas.

If I receive any further comments I will duly forward them to you.

The Local Planning Authority are in dialogue with the applicants Forewind regarding the Statement of Community Consultation. Early and consistent community engagement in particular with the local Town and Parish Councils, Ward Members and residents of settlements affected by the cable routes and in particular the substations are strongly advised, in addition to the statutory consultees and local interest bodies.

The Local Planning Authority wishes to be fully involved as the scheme progresses through the IPC (or their successors).

If you require any further assistance from the Local Planning Authority please do not hesitate to contact me.

Yours sincerely

Susan Hunt
Principal Development Control Officer
Strategic Planning

EAST RIDING
OF YORKSHIRE COUNCIL

CONSERVATION LANDSCAPE & ARCHAEOLOGY

Scoping Opinion Consultation Response

To	Mrs Susan Hunt Development Services, County Hall, Beverley	**Our ref.**	CLA/MG/10/12884
		File	
From	Martin George Conservation Landscape & Archaeology	**Applic.No.**	EIA Scoping 78
		Date	10 November 2010
Tel	01482 393723	**Site Visit**	

Site Address

Applicant

Development

PROPOSED OFFSHORE WIND FARM, DOGGER BANK

Plan/Drawing Nos.

Summary

It is noted that NE and JNCC have jointly provided advice on this application, a copy of which has been provided to the LPA. The response provides a comprehensive appraisal which considers the suitability of the scoping report that has been provided by the developer. I would therefore advise that I defer to the views of NE and JNCC on all matters pertaining to these proposals.

In Para 9.1 of their response NE draw attention to the fact that Local Wildlife Sites (LWS) have not been identified in the initial review of the main ecological and nature conservation designations of the study area of the development envelope for on shore cable routing.

NE rightly identify that this Council is currently in the process of reviewing its LWS sites and that it is important that the applicant obtains the latest data directly from the Local Authority during the desk study process. I concur with this observation but would advise that in order to ensure the accuracy of this information it will have to be provided by the Biodiversity team (Sustainable Development Section) who are undertaking the review of the Local Sites.

If you require any further assistance or a specific response to any particular issues pertaining to this application please do not hesitate to contact me.

Martin George
Hedgerows, Nature Conservation and Ecology Officer

Land and Planning
Yorkshire Water Services Ltd
P.O Box 500
Western House
Western way
Bradford
BD6 2LZ

Tel: (01274) 691111
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E-mail
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Head of Planning & Development Control
Department of Law ; Administration ; Planning
& Property Services
East Riding of Yorkshire Council
County Hall
Beverley
HU17 9BA

Your Ref:
Our Ref: L007127

28th October 2010

Dear Ms. Hunt,

Creyke Beck, Cottingham - Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 Scoping Exercise Consultation - Proposed Offshore Wind Farm at Dogger Bank and Onshore Works including grid connection

Thank you for consulting Yorkshire Water regarding the above proposed development. Yorkshire Water's concerns are obviously with regard to the on- shore element of the project, particularly with regard to the cable routes which I note from the scoping document will be up to 1km in width.

I would expect the developer to consider the following matters within the Environmental Assessment that will accompany a future application for this development:-

1) There is likely to be a quantity of below ground water and waste water infrastructure along the cable routes. At this early stage we cannot provide precise locations but I would expect the developer to consult further with Yorkshire Water in this regard and ensure that during the laying of the cables, our infrastructure is adequately protected.

2) There are five waste water treatment works (WWTW) within the zones shown as being within the indicative cable corridors on the plan supplied within the scoping document. These are at Great Hatfield, Weel, Withernwick, Holme and Holmpton. There are also three sewage pumping stations potentially affected at Thearne, Seaton and Ganstead. Clearly all this infrastructure, along with associated sewerage, must be protected from any damage or interference with their operation arising as a consequence of the development.

3) Within the vicinity of Cottingham, the indicative cable corridor passes through Source Protection Zones (SPZ), including the SPZ1 which requires the highest level of protection from potential pollution sources. Yorkshire Water has significant concerns regarding any development in the vicinity of YWS groundwater assets from which we abstract the public water supply.

The area lies within Cottingham and Dunswell SPZ I & II. Zone 1 is the groundwater Source Protection Zone, as defined by the Environment Agency (EA) i.e. the inner catchment zone in which water at the water table will reach the abstraction point in 50 or less days. SPZ II represents a travel time of 400 days for contaminants at the water table reaching the adit. The area is therefore highly sensitive in terms of vulnerability to groundwater pollution, confirmed by EA mapping indicating that Groundwater Vulnerability at the site is high (Highly Permeable Major Aquifer & Minor Aquifer overlain by soils of High Leaching Potential).

The applicant must demonstrate that there will be no increased risk to groundwater quality arising from the proposed development and the applicant must ensure that ensure that high risk activities take place outwith SPZ I.

YWS therefore require that the Environmental Impact Assessment that will accompany a future application for development of this site contain should detailed evaluation of potential risks to the public water supply. The main period of risk to the aquifer is likely to be the construction phase, during periods of ground disturbance bringing increased risk of hydrocarbon pollution from plant vehicles on site. So far as the construction phase is concerned, information is required on depth of the cables and ground conditions along the easements within the SPZ. The information should address (a) whether clay is present beneath the proposed trenches which will provide groundwater protection during the works, and (b) precautions to be undertaken during any associated temporary site development (e.g. welfare cabins) to ensure no pollution occurs to the underlying aquifer.

I trust the above is helpful but if you require further information, please do not hesitate to contact me at the above address

Yours sincerely

Stephanie Walden
Land Use Planning Manager

Humber Archaeology
Partnership
SITES AND MONUMENTS RECORD

a partnership serving
The East Riding of Yorkshire Council
Kingston Upon Hull City Council

Strategic Development Control Unit
Planning & Economic Regeneration
East Riding of Yorkshire Council
County Hall
BEVERLEY
HU17 9BA

Our ref. SMR/P6/28/ CONS/16522
Your ref. Scoping opinion no. 78
Enquiries Dave Evans

Date 28 October 2010

f.a.o. Susan Hunt

Please quote our reference on all correspondence

Dear Susan,

Re: Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263
Scoping Exercise Consultation
Proposed Offshore Wind Farm at Dogger Bank and Onshore Works including grid connection at Creyke Beck, Cottingham
By Forewind

Thank you for your e-mail of 26th October. Our position and advice for this was discussed in detail with representatives of Forewind at our meeting of 10th August. There are implications for both the offshore and the onshore parts of these development proposals:

Offshore aspects

There are potentially two main areas relating to the marine Historic Environment, which might be affected by these proposals:

1. Submerged shipwrecks. This is an area which has seen extensive maritime activity for the last 5,000 years. Whilst a certain number of known wrecks may be recorded from this area, there will be an inevitable bias towards wrecks of the last 200 years, and particularly towards metal-hulled vessels which could be identified by magnetic sensing. What is likely to be under-recorded would be the more fragmentary remains of pre-1800 timber vessels.

2. Parts of the North Sea were not always submerged during periods of later prehistory; rather some sections which are now under water were formerly dryland during parts of the later Palaeolithic and earlier Mesolithic. One of the main areas which has already been demonstrated to have a rich potential for the survival of in situ deposits is the area around the Dogger Bank: this has been so prolific that a number of archaeologists in recent years have christened this submerged landscape "Doggerland". The view of prehistorians

working on both sides of the North Sea is that this submerged landscape is of international importance. Were it to have been on land, this would almost certainly have been formally designated, in order to give it due protection; however, as it lies in international waters, and is not a shipwreck, it currently falls outside of the categories which our current legislation for formal heritage designation would cover. Hence, there is a very high potential for the construction of this offshore wind-farm to encounter *in situ* later Palaeolithic and Mesolithic deposits and material.

English Heritage, as the Government's advisors on offshore developments and maritime archaeology, would almost certainly be able to advise on appropriate responses to the offshore aspects of this development, and on suitable forms of mitigation once they have the results of preliminary surveys. I would expect the latter to include both marine the geophysical survey and the side-scanning sonar survey; the results of such non-invasive surveys should be fed into a Desk-based study of the Baseline data for the Historic Environment. The latter should also contain an exhaustive consideration of the various classes of evidence for shipwrecks, aircraft losses, artefacts previously recovered by dredging or other activities in the vicinity, and any instances of net obstructions encountered on the seabed. This should also be accompanied by a general overview of the archaeology and geomorphology of this submerged landscape.

Onshore aspects

The route of the large easement for the electricity cables would pass through a classic wetland landscape (across part of both the Holderness Plain and the Hull Valley), which has seen intensive human activity for much of the last 10,000 years: examples of the types of archaeological sites which may be expected in this kind of landscape were discussed in R. Van de Noort and S. Ellis (eds) *Wetland Heritage of Holderness*, Humber Wetlands Project, Hull 1995, and also in R. Van de Noort and S. Ellis (eds) *Wetland Heritage of the Hull Valley*, Humber Wetlands Project, Hull 2000. The most dramatic examples of past activity within the wetlands are provided by finds of boat burials and bog bodies – both of which are known from the Humber Wetlands – but, far commoner, are examples of track-ways, habitation and settlement sites, and the remains of earlier exploitation of the wetland landscape as a rich food and a craft or industrial resource. Much of this area is characterised by the remains of later prehistoric and Romano-British activity, but there are also examples of occasional Anglo-Saxon settlement and funerary sites, and extensive remains of medieval settlement and exploitation of the landscape.

Because much of this area has been covered with alluvium and colluvium deposits, not all of this will be readily visible on aerial photographs as crop-marks or soil-marks. Consequently, we have advised the applicants that, in addition to the previously recorded archaeology along the route, a major implication of these proposals would be their impact upon archaeological remains which are currently unrecorded. This has been amply demonstrated by fieldwork carried out in response to many of the gas and water pipelines, and gas reception facilities which have been proposed or constructed within this landscape during the last 12 years. In particular, geophysical surveys have revealed extensive tracts of previously unrecorded Iron Age and Romano-British settlements (well over 100 new settlements since 2004) and their associated field systems, and have demonstrated that this landscape was far more densely settled during these periods than previously suspected.

We would recommend that a staged archaeological scheme of works should be carried out, comprising:

- Desk based assessment, accompanied by a walkover survey

- Geophysical survey of the entire route of the easement corridor, plus the sites of any proposed temporary storage compounds and working compounds
- Gridded field-walking (where shown by the walkover survey that this would be appropriate)
- Evaluation by trial trenching
- More extensive open area excavation (where appropriate)
- Continuous monitoring of the topsoil strips
- Watching briefs during the cutting of the cable trenches

Such a staged scheme would be the most appropriate way of addressing the archaeological implications of this development. Such an approach has paid dividends on both the Easington to Ganstead gas pipeline and the Easington to Paull gas pipeline; the on-site aspects of these two major schemes were undertaken between 2007 and 2010, and both schemes passed through much the same landscape in within the Holderness Plain. Before extensive fieldwork began, the DBAs for both of these schemes had identified mainly medieval and post-medieval features within this landscape; however, the geophysical surveys were to highlight the potential for many more sites of much earlier eras also being present, and potentially at risk. Subsequent trial trenching, followed by a series of larger excavations, has revealed some 50 or more previously unrecorded Iron Age and Romano-British settlements, a number of prehistoric barrows and hengiform monuments, and a major Mesolithic flint-working site of at least major regional importance along those two routes.

Precisely because the current proposed cable trenches would pass through much the same landscape, a similar density of archaeological settlement, funerary and early agricultural activity may be expected on this route. Moreover, the sub-station at which this cable easement would terminate is itself sited over part of a Middle and Later Iron Age settlement – also discovered in much the same way in the mid 1990s; it may well be that if the Creyke Beck electricity sub-station is expanded (as proposed), that more of this settlement would be found to extend beyond the limits of the existing sub-station.

Medieval and post-medieval remains are also evident throughout the landscape which this cable route would have to cross; as the precise route has yet to be decided, we cannot yet identify these in more detail at this stage, but these will become apparent once the applicants commission a desk-based assessment. It is therefore clear that any proposed developments within this large area would have substantial archaeological implications – some of which would be readily apparent from visible and recorded remains, others of which may be currently masked beneath the surviving medieval landscape.

As noted above, the experience on previous large gas developments and installations in East Yorkshire strongly suggests that the greatest impacts are likely to be on archaeological sites and deposits which are either currently unrecorded, or which have yet to be identified. Hence, the applicants will need to take into account not only the known archaeology, but, more importantly, the impact of their proposals on archaeological deposits which may be present, but are currently unrecorded.

The working width of the easement corridor for the four cables would probably be 40m, with the four main cables set within 1.5m deep trenches; this is deep enough to remove all but the deepest surviving deposits. Other deposits within the working width of the easement would be at risk

from construction traffic, and also from the ground ripping which is usually associated with reinstatement works. In addition, these are the archaeological deposits around the landfall site, where directional drilling would assist in taking the cable route upwards from the beach. Lastly, there are the temporary facilities - construction depots and pipe storage areas invariably require further earth-moving, and the laying of suitable working surfaces, and these too can have direct impacts on the archaeology.

As with all other parts of the cable route, we would recommend that the entire working width and length of the cable route are subject to geophysical survey. This is going through a sensitive area of the Holderness Plain, and recent fieldwork in this area has shown that the subsoils here are susceptible to the application of geophysical survey – with very useful results having been obtained from other projects in this area.

Any Archaeology and Cultural Heritage section of an EIA should contain the following:

1. Introduction
2. Relevant consultative bodies, legislation and policies
3. Methodology used in the study
4. Baseline Position: a comprehensive gazetteer of the known archaeology and architectural features.
5. Impact prediction.
6. Assessment of significance of effects
7. Mitigation strategies

Conclusions with recommendations

I trust that this answers your query.

Yours sincerely,

D H Evans
Partnership Manager

Ms Susan Hunt
East Riding of Yorkshire Council
County Hall Cross Street
Beverley
North Humberside
HU17 9BA

Our ref: RA/2010/116660/01-L01
Your ref: No. 78

Date: 09 November 2010

Dear Ms Hunt

SCOPING CONSULTATION - FIRST TRANCHE OF OFF SHORE WIND FARM DEVELOPMENT AT DOGGER BANK AND ASSOCIATED ONSHORE INFRASTRUCTURE (INCLUDING GRID CONNECTION AT CREYKE BECK NEAR COTTINGHAM).
LAND BETWEEN NATIONAL GRID CREYKE BECK SUBSTATION AND EAST COAST

Further to your letter dated 26th October 2010, I can confirm that the Environment Agency received a consultation request from the Infrastructure Planning Commission (IPC) in respect of the above mentioned EIA Scoping Report on the 14th October 2010. Our formal comments to the IPC consultation are set out below.

Environment Agency position
We have reviewed the submitted Dogger Bank Project One Environmental Impact Assessment Scoping Report dated October 2010 which is comprehensive in its coverage and appears to follow good practice guidance for undertaking EIA. However, we have a few further comments to make in respect of Onshore Ground Conditions and Water Resource, (including the Water Framework Directive, groundwater and contamination, flood risk and general pollution prevention measures) and also Ecology to ensure that the Environmental Statement will appropriately address the environmental issues we consider are of most importance for this proposal.

Our technical comments and advice are detailed below.

Chapter 8 - Ground Conditions and Water Resource - Onshore

Water Framework Directive
Section 8.1.3 of the Scoping report states the potential effect that construction and operation of onshore elements of the project may have on hydrological features, flood risk, ground conditions (including contamination) and geology will be described

taking "into account the Water Framework Directive in terms of maintaining good ecological and chemical status of surface and groundwater's within the study area". We welcome this commitment to the Water Framework Directive. The developers should identify at the earliest stage possible any proposed aspects of the development likely to have significant impacts on water bodies. This could be part of the Environmental Impact Assessment, and could include:

- Preliminary Assessment of need for WFD assessment
- Design measures to meet WFD requirements (if required)
- Detailed assessment of WFD compliance (if required)
- A justification for physical modifications that cause deterioration or prevent achievement of water body ecological objectives (Article 4.7) (if required)
- Proposed Mitigation (if required)

Onshore Ground and Ground water Conditions
It is agreed that the Environmental Impact Assessment (EIA) will need to demonstrate that there will be no impact to groundwater, groundwater abstractors (licensed, deregulated and private) and groundwater dependent habitats from the proposed development.

The EIA will need to consider the risks posed to groundwater from the development during both the construction and operational phases. As highlighted in the report parts of the proposals lie within a Source Protection Zone (SPZ). It is important to note that this is the SPZ for the Hull area drinking water supply from groundwater. The Environment Agency has concerns with regard to both the construction and operational phases of the proposal due to the sensitivity of the groundwater setting, particularly for those areas of development (Area A) located within the inner Source Protection Zone 1 (SPZ1). SPZ 1 is designed to protect against the effects of human activity which might have an immediate effect upon the source. The priority should be to ensure that water supplies intended for human consumption are protected.

The EIA should present a full assessment of the geology, hydrogeology, groundwater sensitivity, hydrology and ground conditions on and at adjacent areas to the areas of development. A robust conceptual understanding of the hydrogeology and the groundwater sensitivity will need to be presented in the EIA so that the risk from both historic and future proposed activities can be understood.

The EIA scoping report submitted indicates that a preliminary risk assessment (PRA) will be undertaken based on our guidance CLR11 Model Procedures for the Management of Land Contamination (2004). The PRA should outline all the potential pollution linkages within the areas of development based on the source-pathway-receptor principle. The PRA should be carried out in conjunction with the EIA so that the risk to groundwater from any existing contamination is understood and that any next stages for further investigation and mitigation can be outlined within the EIA.

The EIA should assess the potential to detrimentally impact groundwater during the construction phase (e.g. use/storage of hazardous substances, dewatering, discharge, drainage, physical disturbance of sub surface, dealing with sediment fines etc). An outline of how construction will be carefully managed should be provided. This should include an outline of the mitigation methods to be used and appropriate guidance to be followed to ensure against pollution of the groundwater both within and outside the Source Protection Zones. This is particularly pertinent to those parts of the development located within the Source Protection Zone 1 and Source Protection Zone 2 areas.

Cont/d..

A Construction Method Statement should be submitted at an appropriate stage in the consent process. Therefore an understanding of the risk to groundwater and the appropriate mitigation measures to protect and prevent pollution of both groundwater and surface water will need to be demonstrated within the EIA. The impacts from any intrusive investigation work required to ascertain site conditions and the mitigation measures needed should also be set out in the EIA. The EIA should also consider the possibility that post development groundwater monitoring may be required. The details of this can be agreed as part of the consent process.

The EIA should identify all relevant groundwater dependent habitats (including groundwater fed surface waters) and assess the risk to these from the proposal during both the construction and operational phases. Appropriate monitoring and/or mitigation measures should be outlined to protect against impacts to water dependent habitats and water users.

The EIA should outline all drainage requirements for the operational development. It should be noted that under our Groundwater Protection Policy, Section 4 (GP3, 2008) we will object to the use non-mains drainage (for foul and / or surface water discharges to ground) within the SPZ1 area. We will accept the discharge of clean roof water to ground within SPZ 1 provided that all roof water down pipes are sealed against pollutants entering the system from surface water run-off providing and that the ground into which the pipes are placed is free from contamination. The risk to groundwater from any drainage to ground proposals outside the SPZ1 will need to be set out in the EIA together with the mitigation measures required to protect the groundwater.

The EIA should outline any hazardous substances that will be stored within the areas of development and what mitigation measures will be proposed to ensure against pollution of both groundwater and surface water. It should be noted under our Groundwater Protection Policy that we will not allow underground storage of hazardous substances within a SPZ 1.

Any underground infrastructure proposed as part of the development will need to be considered in terms of the risk to groundwater and required mitigation measures needed to protect the groundwater, particularly with regard to SPZ1, SPZ2 and nearby abstractors.

The EIA should also outline all water use requirements for both the construction and operational phases.

Flood Risk

It is noted within Section 8.1.3 of the Report that a desk study will be undertaken to establish the key hydrological constraints to the development. We welcome that this will be undertaken in liaison with the Environment Agency.

The report confirms that any future planning application will address the implications of Planning Policy Statement 25 (PPS25) Development and Flood Risk. We would draw attention to the fact that the need for a flood risk assessment (FRA) is not only dependant on the location of the development but, where the proposal lies within Flood Zone 1, also the size of the development site. An FRA will also need to be undertaken for development proposals on sites comprising one hectare and above in flood zone 1, as well as for all development proposal is flood zones 2 and 3.

Cont/d..

It should be noted that the area within which the site for the onshore converter substations lies comprises land that is susceptible to surface water flooding. Significant flooding occurred in June 2007 in the Cottingham area downstream of the site. The Environment Agency would be unwilling to accept any additional flows into the adjacent watercourses including Creyke Beck, Mill Beck and Wanless Beck. This will need to be carefully considered along side the comments made above in relation to the Environment Agency's position to the use non-mains drainage (for foul and / or surface water discharges to ground) within the SPZ1 area

There is significant development pressure in this area of Cottingham. The applicant must ensure a satisfactory solution to flood risk and drainage is established at an early stage. Early consultation with the Environment Agency is strongly advised.

Cable Routes
The proposed cable corridor route crosses many watercourses classified as 'Main River'. Under the terms of the Water Resources Act 1991, and the associated Land Drainage Byelaws 1980, the prior written consent is required for any proposed works or structures in, under, over or within 8m of the top of the bank of any 'Main River' or the landward toe of any flood defence. These structures could include ground investigation works. The requirement for these consents has already been raised with Forewind directly.

The proposed cable corridor route passes through a number of Internal Drainage Board (IDB) areas. Early engagement is advised with the IDB's.

Pollution Prevention
In respect of the land-crossing aspect of the proposal, consideration should be given to all aspects of the Environment Agency's Guidance Notes regarding Preventing Pollution from Major Pipelines. These notes detail the main considerations required in respect of pollution prevention and minimisation, e.g. waste storage; refuelling activities; river crossing or the crossing of any areas with a high water table and any associated dewatering activities.

Regarding the construction of the seaward aspect of the proposal, it is noted that the EIA is to include information regarding site specific data collection and analysis of potential release of suspended solids and any associated remobilisation of elevated heavy metals concentrations into the water column.

It is also noted that the areas under consideration for the cable corridor / pipeline landfall are within the vicinity of designated bathing waters, which extend up and down the East Coast. The Designated Bathing Water Season runs from May to September of each year when samples of water are sampled for bacteriological compliance against set standards. Consideration should be given to minimising any potential for impact upon bathing water quality within this period. This may also be seen to be an impact that relates to Recreation and Tourism as covered by section 10.7 of the Report.

Biodiversity
Recent surveys carried out by the Wildfowl and Wetlands Trust (WWT Consulting) have indicated a high concentration of cetaceans (whales, dolphins etc) particularly harbour porpoise in the central North Sea. This seems to mark a southward shift over the past few years, although the reasons for this shift are not fully understood.

Cont/d..

All species of cetacean are European Protected Species under the EU Species and Habitats Directive, thus the impact of any potential development in the North Sea must be assessed in advance.

Other Matters
Waste
The project will require the preparation of a Site Waste Management Plan in accordance with the Site Waste Management Plan Regulations 2008. Help with Site waste management Plans, including tools and templates, is widely available on line. Below is a selection of links to further information.

Net Regs SWMP Guide
http://www.netregs-swmp.co.uk/simple-guide.pdf

SWMP tool developed in conjunction with wrap
http://www.smartwaste.co.uk/

Guidance for Construction Contractors and Clients VOLUNTARY CODE OF PRACTICE
http://www.wrap.org.uk/downloads/site_waste_management_plan.86be623f.2323.pdf

Envirowise Intro to site waste management plans
http://envirowise.wrap.org.uk/uk/Our-Services/Publications/GG642-An-Introduction-to-Site-Waste-Management-Plans.html

Defra non Statutory Guidance
www.defra.gov.uk/environment/waste/topics/construction/pdf/swmp-guidance.pdf

The developer is encouraged to commit to the Government's and WRAP's Halving Construction and Demolition Waste to Landfill by 2012 policy, if they have not already done so.

The developer should consider how they can incorporate recycled/recovered materials into the building programme, including the use of secondary and recycled aggregates. This is part of the first stage of site waste management planning.

Attention to detail during site waste management planning will also assist the developer in complying with other waste legislation including Duty of Care and Hazardous waste Regulations.

We recommend our new PPG6 Pollution Prevention Guidance on construction sites which is also available on line.

New PPG6
http://publications.environment-agency.gov.uk/pdf/PMHO0410BSGN-e-e.pdf

Conclusion
The comments we set out above are without prejudice to future decisions we make regarding any applications subsequently made to us for our permits or consents for operations at the site.

Should you require clarification of the above or any further information, please do not hesitate to contact me on the details below.

Yours sincerely

Cont/d..

Ms Rachel Jones
Planning Liaison Technical Specialist

Direct dial 01132134909
Direct fax 01132134609
Direct e-mail rachele.jones@environment-agency.gov.uk

End

EAST RIDING
OF YORKSHIRE COUNCIL

MEMORANDUM

To: Planning & Development Control Manager
F.A.O. Mrs Susan Hunt

From: Helen Shewan
Senior Environmental Health Officer

Date: 5 November 2010

Ext.: 6172

FLARE ref: SRU 256975

Proposal	Environmental Impact Assessment for offshore windfarm
Location	Dogger Bank to Creyke Beck Substation Park Lane Cottingham East Riding Of Yorkshire HU16 5SB
Case Reference	

ENVIRONMENTAL CONTROL CONSULTATION RESPONSE

I acknowledge receipt of the above scoping exercise consultation on 27 October 2010 which is for an offshore wind farm and onshore elements including a cable route coming ashore at a location as yet to be determined and running to the substation at Creyke Beck in Cottingham. This application covers areas in the Bridlington and Beverley district treams however, I shall respond for the whole application.

I have now reveiwed the Scoping Assessment accompanying this application. The specification of the turbines and the type of foundations to be employed are yet to be determined as is the route of the cable.

Section 10.6 identifies potential noise and vibration from off shore and on shore activities including the cable route, proposed substations which may emit a distinguishable hum at 100Hz, the existing substation and traffic noise. It states that there will be qualitative and quantitative assessments to identify potential disturbance and this will include controls and/or mitigation measures to reduce the impact of the development.

I am happy with the broad proposals at this stage. I understand that a more detailed noise and vibration assessment will be submitted for agreement in due course. I have forwarded a copy of your email to Rowan Devlin of the Specialist team who will comment on air quality and potentially contaminated land.

William Park/CS/ERC
09/11/2010 12:08

To Susan Hunt/CS/ERC@EAST_RIDING, Mike Peeke/CS/ERC@EAST_RIDING
cc
bcc
Subject Re: Dogger Bank Offshore Wind Farm - Scoping Opinion no.78

Susan

I have reviewed the relevant sections of the Scoping Report and have found them robust.

Section 10.4.2 Potential impacts, relates to the construction phase of the development and the scoping report states that there will be a potential adverse impact on local transport due to an increase in construction vehicle movement..

Road closures - albeit temporary - are mentioned in this section of the report and although these closures may be necessary for part of the construction works its likely we - the highway authority - would prefer to use thrust boring/HDD under major roads for the laying of the cables to lessen the disruption to other road users instead of a closure.

I will ascertain the views of the Area Manager, Streetscene Services (Highways) regarding this aspect of the proposals, however I'm sure a satisfactory solution could be obtained once an application is submitted.

The base line data that will be used for a Transport Assessment, impact assessment and mitigation measures are also robust and therefore this aspect of the scoping study is acceptable from a Highway Management view point.

Regards

Will Park
Principal Highway Management Officer
Strategic Development Management
Ext. 3753

Yorkshire Wildlife Trust

THE wildlife TRUSTS YORKSHIRE

1 St George's Place, York YO24 1GN **Tel: 01904 659570** Fax: 01904 613467 Email: info@ywt.org.uk **www.ywt.org.uk**

Susan Hunt
Planning and Development Management
County Hall
Beverley
East Riding of Yorkshire
HU17 9BA

8th November 2010
Your reference: Scoping opinion no.78

Dear Susan

Proposed Offshore Wind Farm at Dogger Bank and Onshore Works including grid connection at Creyke Beck, Cottingham

The Yorkshire Wildlife Trust works across the Yorkshire and Humber region managing eighty reserves and with a membership of over 30,000. The YWT is the second oldest of the 47 Wildlife Trusts which work in partnership to cover the whole of the UK. The Trust's principle vision is to work for a Yorkshire rich in wildlife, valued and enjoyed by people.

Thank you for contacting the Trust about the above proposal. Our comments only relate to the onshore works, as at present the Trust does not have the capacity to provide a thorough assessment of the offshore component of the project.

Onshore Works

The Trust is satisfied that the Scoping Report has taken into account the most likely impacts of the onshore works on the area's wildlife and habitats and is happy with the surveys that have been proposed to assess these impacts. However, there are several other factors that we would also like to see taken into account during the Environmental Impact Assessment.

Yorkshire Wildlife Trust has several reserves around Cottingham and Hull that have not been included in the Scoping Report. Although these sites are not formally designated, they provide important wildlife sites and green spaces within the Hull City areas, as well as being important areas for recreation and outdoors education. The Trust would be able to provide further information about the location of these sites so that they can be included in the EIA.

The scoping report looks at the impact of the onshore works on designated sites, however there is now a large amount of evidence that shows it is also important to protect areas of land between these sites. This will create a network of wildlife corridors to help link up the protected areas, which will allow greater movement and migration of species, making them less vulnerable to damage and changes to their environment. Yorkshire Wildlife Trust's Living Landscapes Project has done a lot of work to identify areas that could provide suitable wildlife corridors throughout Yorkshire and we would therefore like to see this work included in the EIA. More information about the Living Landscapes project is available at http://www.ywt.org.uk/living_landscapes.php. As there are a number of major projects proposed in areas which may be affected by the onshore part of the proposal it will be particularly important that habitats and sites are not fragmented by the cumulative impact of the developments.

The Trust will be happy to comment on ongoing plans for the Dogger Bank wind farm.

Yours sincerely

Sara Robin
Conservation Officer (Planning)
Yorkshire Wildlife Trust
1 St George's Place
York
YO24 1GN
Telephone: 01904 615581
Email: sara.robin@ywt.org.uk
Website: http://www.ywt.org.uk

Andrew Chudley/CS/ERC
08/11/2010 16:46

To susan.hunt@eastriding.gov.uk
cc simon.parker@eastriding.gov.uk, Patrick Wharam/CS/ERC
bcc
Subject Dogger Bank Offshore Wind Farm - Scoping Opinion no.78

Dear Susan

Simon and myself have had a look at the document and Public Rights of Way appear to be covered by the statement

"Public Rights of Way (PRoW) will be identified and classified with reference to the definitive map and statement held by East Riding of Yorkshire Council. PRoW that may be affected by the development will be considered on a case by case basis in consultation with the Council's Rights of Way team"

As long as when the final route is identified they apply and pay for any Temporary Closure Orders necessary to protect the public whilst construction is carried out, we will have no problem with the project. Applications will need to be in 8 weeks before they are required and consultation is requested with the relevant user groups and the parish councils affected. The Definitive Map Team can provide information as to which PRoW are likely to be affected.

Andrew Chudley
Countryside Access Officer
Eastern Area
andrew.chudley@eastriding.gov.uk
Ext: 5203
Direct line: 01482 395203
Mobile: 07768 190220
(please note that my office day is on a Monday and that I may be out on site most other days)

Dogger Bank Project One Windfarm
Scoping Opinion – Biodiversity comments

Offshore Issues

5. Physical Environment - Offshore
5.3 Potential effects
This sections needs to consider the potential impacts in relation to coastal erosion and sediment transport on the Holderness coast. In particular the effects of construction, operation and decommissioning at the sites where the cables come ashore needs to take account of the eroding shoreline and sediment transport. The sediment also plays an important role in the dynamics of the Humber Estuary SAC and therefore this issue should be scoped into the HRA. Consideration of the coastal erosion issue needs to have regard to the emerging Shoreline Management Plan 2 (SMP2).

6. Biological Environment - Offshore
We support the approach taken to the EIA in this chapter. With regard to birds, the boat and aerial surveys should provide an accurate baseline of concentrations of birds within the study area. However other studies, such as the RSPB's limited satellite tagging of seabirds at Bempton SPA have shown that some species from the SPA forage in the Dogger Bank during the breeding season. Such studies should be referenced and preferably expanded in order to help inform the HRA as well as the EIA regarding the relationship between the Dogger Bank and the Bempton & Flamborough SPA.

6.5 Ornithology
6.5.2 Potential Impacts
In the final section 'Interactions between other activities' a number of activities are listed including fishing. The relationship between the windfarm and fishing needs to be established in order to assess the impacts on birds. If the windfarm area (Tranche A) is closed to fishing this would effectively create a 'no-take zone' which could have a potentially positive effect on fish stocks. This could also have a potentially positive effect on seabirds. Sandeels are the most significant fish species as they are a key prey item for many species of seabirds (e.g. auks). The Scoping report identifies part of Tranche A as a spawning ground for sandeels. If fishing is permitted within the windfarm the EIA should consider the potential for increased collision mortality of birds and Wind Turbine Generators as some species of seabirds habitually follow fishing vessels.

9.1 Biological Environment - Onshore
9.1. Ecology and Nature Conservation Designation
It should be noted that the non-statutory SINC designations in the East Riding of Yorkshire are currently being reviewed and either being deleted or designated as Local Wildlife Sites (LWS). Enquiries regarding the status of any sites should be directed to the North and East Yorkshire Ecological Data Centre.

9.1.1 Existing Environment
I agree with the overall scope of habitats and species likely to require assessment for the onshore project areas, with the following suggested additions.
Project Area A (Substation Area)

In addition to the information cited it should be noted that this area includes the Beverley & Barmston Drain. Water Vole has been recorded from the Drain in 2010. This was in Dunswell at the outfall of the drainage ditches which run from the Creyke Beck Substation. Therefore this species not only occurs within the study area but may occur in the immediate vicinity of the existing Substation.

On the south-western and north-western sides of the substation there are several grass verges adjacent to the Substation and minor road. There are three electricity pylons located within these grasslands. The grassland may be species rich and should be subject to a botanical survey in June to establish a full species list for this habitat. The total area of grassland is about 1 hectare. If they are of BAP habitat of conservation value mitigation measures should be put in place (e.g. fencing) to protect them during construction phase and long-term management e.g. mowing regimes reviewed.

All the onshore project areas have the potential to support farm birds including the schedule 1 species Barn Owl which is relatively widespread in the project areas.

Vaughan Grantham
10 November 2010

Peter Hopkins/CS/ERC
10/11/2010 10:44

To Susan Hunt/CS/ERC@EAST_RIDING
cc
bcc
Subject Fw: Dogger Bank Offshore Wind Farm - Scoping Opinion no.78

Hi Susan,

Sorry my response is a day later than you requested.

I've looked at the scoping document and carried out a desk based survey.

I would not object to where the sub-station equipment is proposed to be sited. There is any existing substation on site, and there are no CA's or LB's which would be affected in setting by development of this site to north of Cottingham.

I note that the developer doesn't want any comments about the preferred line of cabling from the coastline to the sub-station, so I'll keep quiet on that front for now, I would strongly recommend that you consult the Humber Archaeological Partnership if/when the developer asks for opinions on this matter.

Regards,

Peter

----- Forwarded by Peter Hopkins/CS/ERC on 10/11/2010 10:33 -----

Malte Klockner/CS/ERC
27/10/2010 08:36

To Peter Hopkins/CS/ERC@EAST_RIDING
cc
Subject Fw: Dogger Bank Offshore Wind Farm - Scoping Opinion no.78

Peter

That sounds like a job for you!

Best wishes

Malte

Mr Malte Klöckner, Dipl. -Ing., MSc
Conservation Officer
Tel: 01482 393725
Fax: 01482 393639
County Hall
Beverley
East Riding of Yorkshire
HU17 9BA

----- Forwarded by Malte Klockner/CS/ERC on 27/10/2010 08:35 -----

Susan Hunt/CS/ERC
26/10/2010 16:53

To Mike Ball/CR/ERC@EAST_RIDING, Neil Mclachlan/CR/ERC@EAST_RIDING, William Park/CS/ERC@EAST_RIDING, "Page, Tim \(NE\)" <Tim.Page@naturalengland.org.uk>, Paul Worledge/CS/ERC@EAST_RIDING, Ian McKechnie/CS/ERC@EAST_RIDING, David Howliston/CS/ERC@EAST_RIDING, Chris Ladley/CE/ERC@EAST_RIDING, Malte Klockner/CS/ERC@EAST_RIDING, Stephen Devey/CS/ERC@EAST_RIDING, Martin

ENGLISH HERITAGE

Ms Laura Allen
Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Our ref: OWF/R3/Dogger
Your ref: 101012_EN010021_287174

11th November 2010

Dear Ms Allen,

Dogger Bank Project One – Proposed Offshore Wind Farm
Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
Response to request for an Environmental Impact Assessment Scoping Opinion

Thank you for your letter, dated 14th October 2010, regarding this project proposal. Please consider this letter to be the corporate response of English Heritage.

English Heritage is the Government's advisor on all aspects of the historic environment in England. English Heritage is an Executive Non-departmental Public Body sponsored by the Department for Culture, Media and Sport (DCMS) and we report to Parliament through the Secretary of State DCMS. The National Heritage Act (2002) gave English Heritage responsibility for maritime archaeology in the English area of the UK Territorial Sea. However, we note that the part of the proposed development area is located in the UK marine area (as described by the Marine and Coastal Access Act 2009), so any advice that we provide is offered without prejudice to our responsibilities as provided by the aforementioned 2002 Act. We have therefore copied this response to DCMS should they wish to comment further.

We have based the following comments on *Dogger Bank Project One Offshore Windfarm EIA Scoping Report*, prepared by Royal Haskoning for Forewind, dated October 2010. We understand that the Dogger Bank Zone, which encompasses this Project One (Tranche A), was awarded to the Forewind consortium under The Crown Estate Round 3 tender process. We also understand that this consultation exercise fulfils the consultation requirement under sections 42 to 50 of the Planning Act 2008.

ENGLISH HERITAGE

English Heritage recommends that EIA Scoping Reports are tailored to the type, purpose, and level of development under consideration. We therefore recommend that the resultant Environmental Statement should:

- review the objectives of other relevant policies, plans and programmes, with information on synergies or inconsistencies;
- establish the historic environment baseline including trends and gaps in data with notes on sources and any problems encountered;
- identify issues and opportunities to promote historic environment information; and
- set out a sustainability appraisal framework as detailed by objectives, indicators and targets inclusive of the historic environment.

While English Heritage broadly supports renewable energy we are aware that such developments can be challenging to the historic environment. With this in mind English Heritage has drawn up guidelines for planners and developers entitled *Wind Energy and the Historic Environment* (published 2005, product code: 51099), and we assume that you have a copy of this guidance (if not, please let me know). These guidelines are designed to be used alongside other current standard methodologies associated with the development of such proposals. In general terms, English Heritage advises that a number of considerations will need to be taken into account when proposals of this nature are being assessed. This includes consideration of the impact of ancillary infrastructure, such as cabling and substations as well as the turbines themselves.

<u>We offer the following comments on the EIA Scoping Report as relevant to the marine environment</u>:

1 The policy context for this project should include the UK Government and Devolved Administrations' *High Level Marine Objectives* (published in 2009).

2 Section 7.2 (Seascape and Visual Character) – the detail under 7.2.3 (approach to EIA) should be expanded to include the Historic Seascape Characterisation work undertaken by English Heritage. It is important at this stage for an understanding to be developed that the concept of 'seascape' encompasses more than visual considerations and that the approach in the EIA should assesses the overall, three dimensional character of the area subject to development and determine the capacity of that area to accommodate change. We did note the reference made to the English Heritage Action Plan for the delivery of the Council of Europe European Landscape Convention in section 7.4.3, but we consider it important that this action plan is also used to inform the delivery of this section of the EIA and also to inform the Zone Characterisation document within the overall ZAP process.

FORT CUMBERLAND, EASTNEY, PORTSMOUTH PO4 9LD

Telephone 023 9285 6735 Facsimile 023 9285 6701 www.english-heritage.org.uk

3 Section 7.4 (Marine and Coastal Archaeology and Cultural Heritage) an important matter is identified in section 7.4.2 (Potential Impacts) about making available the results of the archaeological analysis generated from data gathered to produce the EIA. We support this statement and add that the Environmental Statement should set out the process whereby the developer will produce an OASIS (Online AccesS to the Index of archaeological investigationS') form for any completed and agreed archaeological reports produced as a component of the EIA project to be deposited with English Heritage's National Monuments Record. Other opportunities for publication and public dissemination of new information should also be included.

4 In section 7.4.3 (Approach to EIA) we noted the following: 'The results of the interpretation will dictate the need for further investigation/mitigation measures, should avoidance of features not be possible.' In consideration of the potential to encounter material of historic environment interest, as stated in this EIA scoping exercise, we require the Environmental Statement (ES) to offer specific information on any further investigation methodologies and appropriate mitigation measures, to be agreed with English Heritage and DCMS (where necessary), prior to any development occurring. The ES should also set out how mitigation measures will also include a protocol for reporting finds of archaeological interest encountered in the delivery of any consented project.

5 The following references should be used in Chapter 12 (References): Joint Nautical Archaeological Policy Committee *Code of Practice for Seabed Development* (revised edition 2006) published by The Crown Estate.

<u>We offer the following comments on the EIA Scoping Report as relevant to the onshore environment</u>:

We consider that the scope and extent of the proposed assessment to be broadly acceptable insofar as it relates to archaeology and the historic environment (as set out in Chapter 10 Historic Environment – onshore).

Within, and in the vicinity of, the four Project Areas there are a number of heritage assets, both designated and undesignated. Therefore, we would expect the Environmental Statement to examine the potential effects which the on-shore cabling and the converter substations might have upon the significance of all:-

- Designated historic assets and their settings – this includes Listed Buildings, Conservation Areas, Scheduled Monuments, and Historic Parks and Gardens.
- Non-designated archaeological remains of national importance and their settings.
- Non-designated features of local historic or architectural interest and value (since these make an important contribution to the local distinctiveness of an area and its sense of place. This covers buildings, historic open spaces, historic features and the wider historic landscape).

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It is important to stress that the management and use of the full range of the historic environment is conducted in a manner that best serves the public understanding and enjoyment of the whole, and not just that of the designated and protected sites. In this regard, there is potential for all heritage assets to be taken into consideration, whether they are designated or not in accordance with the principles set out in Planning Policy Statement 5 (*Planning for the Historic Environment*).

Chapter 11 (Scoping Conclusion and Summary of Key Issues)
In section 11.2 in the table for "offshore environment" we recommend that the discussion provided in the EIA for seascape character should consider the cumulative parameter in the context of the Zone Characterisation exercise to be prepared for the Dogger Bank Zone.

Yours sincerely,

Christopher Pater
Marine Planning Unit

Cc Ian Smith (English Heritage, Yorkshire Region)
Andrew Hammon (English Heritage, Yorkshire Region)
Owain Lloyd-James (English Heritage, National Advice)
Annabel Houghton (DCMS, Architecture and Historic Environment Division)
Alan Gibson (Marine Management Organisation)

FORT CUMBERLAND, EASTNEY, PORTSMOUTH PO4 9LD
Telephone 023 9285 6735 Facsimile 023 9285 6701 www.english-heritage.org.uk

Mr David Cliff
Infrastructure Planning Comission
Temple Quay House (2 The Square)
Temple Quay
Bristol
Avon
BS1 6PN

Our ref: RA/2010/116544/01-L01
Your ref: 101012_EN010021_287174

Date: 01 November 2010

Dear Mr Cliff

PROPOSED OFFSHORE WIND FARM: DOGGER BANK
ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCOPING OPINION

Thank you for your EIA Scoping consultation letter dated 14th October concerning the above mentioned development proposal.

Environment Agency position
We have reviewed the submitted Dogger Bank Project One Environmental Impact Assessment Scoping Report dated October 2010 which is comprehensive in its coverage and appears to follow good practice guidance for undertaking EIA. However, we have a few further comments to make in respect of Onshore Ground Conditions and Water Resource, (including the Water Framework Directive, groundwater and contamination, flood risk and general pollution prevention measures) and also Ecology to ensure that the Environmental Statement will appropriately address the environmental issues we consider are of most importance for this proposal.

Our technical comments and advice are detailed below.

Chapter 8 - Ground Conditions and Water Resource - Onshore

Water Framework Directive
Section 8.1.3 of the Scoping report states the potential effect that construction and operation of onshore elements of the project may have on hydrological features, flood risk, ground conditions (including contamination) and geology will be described taking "into account the Water Framework Directive in terms of maintaining good ecological and chemical status of surface and groundwater's within the study area".

We welcome this commitment to the Water Framework Directive. The developers should identify at the earliest stage possible any proposed aspects of the development likely to have significant impacts on water bodies. This could be part of the Environmental Impact Assessment, and could include:

- Preliminary Assessment of need for WFD assessment
- Design measures to meet WFD requirements (if required)
- Detailed assessment of WFD compliance (if required)
- A justification for physical modifications that cause deterioration or prevent achievement of water body ecological objectives (Article 4.7) (if required)
- Proposed Mitigation (if required)

Onshore Ground and Ground water Conditions
It is agreed that the Environmental Impact Assessment (EIA) will need to demonstrate that there will be no impact to groundwater, groundwater abstractors (licensed, deregulated and private) and groundwater dependent habitats from the proposed development.

The EIA will need to consider the risks posed to groundwater from the development during both the construction and operational phases. As highlighted in the report parts of the proposals lie within a Source Protection Zone (SPZ). It is important to note that this is the SPZ for the Hull area drinking water supply from groundwater. The Environment Agency has concerns with regard to both the construction and operational phases of the proposal due to the sensitivity of the groundwater setting, particularly for those areas of development (Area A) located within the inner Source Protection Zone 1 (SPZ1). SPZ 1 is designed to protect against the effects of human activity which might have an immediate effect upon the source. The priority should be to ensure that water supplies intended for human consumption are protected.

The EIA should present a full assessment of the geology, hydrogeology, groundwater sensitivity, hydrology and ground conditions on and at adjacent areas to the areas of development. A robust conceptual understanding of the hydrogeology and the groundwater sensitivity will need to be presented in the EIA so that the risk from both historic and future proposed activities can be understood.

The EIA scoping report submitted indicates that a preliminary risk assessment (PRA) will be undertaken based on our guidance CLR11 Model Procedures for the Management of Land Contamination (2004). The PRA should outline all the potential pollution linkages within the areas of development based on the source-pathway-receptor principle. The PRA should be carried out in conjunction with the EIA so that the risk to groundwater from any existing contamination is understood and that any next stages for further investigation and mitigation can be outlined within the EIA.

The EIA should assess the potential to detrimentally impact groundwater during the construction phase (e.g. use/storage of hazardous substances, dewatering, discharge, drainage, physical disturbance of sub surface, dealing with sediment fines etc). An outline of how construction will be carefully managed should be provided. This should include an outline of the mitigation methods to be used and appropriate guidance to be followed to ensure against pollution of the groundwater both within and outside the Source Protection Zones. This is particularly pertinent to those parts of the development located within the Source Protection Zone 1 and Source Protection Zone 2 areas.

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A Construction Method Statement should be submitted at an appropriate stage in the consent process. Therefore an understanding of the risk to groundwater and the appropriate mitigation measures to protect and prevent pollution of both groundwater and surface water will need to be demonstrated within the EIA. The impacts from any intrusive investigation work required to ascertain site conditions and the mitigation measures needed should also be set out in the EIA. The EIA should also consider the possibility that post development groundwater monitoring may be required. The details of this can be agreed as part of the consent process.

The EIA should identify all relevant groundwater dependent habitats (including groundwater fed surface waters) and assess the risk to these from the proposal during both the construction and operational phases. Appropriate monitoring and/or mitigation measures should be outlined to protect against impacts to water dependent habitats and water users.

The EIA should outline all drainage requirements for the operational development. It should be noted that under our Groundwater Protection Policy, Section 4 (GP3, 2008) we will object to the use non-mains drainage (for foul and / or surface water discharges to ground) within the SPZ1 area. We will accept the discharge of clean roof water to ground within SPZ 1 provided that all roof water down pipes are sealed against pollutants entering the system from surface water run-off providing and that the ground into which the pipes are placed is free from contamination. The risk to groundwater from any drainage to ground proposals outside the SPZ1 will need to be set out in the EIA together with the mitigation measures required to protect the groundwater.

The EIA should outline any hazardous substances that will be stored within the areas of development and what mitigation measures will be proposed to ensure against pollution of both groundwater and surface water. It should be noted under our Groundwater Protection Policy that we will not allow underground storage of hazardous substances within a SPZ 1.

Any underground infrastructure proposed as part of the development will need to be considered in terms of the risk to groundwater and required mitigation measures needed to protect the groundwater, particularly with regard to SPZ1, SPZ2 and nearby abstractors.

The EIA should also outline all water use requirements for both the construction and operational phases.

Flood Risk

It is noted within Section 8.1.3 of the Report that a desk study will be undertaken to establish the key hydrological constraints to the development. We welcome that this will be undertaken in liaison with the Environment Agency.

The report confirms that any future planning application will address the implications of Planning Policy Statement 25 (PPS25) Development and Flood Risk. We would draw attention to the fact that the need for a flood risk assessment (FRA) is not only dependant on the location of the development but, where the proposal lies within Flood Zone 1, also the size of the development site. An FRA will also need to be undertaken for development proposals on sites comprising one hectare and above in flood zone 1, as well as for all development proposal is flood zones 2 and 3.

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It should be noted that the area within which the site for the onshore converter substations lies comprises land that is susceptible to surface water flooding. Significant flooding occurred in June 2007 in the Cottingham area downstream of the site. The Environment Agency would be unwilling to accept any additional flows into the adjacent watercourses including Creyke Beck, Mill Beck and Wanless Beck. This will need to be carefully considered along side the comments made above in relation to the Environment Agency's position to the use non-mains drainage (for foul and / or surface water discharges to ground) within the SPZ1 area

There is significant development pressure in this area of Cottingham. The applicant must ensure a satisfactory solution to flood risk and drainage is established at an early stage. Early consultation with the Environment Agency is strongly advised.

Cable Routes
The proposed cable corridor route crosses many watercourses classified as 'Main River'. Under the terms of the Water Resources Act 1991, and the associated Land Drainage Byelaws 1980, the prior written consent is required for any proposed works or structures in, under, over or within 8m of the top of the bank of any 'Main River' or the landward toe of any flood defence. These structures could include ground investigation works. The requirement for these consents has already been raised with Forewind directly.

The proposed cable corridor route passes through a number of Internal Drainage Board (IDB) areas. Early engagement is advised with the IDB's.

Pollution Prevention
In respect of the land-crossing aspect of the proposal, consideration should be given to all aspects of the Environment Agency's Guidance Notes regarding Preventing Pollution from Major Pipelines. These notes detail the main considerations required in respect of pollution prevention and minimisation, e.g. waste storage; refuelling activities; river crossing or the crossing of any areas with a high water table and any associated dewatering activities.

Regarding the construction of the seaward aspect of the proposal, it is noted that the EIA is to include information regarding site specific data collection and analysis of potential release of suspended solids and any associated remobilisation of elevated heavy metals concentrations into the water column.

It is also noted that the areas under consideration for the cable corridor / pipeline landfall are within the vicinity of designated bathing waters, which extend up and down the East Coast. The Designated Bathing Water Season runs from May to September of each year when samples of water are sampled for bacteriological compliance against set standards. Consideration should be given to minimising any potential for impact upon bathing water quality within this period. This may also be seen to be an impact that relates to Recreation and Tourism as covered by section 10.7 of the Report.

Biodiversity
Recent surveys carried out by the Wildfowl and Wetlands Trust (WWT Consulting) have indicated a high concentration of cetaceans (whales, dolphins etc) particularly harbour porpoise in the central North Sea. This seems to mark a southward shift over the past few years, although the reasons for this shift are not fully understood.

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All species of cetacean are European Protected Species under the EU Species and Habitats Directive, thus the impact of any potential development in the North Sea must be assessed in advance.

Other Matters

Waste

The project will require the preparation of a Site Waste Management Plan in accordance with the Site Waste Management Plan Regulations 2008. Help with Site waste management Plans, including tools and templates, is widely available on line. Below is a selection of links to further information.

Net Regs SWMP Guide
http://www.netregs-swmp.co.uk/simple-guide.pdf

SWMP tool developed in conjunction with wrap
http://www.smartwaste.co.uk/

Guidance for Construction Contractors and Clients VOLUNTARY CODE OF PRACTICE
http://www.wrap.org.uk/downloads/site_waste_management_plan.86be623f.2323.pdf

Envirowise Intro to site waste management plans
http://envirowise.wrap.org.uk/uk/Our-Services/Publications/GG642-An-Introduction-to-Site-Waste-Management-Plans.html

Defra non Statutory Guidance
www.defra.gov.uk/environment/waste/topics/construction/pdf/swmp-guidance.pdf

The developer is encouraged to commit to the Government's and WRAP's Halving Construction and Demolition Waste to Landfill by 2012 policy, if they have not already done so.

The developer should consider how they can incorporate recycled/recovered materials into the building programme, including the use of secondary and recycled aggregates. This is part of the first stage of site waste management planning.

Attention to detail during site waste management planning will also assist the developer in complying with other waste legislation including Duty of Care and Hazardous waste Regulations.

We recommend our new PPG6 Pollution Prevention Guidance on construction sites which is also available on line.

New PPG6
http://publications.environment-agency.gov.uk/pdf/PMHO0410BSGN-e-e.pdf

Conclusion

The comments we set out above are without prejudice to future decisions we make regarding any applications subsequently made to us for our permits or consents for operations at the site.

Should you require clarification of the above or any further information, please do not hesitate to contact me on the details below.

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Yours sincerely

Ms Rachel Jones
Planning Liaison Technical Specialist

Direct dial 01132134909
Direct fax 01132134609
Direct e-mail rachele.jones@environment-agency.gov.uk

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From: &box_FPLplantprotection_conx,
To: IPC Scoping Opinion;
Subject: RE: Scoping Consultation Request: Dogger Bank Offshore Wind Farm
Date: 15 October 2010 14:48:10

Dear Sir/Madam

Thank you for the consultation document relating to the Dogger Bank Offshore Wind Farm. Whilst we have no plant located offshore we could have plant within the cable corridors and would appreciate being informed of the routes of these corridors as and when they are finalised.

Kind regards

Graham Penlington
Admin Assistant

T: 01709 845375
F: 0845 6411808
E: graham.penlington@fulcrum.co.uk

I: www.fulcrum.co.uk

From: IPC Scoping Opinion [mailto:IPCScopingOpinion@infrastructure.gsi.gov.uk]
Sent: 14 October 2010 12:20
To: &box_FPLplantprotection_conx,
Subject: Scoping Consultation Request: Dogger Bank Offshore Wind Farm

Dear Sir/Madam,

Please find attached an electronic version of the scoping consultation request for Dogger Bank Offshore Wind Farm.

We look forward to receiving your response.

Kind regards

<<101010_EN010021_Letter_to_stat_consultees.doc>>

Hannah Pratt
EIA and Land Rights Advisor
Infrastructure Planning Commission (IPC)
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Direct Dial: 0303 444 5001
Helpline: 0303 444 5000
Email: Hannah.Pratt@infrastructure.gsi.gov.uk
Web: www.independent.gov.uk/infrastructure

The IPC gives advice about applying for an order granting development consent or making representations about an application (or a proposed application). The IPC takes care to ensure that the advice we provide is accurate. This communication does not however constitute legal advice upon which you can rely and you should note that IPC lawyers are not covered by the compulsory professional indemnity insurance scheme. You should obtain your own legal advice and professional advice as required.

We are required by law to publish on our website a record of the advice we provide and to record on our website the name of the person or organisation who asked for the advice. We will however protect the privacy of any other personal information which you choose to share with us and we will not hold the information any longer than is necessary.

You should note that we have a Policy Commitment to Openness and Transparency and you should not provide us with confidential or commercial information which you do not wish to be put in the public domain.

****

Chief Scientific Adviser's Group
Building 3.3
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

IPC
10 NOV 2010
REF:

Your ref: 101012_EN010021_287174

HSE email:NSIP.applications@hse.gsi.gov.uk

Mr David Cliff
EIA & Land Rights Advisor
Infrastructure Planning Commission (IPC)
Temple Quay House
Temple Quay
Bristol
BS1 6PN

9th November 2010

Dear Mr Cliff

PROPOSED OFFSHORE WIND FARM, DOGGER BANK ("the project")
PROPOSAL BY FOREWIND ("the applicant")
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 ("the EIA Regulations")

Thank you for your letter of 14th October 2010 regarding the information to be provided in an environmental statement relating to the above project.

There is little for HSE to comment on at this stage however, there are some observations that it would seem sensible to pass on to Forewind.

Major Hazards sites and explosives sites within the vicinity of the proposed development

Explosives sites

A check has been made on the locations of licensed explosives sites in relation to the proposed Dogger Bank Offshore Wind Farm. On the basis of the information provided, there are no HSE-licensed explosives sites which might impact on the proposed Offshore Wind farm. However, HSE has licensed an explosive site at Hollym which may impinge on the bottom indicative cable corridor route. HSE also has licensed an explosive site at Cottingham which may impinge on the apex point of all the indicative cable corridor routes. These cable corridor routes are very broad and the HSE Explosives Inspectorate would like the opportunity to comment further when more accurate cable route details are available.

Consultation distances

The following figures from the Environmental Impact Assessment Scoping Report have been used to determine the application site boundary:

- Figure 1.1 (Rev 3 Dated 29-Sep-10) – Scoping Envelope.
- Figure 1.3 (Rev 9 Dated 27-Sep-10)) – Onshore Scoping Envelope Detail.

The application site boundary for the onshore substation and the identified area within which the onshore cable may be sited, potentially fall within forty-four of HSE's Consultation Distances and one estimated Consultation Distance. Only the onshore area indicated in Figures 1.1 and 1.3 have been reviewed as part of the land-use planning preliminary assessment. Offshore operations are not considered as part of HSE's land-use planning advice.

There is not sufficient information in the report to determine the exact location of the substation on the mainland, the final route of the onshore cabling and whether any new workplaces will be constructed as part of this project. Therefore, a workplace containing fewer than 100 people in each building and fewer than 3 occupied storeys per building has been assumed for the purposes of this assessment. **If final proposals differ from these assumptions, a revised assessment would be required which may affect the advice from HSE.**

When further details are known, HSE should be consulted about proposals within the consultation zones, but on the basis of the information provided, it is unlikely that HSE would advise against the proposed development.

As the proposed development is potentially within the Consultation Distances of several Major Hazard pipelines of several different pipeline operators, the applicant **should consider contacting the pipeline operators** for the following reasons:

- The operator may have a legal interest in the vicinity of the pipeline. This may restrict certain developments within a certain proximity of the pipeline.
- The standards to which the pipeline is designed and operated may restrict occupied buildings or major traffic routes within a certain proximity of the pipeline. Consequently there may be a need for the operator to modify the pipeline, or its operation, if the development proceeds.

Hazardous Substances Consent (HSC)

The Dogger Bank Project One: EIA Supplementary Scoping Report does not make reference to the storage of hazardous substances. Any site needing to store or use hazardous substances at or above specific quantities must obtain consent from the Hazardous Substances Authority (HSA) in accordance with

the Planning (Hazardous Substances) (Amendment) (England) Regulations 2010.

Forewind should check if any of the named substances in Part A of the Schedule are present at or above the specified controlled quantities. If they are then they would need to apply for a Hazardous Substances Consent. In many cases the substances present may not be included in Part A; but they may fall within one or more of the categories of substances & preparations specified in Part B of the Regulations. If that is the case and they are present at or above the controlled quantity, they would need to obtain a consent.

There is insufficient information to determine:

- If HSC is required.
- Whether HSE would advise against granting HSC.
- The Hazardous Substances Authority that should be contacted to apply for HSC.

Electrical Safety

This project may involve connections to the electrical power distribution systems and have an impact on existing generation, transmission and distribution assets. As well as satisfying general UK health and safety legislation (i.e. Health and Safety at Work etc Act 1974 and supporting regulations), the proposed design and future operations must comply with the Electrical Safety, Quality and Continuity Regulations 2002, as amended. Generators, distributors, their contractors and others have defined duties in order to protect members of the public from the dangers posed by the electrical equipment used. HSE enforces the safety aspects of these regulations. If you have any doubts about the particular application of these regulations in terms of either the operation or construction of substations, overhead lines or underground cables, please contact Mr J C Steed, Principal Specialist Inspector (Electrical Networks), either at john.steed@hse.gsi.gov.uk or Rose Court GSW, 2 Southwark Bridge Road, London SE1 9HS.

Design Standards

As well as satisfying general UK health and safety legislation (i.e. Health and Safety at Work etc Act 1974 and supporting regulations) the promoter should consider providing a summary of the design standards that will be specified at the wind turbine procurement stage. For example the relevant standards include EN 61400-1:2005 *(Wind Turbines – Design Requirements)*, EN 50308:2004 *(Wind Turbines – requirements for design, operation and maintenance)*, EN 62271-200:2004 *(High-voltage switchgear and control gear)*.

In particular, HSE would prefer any high voltage switch gear to be at a separate level to the entry point for each turbine. Likewise details of the various EU product safety Directives that the turbines will be certified ("CE-marked") in accordance with, for example the Machinery Directive (2006/42/EC). We would expect each turbine to be equipped with an access

lift complying with the same Directive in view of the access height to the nacelle.

I hope this information is useful. HSE looks forward to receiving the formal s42 consultation from the promoter in due course when the plans are sufficiently developed.

Please note any further electronic communication on this project can be sent direct to the HSE designated e-mail account for NSIP applications the details of which can be found at the top of this letter. Alternatively hard copy correspondence should be sent to Miss Vilja Gatrell at:

4S3 Redgrave Court,
Merton Road,
Bootle
Merseyside
L20 7HS
Tel. 0151 951 4607

Yours sincerely

Penny Taylor
Risk Communications Policy Unit

Centre for Radiation, Chemical and Environmental Hazards

IPC
19 NOV 2010
REF:

Health Protection Agency

Centre for Radiation, Chemical and Environmental Hazards

Chilton, Didcot
Oxfordshire OX11 0RQ

Tel +44 (0) 1235 831600
Fax +44 (0) 1235 833891
www.hpa.org.uk/radiation

FAO: David Cliff
Infrastructure Planning Permission
Temple Quay House
Temple Quay
BRISTOL
BS1 6PN

16 November 2010

Your Ref: EN010021
Our Ref: EN_RE_WF_101112_0074

Dear Mr Cliff

PROPOSED OFFSHORE WIND FARM, DOGGER BANK

Thank you for your letter advising of Forewind's intention to make an application to the Infrastructure Planning Commission (IPC) for consent for the proposed Dogger Bank Offshore Wind Farm.

The attached response provides a framework for considering the health impact, including the direct and indirect effects associated with power frequency electric and magnetic fields. Also, there are some pages on the HPA website regarding IPC-related activity (www.HPA.org.uk/IPC); and guidance on issues such as Health Impact Assessments will become available in the next few weeks.

Please do not hesitate to contact me if you require any clarification. In doing so, please send all correspondence to crce.ipcconsulations@hpa.org.uk to ensure we are able to deal with your queries more efficiently.

Yours sincerely

Dr JILL MEARA

Consultant in Health Protection/Deputy Director, Centre for Radiation, Chemical and Environmental Hazards (CRCE), Health Protection Agency

Encl: HPA position statement for onshore / offshore wind farms v1.1

Planning Act 2008: HPA position in relation to applications for onshore and offshore wind farms

This document sets out the Health Protection Agency's (HPA's) position in relation to Nationally Significant Infrastructure Project (NSIP) applications for new onshore and offshore wind farms under the Planning Act 2008. It is intended for the use of NSIP promoters and should be read in conjunction with the HPA's external guidance. Promoters should refer to the HPA IPC web-pages (www.HPA.org.uk/IPC), which detail the protocol for interacting with the HPA. Electronic-format. Correspondence concerning NSIP applications should be directed to crce.ipcconsulations@hpa.org.uk.

Background

The HPA is a statutory consultee at the pre-application **and** application stages for NSIPs "which are likely to involve chemicals, poisons or radiation which could potentially cause harm to people"[1]. The HPA is also required to consider other related planning documents such as Environmental Impact Assessments (EIA), where these accompany a NSIP application.

The HPA response to NSIP consultations covers chemicals, non-ionising and ionising radiation. The HPA will not comment upon wider health determinants as these are outside the HPA's remit as a statutory consultee. Promoters should ensure that they consult other health bodies: Strategic Health Authorities (SHAs), Primary Care Trusts (PCTs), and Health Boards (HBs) (in Wales) are statutory consultees to NSIP. Whilst SHAs are directly named as a consultee for NSIPs in the Regulations[2], PCTs and HBs come under the wider definition of "statutory undertakers."

Wind farms: non-ionising radiation (power frequency electric and magnetic fields)

The HPA provides advice on standards of protection for exposure to non-ionising radiation, including the power frequency electric and magnetic fields associated with electricity power lines and associated equipment. A summary of this advice is provided as a separate annex to this document.

Wind farms: chemicals

At this point in time, there is no body of evidence conclusively linking wind farms with adverse health effects arising from emissions of chemicals.

When operational, wind generation should not produce emissions, pollutants, or waste products. Installations are therefore highly unlikely to lead to public health impacts associated with emissions of chemicals.

There is potential for impacts to arise during the construction and decommissioning phases from the transport of material and equipment (eg, accidental leaks, spills, and releases). The movement of material off-site has the potential to lead to impacts, if not properly managed (eg, associated with contaminated land or dredged sediment). The HPA would expect the applicant to adhere to best practice guidance during these phases and for them to ensure that potential impacts are assessed and minimised. Further HPA recommendations are outlined in the HPA's EIA scoping response template (www.HPA.org.uk/IPC).

Offshore wind farms are located out to sea, away from members of the public, hence the potential for the public to be affected by any emissions from them is very small. Where onshore wind farms are located near to people, there is evidence that they may be more likely to give rise to other environmental impacts. A brief outline is given in the section below. Note that this is intended to provide an overview and does not constitute a literature review or HPA opinion on these aspects.

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[1]Cited in the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 http://www.opsi.gov.uk/si/si2009/uksi_20092264_en_1

[2]The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 http://www.opsi.gov.uk/si/si2009/uksi_20092264_en_1

Wind farms: environmental aspects outside of the HPA's remit as a consultee

The most common concerns expressed, with regard to siting of wind turbines close to housing, are related to noise and shadow flicker (which occurs when the sun is at low-levels and the sunlight is intermittently blocked by the blades of the turbine, causing a flashing effect).

Government departments have published some information of relevance with respect to noise and other impacts[3,4]. It is important that promoters consult Local Authorities regarding potential nuisance impacts.

Wind farms: summary of HPA requirements

The HPA considers that the onus is on the applicant to conduct the assessment of compliance with the referenced advice and policy, and to gather and present the information clearly, leaving no additional analysis necessary on the part of the HPA. The assessment should be clearly laid out, either as an identified section of a report which can be read in isolation or as a separate report.

In respect of electromagnetic fields, compliance with the ICNIRP guidelines should be highlighted. If it is considered not practicable for compliance to be achieved at all locations accessible to the public, the report should provide a clear justification for this. The report should include an appropriate risk assessment showing that consideration has been given to mitigation measures for acute risks. In relation to possible long-term health effects and precaution, the report should include a summary of compliance with HPA advice and Government policy.

[3] Wind Power: 10 Myths Explained
http://webarchive.nationalarchives.gov.uk/+/http://www.berr.gov.uk/energy/sources/renewables/explained/wind/myths/page16060.html#MythTurbinesareahealthhazard

[4] Moorhouse A et al (2007). Research into Aerodynamic Modulation of Wind Turbine Noise: Final Report. July 2007. Contract No NANR233. Department for Business, Enterprise and Regulatory Reform, University of Salford. URN 07/1235.

Annex

HPA advice regarding power frequency electric and magnetic fields

In March 2004, the National Radiological Protection Board (NRPB), (now part of the HPA), published advice on limiting public exposure to electromagnetic fields. The advice was based on an extensive review of the science and a public consultation on its website, and recommended the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP):

http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/

The ICNIRP guidelines are based on the avoidance of known adverse effects of exposure to electromagnetic fields (EMF) at frequencies up to 300 GHz (gigahertz), which includes static magnetic fields and 50 Hz electric and magnetic fields associated with electricity transmission.

For static magnetic fields, ICNIRP recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT as advised by the International Electrotechnical Commission.

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to the field. The ICNIRP guidelines give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m^{-1} (kilovolts per metre) and 100 μT (microtesla). If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with the basic restrictions and reducing the risk of indirect effects. Further clarification on advice on exposure guidelines for 50 Hz electric and magnetic fields is provided in the following note on the HPA website:

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733805036

HPA notes the current Government policy is that the ICNIRP guidelines are implemented in line with the terms of the European Recommendation:

http://www.dh.gov.uk/en/Publichealth/Healthprotection/DH_4089500

There is concern about the possible effects of long-term exposure to electromagnetic fields, including possible carcinogenic effects at levels much lower than those given in the ICNIRP guidelines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia, could not be used to derive quantitative guidance on restricting exposure. However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

The Stakeholder Advisory Group on ELF EMFs (SAGE) was then set up to take this recommendation forward, explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government. In the First Interim Assessment of the Group, consideration was given to mitigation options such as the 'corridor option' near power lines, and optimal phasing to reduce electric and magnetic fields. A Second Interim Assessment addresses electricity distribution systems up to 66 kV. The SAGE reports can be found at the following link:

http://sagedialogue.org.uk/ (go to "Document Index" and Scroll to SAGE/Formal reports with recommendations)

The Agency has given advice to Health Ministers on the First Interim Assessment of SAGE regarding precautionary approaches to ELF EMFs and specifically regarding power lines and property, wiring and electrical equipment in homes:

http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1204276682532?p=1207897920036

The evidence to date suggests that in general there are no adverse effects on the health of the population of the UK caused by exposure to ELF EMFs below the guideline levels. The scientific evidence, as reviewed by HPA, supports the view that precautionary measures should address solely the possible association with childhood leukaemia and not other more speculative health effects. The measures should be proportionate in that overall benefits outweigh the fiscal and social costs, have a convincing evidence base to show that they will be successful in reducing exposure, and be effective in providing reassurance to the public.

The Government response to the SAGE report is given in the written Ministerial Statement by Gillian Merron, the Minister of State, Department of Health, published on 16th October 2009:

http://www.publications.parliament.uk/pa/cm200809/cmhansrd/cm091016/wmstext/91016m0001.htm

The above information provides a framework for considering the health impact associated with the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

10th November 2010

Dear Sir/Madam,

Consultation: Dogger Bank Project 1, Environmental Impact Scoping Report

These comments are submitted on behalf of the Homes and Communities Agency (HCA), the national housing and regeneration agency.

Our role is to create opportunity for people to live in high quality, sustainable places. We provide funding for affordable housing, bring land back into productive use and improve quality of life by raising standards for the physical and social environment.

The Homes and Communities Agency welcomes the invitation to comment on the pre-application consultation. As part of this consultation we have the following comments;

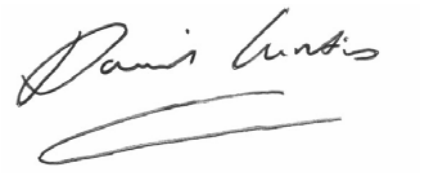
Policy Stance:
The Homes and Communities Agency does not have a specific policy stance in relation to offshore wind farms, but we will support the Government's position on this issue. Assuming that the site is supported by the Government, we will have no objections in principle to the development of the offshore wind farm.

Both North and North East Lincolnshire refers to this project within their respective Local Investment Plans, with specific reference to the 5,000 jobs that will be created in key manufacturing roles as a result of the wind farm. The HCA are working closely with North Lincolnshire Council to develop the proposals to provide increased housing provision through the Lincolnshire Lakes project.

Consultation process:
The developer should fully take into account the needs and views of the local community. The Scoping Report does contain a section on consultation and the production of a Statement of Community Consultation (SOCC) would be most welcome at an early stage. We would welcome the inclusion of information about the workshops and meetings held to date, the stakeholders who have been consulted and the issues they have raised. It would also be useful to set out a future consultation timetable including further details of the ways the community are involved and can further participate.

Summary of Response to Consultations
Local Authorities in Yorkshire and The Humber are currently engaged in the preparation of a Local Investment Plans which will set out the housing and regeneration priorities for North and North East Lincolnshire. It is likely that key investments including wind farm proposals, will be set out in the Local investment Plan.

I hope the comments submitted are helpful and are considered in this consultation process. Please contact me should you have any queries.



David Curtis
Director
North East, Yorkshire and The Humber

From: Alan.Bravey@eastriding.gov.uk
To: IPC Scoping Opinion;
Subject: Proposed Offshore Wind Farm, Dogger Bank
Date: 18 October 2010 11:11:36

Good morning,

Thank you for the opportunity to comment on the above application.

The Humber Local Resilience Forum has agreed that it would be inappropriate for it to make formal comments on any applications because it is not a statutory body. The individual organisations that make up the Local Resilience Forum should all be planning consultees and can therefore be consulted through established systems.

Thanks

Alan

Alan Bravey
Emergency Planning Manager
Humber Emergency Planning Service
01482 393050

MessageLabs. (CCTM Certificate Number 2009/09/0052.) In case of problems, please call your organisation's IT Helpdesk.
Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes.

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David Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Your reference: 101012_EN010021_287174
Date: 10 November 2010

By e-mail to
ipcscopingopinion@infrastructure.gsi.gov.uk

Dear David

PROPOSED OFFSHORE WIND FARM, DOGGER BANK ("the Project")
PROPOSAL BY FOREWIND ("the Applicant")
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 ("the EIA Regulations")

Thank you for your recent consultation requesting our scoping advice on the proposed Dogger Bank Offshore Wind Farm Project One (Tranche A). This project proposes development activities onshore, within English territorial waters and also in UK offshore waters, beyond 12 nautical miles. Therefore this is a joint response between the Joint Nature Conservation Committee (JNCC) and Natural England (NE).

The JNCC is the statutory adviser to Government on UK and international nature conservation. Our work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems. Our role is to provide evidence, information and advice to inform good policy making, planning, development and risk management leading to the protection of our natural resources.

JNCC has responsibility for the provision of nature conservation advice in the offshore area. 'Offshore' is defined as beyond 12 nautical miles (nm) from the coastline to the extent of the United Kingdom Continental Shelf (UKCS). Within territorial waters (<12 nm) nature conservation advice is the responsibility of the relevant country agencies these being: Natural England (NE), Countryside Council for Wales (CCW), Scottish Natural Heritage (SNH) and the Council for Nature Conservation and the Countryside (CNCCNI).

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development. We are working towards the delivery of four strategic outcomes:

- A healthy natural environment;
- People are inspired to value and conserve the natural environment;
- Sustainable use of the natural environment;
- A secure environmental future

The advice provided by NE and JNCC in this letter is made for the purpose of this present consultation only. Under the relevant legislation, NE and JNCC expect to be included as consultees in relation to any additional matters to be determined by the consulting body that may arise as a result or, or in relation to, the present proposal. NE and JNCC retain their statutory discretion to modify their present advice or opinion in view of any or all such additional matters or any additional information related to this consultation that may come to our attention.

Project Description

The Dogger Bank offshore wind farm zone (Zone 3) is located in the North Sea off the east coast of Yorkshire. Forewind's Dogger Bank Project One is located within an area identified as Tranche A, which covers the south western area of the zone. An export cable corridor has been identified, which runs from the Tranche A area to the Yorkshire coast north of the Humber and south of Flamborough Head. A broad onshore study area has also been selected. Within each of these areas the project is likely to comprise of the following main components:

Offshore

- Offshore wind farm array to generate up to 1.4 GW (wind turbines and their support structure/foundations as well as scour protection, if required);
- Offshore collector and converter substations (with foundations and scour protection measures);
- Offshore operations and maintenance infrastructure;
- Subsea inter-array cables;
- Subsea export cables (which may required pipeline and cable crossings); and
- Offshore meteorological masts and metocean equipment.

Onshore

- Onshore transition pit;
- Cable system from transition pit to converter substation;
- Ancillary cable ducts;
- Cable system converter substation to National Grid Electricity Transmission (NGET) substation; and
- Up to two converter substations.

The Zonal Appraisal & Planning Process

For Round 3 development, the zonal appraisal and planning (ZAP) process broadly characterises each zone and sets the (environmental) context for each individual wind farm site within the zone. Forewind have produced a Zone Characterisation (ZoC) document as a result of the Dogger Bank zone ZAP process. The ZoC document was published on www.forewind.co.uk in October 2010 at a similar time to Forewind submitting a scoping opinion request to the IPC.

The key benefits of zonal appraisal with respect to EIA are that:

- It provides a better opportunity for understanding the wider context of environmental issues, particularly in respect of potential cumulative impacts.
- A wider development zone presents greater flexibility for locating development away from sensitive areas.
- The ZAP process provides a framework for discussion of key issues across a number of stakeholders.

The ZoC document is therefore highly relevant to the Dogger Bank Project One scoping report as it summarises the work on zonal characterisation and the baseline data available for this zone. The process of zonal appraisal will inform, and provide the context to, each individual EIA for progressive phases of development within the zone.

It would therefore be ideal to review the Dogger Bank Project One scoping report in combination with the ZoC document. However, due the publication timing and the substantial nature of the ZoC document it has not been possible to undertake a dual review in this instance. We would like to highlight that it would have been helpful if Forewind had published the ZoC document in advance of requesting a scoping opinion from the IPC for the Dogger Bank Project One.

Forewind should also ensure that there is good integration and referencing of the ZoC document any scoping reports produced for all projects in the zone.

Aim of this Scoping Opinion

The purpose of this scoping opinion is to provide the Infrastructure Planning Commission (IPC) with advice on the suitability of the scoping report submitted by the developer in presenting the range of issues that will be considered in the Environmental Impact Assessment (EIA) for the project.

This response focuses on the content of the scoping report, following the order of topics presented within the report, with reference to other relevant discussion where appropriate. We aim to inform the IPC of where we feel the developer needs to strengthen their on-going EIA process to produce an Environmental Statement that is fit for purpose.

For this offshore wind farm proposal we highlight the key nature conservation interests and visual impacts that we consider should be scoped into the EIA. Our full advice on these interests is provided in the following appendices:

- **Appendix A1 - Advice relating to the development in general.**
- **Appendix A2 - Advice relating to the offshore elements of the development.**
- **Appendix A3 - Advice relating to the onshore elements of the development.**

Please note that our advice in relation to potential impacts may alter once the final landfall and onshore cable route has been chosen.

As part of our scoping advice we include the range of interests and potential impacts that may need to be considered in relation to regulation 61 of The Conservation of Habitats and Species Regulations 2010, commonly referred to as the Habitats Regulations Appraisal (HRA), and regulation 25 of The Offshore Marine Conservation (Natural Habitats &c.) Regulations 2007 (as amended). More detail on the legislation relevant to this proposal, legislative requirements and those relating to an HRA are given in:

- **Appendix B1 - Relevant legislation & planning policies.**
- **Appendix B2 - Advice on HRA for relevant SPAs.**
- **Appendix B3 - Advice on HRA for relevant SACs.**

Again please note that our advice may alter once the landfall and onshore cable route have been decided upon.

Key Issues

We note that along with the other Round 3 plans, the proposals are of a scale that has not been encountered before and there are likely to be significant challenges assessing the environmental effects, particularly through the HRA process. The key issues which we would like to highlight for the IPC at this stage are:

1. Potential effects on marine mammals from noise during construction – both at a project-level and cumulatively.
2. The potential effects of this development proposal on birds during all phases of development encompassing displacement, indirect effects (through impacts on prey species) and collision mortality – both at a project level and cumulatively.

JNCC and Natural England are keen to work with the IPC (and the developer) and it may be appropriate to discuss the issues raised within this letter at a future meeting (recognising the need to record such discussions for public presentation).

If you have any questions regarding the above comments or want to discuss further any of the issues we have raised please contact the following:

Simone Pfeifer simone.pfeifer@jncc.gov.uk at JNCC and Louise Burton louise.burton@naturalengland.org.uk at Natural England.

Yours sincerely

Simone Pfeifer
On behalf of Victoria Appleyard
Offshore Industries Advisor

Louise Burton
Marine Renewables Advisor

On behalf of:

JNCC
Joint Nature Conservation Committee

On behalf of:

NATURAL ENGLAND

Appendix A1 - Advice relating to the development in general

1. Introduction

1.6 Zone Appraisal and Planning (ZAP)

We advise that the applicant's Environmental Statement (ES) contains an outline of the main alternatives they have considered for the development, with an explanation of the reasons for their final choice of project. This should relate to the Zone Appraisal and Planning (ZAP) process and the associated Zone Characterisation (ZoC) document as well as the Tranche A Selection Report.

The key benefit of the ZAP process with respect to EIA is that it provides a framework for the discussion of key issues across a number of stakeholders through a process of active engagement. In this case we have had little to no consultation on the ZoC and as such are unable to provide any specific advice. Continual review of the zonal plan, with close liaison with stakeholders could usefully take place at regular intervals as the data collected becomes available for analysis, potentially streamlining the discussions that need to take place at an EIA level.

Natural England would welcome the opportunity to work with Forewind on the production of their ZoC documents, particularly the onshore ZoC, in the near future.

1.7.3 Identification of the onshore scoping envelope

Landfall - as there are numerous potential landfall sites it is difficult to give advice on any specific local concerns that would need to be considered. As the Holderness Coast is a rapidly changing coastline it is particularly important to consider any potential impacts on coastal processes. We would recommend that Forewind consult the shoreline management plan. They should also be aware that significant areas of this coastline have eroded at a much faster rate than had been predicted, and this has had implications for other projects along the coast. Work produced as part of the Westermost Rough and Humber Gateway offshore wind farms and the Langeled Pipeline project provides useful reference material.

2. Project Description

Phases of Development

If the developer will be making their licence application after next April they should be aware that they will be applying for the new Marine Licence, and that the whole life of the project will need to be considered. We would imagine that this would be of particular relevance when considering the rate of recovery from the construction and operational phases, combined with the impact of decommissioning.

- **Construction**: The ES should include details on proposed construction methods including information on project management including contractor arrangements, 'chain of command', roles and responsibilities of key staff, and timetabling and the phasing/sequencing of proposed works, especially if this has been identified as a mitigation measure for environmental, visual or other effects. Information should also be included on the proposed construction equipment, and intended delivery routes and port facilities.
- **Operation & Maintenance**: The ES should include details of operation and maintenance activities relating to both the turbines and associated infrastructure, i.e. cables, etc and an assessment of any impacts that could arise, considering any potential environmental, navigational and/or other effects.
- **Repowering**: It is important to be clear on what repowering entails and whether there is likely to be any relocation of subsea infrastructure or alteration of the wind farm layout. This includes whether further scour protection is required for foundations in the same, or in new, locations across the wind farm site. Any alterations to the locations of offshore elements for repowering may require an update to the benthic survey work and assessments that have previously been carried out.
- **Decommissioning**: The process and methods of decommissioning should also be considered, and reviewed, at this (pre-application) stage, with an options appraisal present in the ES.

3. EIA Methodology

3.1.4 Habitats Regulations Assessment

To highlight further detail outlined in Appendix B2 and Appendix B3 at this stage JNCC and Natural England are of the opinion that the applicant should provide further information regarding both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) that may be affected by the proposed project to enable clear advice to be provided on screening for an Appropriate Assessment.

It is important to be clear on the distinction between the test for 'likely significant effect' pertaining to appropriate assessment, and measuring the significance and magnitude of impacts relevant to EIA. Adequate scoping with direct engagement of the SNCAs will enable the potential need for appropriate assessment for a project, or aspects of a project, to be addressed at the earliest opportunity. If appropriate assessment is anticipated as is the case for this project, early engagement and planning will enable the developer to undertake a suitably robust EIA, for example, developing applicable survey methodologies, and presenting results as part of the EIA process that will address the competent authority's information needs. This will minimise the risk of the competent authority being presented with insufficient information to address their responsibilities under the Habitats Regulations, and subsequent delays to the consenting process and in addition, will allow the appropriate assessment process to be considered throughout EIA. We would welcome the opportunity to discuss the scope of the Habitat Regulations Assessment with the developer and the IPC in the near future.

3.4 Mitigation and monitoring

We recognise the difficulties in the forward-planning of monitoring programmes. However to ensure effective monitoring, and so as to inform the EIAs of future Tranches in Zone 3, monitoring needs to be comparable to both pre- and post-construction and not necessarily focused on 'baseline' information. Characterisation should provide a broad overview of the species and physical processes present in the development site, including any cable routes. The methodology for monitoring surveys should follow that used for the pre-construction survey and enable assessment of the effects predicted within the EIA. It is important, therefore that the methodology for monitoring is discussed early in the project so that it can be paired with any pre-construction survey work to allow testing of impact hypotheses.

We welcome the intention of Forewind to work closely with the relevant stakeholders to develop the most appropriate mitigation and monitoring programme and suggest that discussions regarding survey strategies are held in the near future.

3.5 Cumulative and in-combination effects

An area of concern for this development, and all other Round 3 development, in environmental terms is the potential for cumulative impacts arising with other operational, planned and in-construction marine activities in the area. This includes interaction with other wind farm developments in the Greater Wash region (constructed, planned or any future extension projects) as well as developments within the Round 3 Hornsea and Dogger Bank OWF zones. Interaction with other activities in the area such as gas industry operations and marine aggregates should also be considered.

We consider that the assessment of cumulative and in-combination effects should be more robustly presented within the ES. We advise that in addition to the identification of potential cumulative and in-combination effects under sub-chapters within the ES, there should be an additional chapter/section dedicated to cumulative and in-combination effects which summarises and discusses all the issues identified under each topic heading, and presents

the topic in its entirety. It is critical that cumulative impact assessment is thoroughly considered at the scoping stage, so that it can be undertaken robustly.

For example, the developer could present their activities in a table format and define what they consider to be the activities to be considered in-combination with the proposed development, considering both the spatial and temporal aspects. It may be useful to present this for each phase of development (i.e. construction, operation and decommissioning) as this would clearly set out which effects are likely to be short-term in nature, and which are more likely to be lasting effects.

With respect to the above cumulative and in-combination issues relating to birds and marine mammals, it is clear that due to the wide ranging and mobile nature of such species, both the assessment and potential mitigation would be more easily addressed at a wider level. This is of particular importance for bird species, such as sandwich tern and gannet, and marine mammals.

4. Stakeholder Engagement

Although we believe that a thorough consultation process has been undertaken please be advised that Natural England recommends that Forewind contact the North Eastern Sea Fisheries Committee for further detail on the prohibited trawl zone along the Holderness Coast and in relation to additional information on the shellfishery in the cabling area (which is of high economic importance to the region) as well as fishing activity along the coast. We believe that there may be some inaccuracies relating to the inshore fisheries data provided in section 7.1.

Appendix A2 - Advice relating to the offshore elements of the development

1. Physical environment (Section 5 pages 39-48)

5.1 Scour protection

Due to the potential for scour protection to alter seabed habitats, JNCC and Natural England would like to see greater justification for the use of scour protection. Full consideration should be given in the ES to all the available and best environmental options for scour protection, including considering the potential to remove during decommissioning (e.g. removable fibre mattressing instead of rock dumping), to allow the habitat to return to its original form. Where possible the construction should be designed and planned to reduce the footprint of disturbance on the sea bed, for example, scour protection should be installed only if the structural integrity of the foundations are at risk (OSPAR 20081). Changes in design that reduce the need for scour protection such as increased driven depth and wall thickness of monopiles (Westermost Rough offshore wind farm Environmental Statement 2009, p21), design changes to J-tubes and strengthening of cables or the use of jacket/ quadrapod foundations which minimises the amounts required are encouraged and should be considered.

5.2 Cables

Recent experience has shown that developments often need to undertake remedial burial work for cables at a point in the future, when the best environmental options are limited. We therefore advise that scour and its associated impacts around export and inter-array cables that have the potential to become uncovered are fully explored in the ES. In order to achieve the best environmental option and long-term solution from the start, in addition to the consideration of the total impacts over the lifetime of the development.

Provided the cables are buried, at suitable depths we have no concern about cable impacts on sediment movement within the array area. However, any potential proposals for scour protection and rock armouring that would interrupt sediment transport (bedload) along the export cable route should be evaluated.

Natural England believe that there may be impacts on long shore sediment transport, and it is therefore important that the cable does not become an exposed / raised structure that will interrupt sediment supply, effectively acting as a groyne and trapping sediment. Likewise, we advise against the use of cable protection for the same reason; even if it is buried, cable protection could result in increased scour and erosion. We therefore advise that standard best practice is followed, as set out in a FEPA licence condition, burying the cable to an optimum depth so that it will not become exposed, and monitoring should be undertaken to ensure that the cable is not exposed and coastal processes are un-affected.

Landfall

The ES will need to consider the erosion rate over the lifetime of the development, with further modelling of potential storm surges which are predicted to occur more frequently as part of climate change.

Please note that Natural England has advised a FEPA condition for both Humber Gateway and Westermost Rough offshore wind farms, which specifies that there is no hard protection of the cable either offshore or within the cliff structure over the lifetime of the project due to the potential interruption of coastal processes including longshore sediment transportation and natural coastal erosion. We believe that any potential reduction in sediment transport at a cross shore profile could lead to less material reaching Spurn Point and more being transported out; resulting in a negative sediment balance. This may result in thinning and a possible breach at Spurn Point. Any morphological change to Spurn point would lead to a risk of impact on the Humber Estuary Designated Site, i.e. SAC, SPA, Ramsar and the SSSI geomorphological interest (it is also possible that impacts could be felt at Easington Lagoons SSSI) from loss of habitat and increased flood risk. This may need to be assessed through the HRA process.

5.3 Potential Effects

Effects on physical processes: It is stated that potential changes in the hydrodynamic regime "will not be expected to result in a significant impact on any related environmental parameter"; however, no justification for this conclusion is provided. We consider that impacts to the hydrodynamic regime (nature of tidal flows and waves) resulting from the installation of turbines and potential subsequent changes in sedimentary processes (e.g. sediment mobility, sandbank morphology, and bedforms) should be assessed during the EIA. This assessment should be informed by appropriate hydrodynamic information for the development area and should consider both potential near-field effects (i.e. within the immediate vicinity of the turbine grid) and far-field effects (e.g. within the wider area of Dogger Bank). In-combination effects need to be considered, especially given the large number of turbines proposed and the overlap of the project with the Annex I sandbank habitat of the Dogger Bank pSAC. **JNCC also advise that screening for an Appropriate Assessment in relation to potential effects on hydrodynamic and sedimentary processes will be required. Please refer to Appendix B3 for further detail on the HRA process in relation to SACs.** JNCC and NE would therefore welcome discussions with Regulators and Forewind in relation to this.

2. Biological environment (Section 6 pages 49-87)

6.1.2 Statutory international designations

JNCC welcome that it is acknowledged by Forewind that the list of relevant SPAs will need revision following site specific investigation. This list may need to be extended to include further afield SPAs for certain far-ranging/ migratory species, and international sites. Further discussion is needed on how to define the scope of the HRA from the data collected, and whether the methodology being employed is sufficient.

Forewind should note that Dogger Bank pSAC has not yet been submitted to the European Commission. The site is currently undergoing public consultation, until 12 November. However we recommend that it is considered as such, using the available Conservation Objectives, during the EIA and HRA for this project.

Table 6.1 (Page 50): Please note that Flamborough Head and Bempton Cliffs SPA is missing from the list.

6.1.3 Statutory national designations

Marine Conservation Zones: Please note that the Net Gain project has submitted their second iteration report. This report outlines the sites for Marine Conservation Zones (MCZs) that are currently being considered by the regional stakeholder groups. Of particular relevance is the Holderness Coast Prohibited Trawl Area which is likely to be put forward as a MCZ. This covers the area south of Bridlington down to Spurn Point out to 3nm. Natural England or Net Gain will be able to provide further information on this as soon as it becomes available. The 2nd iteration progress report and further information on the Net Gain project is available at http://www.netgainmcz.org.

6.2.1 Existing environment - Intertidal

Please note that the UK Sea Map 2010 data does not cover the intertidal area.

6.2.2 Potential impacts

Loss of habitat: Construction activities are considered to be of “temporary and localised significance”; it would be useful to refer to post construction monitoring reports of existing developments to give an indication of recovery rate.

6.3.1 Existing Environment - Subtidal

To support the preparation of the environmental baseline chapters relevant to the cable route we recommend reviewing the results of the Humber Regional Environmental Characterisation (REC) project. This project covers an area of 11,000 km^2 off the Humber estuary and will provide regional scale interpretations of geophysical, geological and biological data from the study area in form of integrated broad scale seabed maps. The final report will be published in February 2011 but all environmental data acquired during the survey phase of the project is already publicly available from the Marine ALSF Data Archive at www.marinealsf.org.uk. Background information on the Humber REC including a map of the area covered can be found at http://www.alsf-mepf.org.uk/projects/rec-projects.aspx.

6.4 Fish and Shellfish Resource

Migratory Species: Please note European Eel and Smelt are both listed as MCZ Features of Conservation Importance and both have been known occur within the cable corridor. Net Gain will therefore be considering their possible inclusion in a possible MCZ.

6.5 Ornithology

6.5.1 Existing environment

Offshore waters

Whilst Tranche A is well outside the foraging range of many species of relevance to coastal SPA populations during the breeding season, it may be an area of importance to these populations pre and post breeding (and not limited to the migration period as suggested).

The Crown Estate & Forewind Studies

The data from both studies suggest that auk species (guillemot and razorbill) are of key significance to this site. This emphasises the need to ensure that the current and future survey methodologies are able to calculate robust population estimates for these two species.

Table 6.2: We would like clarification if ‘peak count’ and ‘monthly total’ are the same? Are these raw counts?

Table 6.3: We would like clarification how the ‘relative abundance calculated’ was calculated?

6.5.2 Potential Impacts

Disturbance and Displacement

Please note that birds may also respond to the visual cues of WTGs (as well as noise). In terms of disturbance/ displacement of prey species, we encourage a collaborative approach to this assessment, in conjunction with the work on Fish and Shellfish impacts (6.4).

Barrier effects

The barrier effect does not necessarily entail the wind farm being a 'physical obstacle' as such, instead the bird perceives the wind farm area as something to avoid. This avoidance behaviour leads to changes in flight paths, and hence potentially increased energetic requirements. It is questionable if the perception of the wind farm as a barrier would be worsened in high winds or reduced visibility. In fact flocks of waterfowl in the Kalmar Sound, Sweden (Pettersson, 2005)[1] flew nearer to the wind farm before exhibiting avoidance behaviour in poor visibility and night time conditions, than in clear conditions, which may have resulted in less deviation from their intended flight path. However, the energetic consequences of this difference are undetermined. It is acknowledged that weather may have an influence on migration altitude, and that altitude varies considerably both within and between species. For many migrant species there is no existing data on migration altitude, particularly over the sea and as such, we require further evidence to support this assumption.

Collision risk

Whilst body size and wing loading may be factors that contribute to estimating the sensitivity of a species to collision with turbines, other factors may also be relevant (e.g. predator vigilance, foraging technique). Furthermore, the risk of collision is a function of exposure and sensitivity; hence species may be sensitive to collision, but not exposed to this risk doe to avoidance of the wind farm site.

[1] Pettersson J (2005). The Impact of Offshore Wind Farms on Bird Life in Southern Kalmar Sound, Sweden A final report based on studies 1999-2003 (at the request of the Swedish Energy Agency - A reference group collaboration with its principal centre at Ekologiska Institutionen Lunds Universitet.

6.5.3 EIA process

JNCC would like to highlight that the initial survey protocol was presented to us, but it is not clear that our recommendations have been taken on board

We are encouraged that Forewind are in consultation with us (and others) regarding the survey methodologies. We acknowledge that the location of the site offers challenging conditions, and are keen to work with Forewind to ensure the surveys are fit for purpose and the data gathered is informative. It is important to recognise that the process is an iterative one, where as data is gathered adjustments/ amendments to methodologies may be beneficial. It is also important to note that boat and aerial surveys may not be sufficient to provide information on certain ornithological issues, such as migratory/ passage species and connectivity between protected sites and Tranche A. Complimentary survey methods may be necessary to inform these issues (such as tracking, radar etc), and we would welcome early engagement with JNCC and other relevant stakeholders to work towards a suitable approach.

6.4.2. Potential Impacts

Please note that physical damage to habitat and species should also be considered as part of the construction phase.

6.6. Marine Mammals

It would be helpful if Forewind could please refer to ‘common seals’ by their official common name of ‘harbour seals’.

6.6.1 Existing environment

As detailed in SMRU Ltd (2010) it is difficult to gather a thorough baseline on marine mammals at a local level, as they are wide ranging and presence is variable between years. We note the intention to identify the use of the area by marine mammals but also highlight that this will be difficult with the proposed methodology, and the survey effort required to establish spatial preference with any confidence is not realistic at this scale. We support the improvement of the baseline to inform the above assessments but would welcome the developer’s recognition of the issues involved, and what is feasible relevant to the identified objectives. We are keen to look into how such issues can be addressed using an analysis of approach based around the Joint Cetacean Protocol (JCP) work.

The JCP (http://www.seawatchfoundation.org.uk/sightings.php?uid=245) will provide the best available measures of cetacean abundance and distribution for offshore wind farm impact assessments. For certain key species, such as: harbour porpoise, bottlenose dolphin and common dolphin the analysis methods ensures there is sufficient power to detect change to give us robust confidence intervals for measures of abundance and distribution.

Largely based on SCANS and other wide scale data, the JCP is also supplemented with finer scale data. For example, the bottlenose dolphin monitoring off West and North Wales uses a mixture of line-transect and photo-monitoring, and is compatible with the JCP. All the suitable data will be analysed by CREEM/SMRU. The data being gathered by developers within zones can be added to the overall analysis, so long as it is compatible. This will be the best use of the relatively limited dataset that 2 years of surveys undertaken by many developers represents, and nesting this smaller scale data within the broader monitoring work would allow results to be assessed within a wider context, appropriate for wide-ranging species such as cetaceans.

6.6.2 Potential impacts

The scoping report fails to address potential effects on European Protected Species and the requirement for a licence should there be a risk of injury or disturbance to these species. It is generally agreed that pile driving activities for offshore wind farm construction will require an EPS licence due to the noise impacts involved and the assessed risk of disturbance to cetaceans. Although at present there remain uncertainties about the nature of turbine foundations to be used, and hence the need for piling activity to take place and its associated noise levels, Forewind should nevertheless be aware of, and highlight in the scoping report, the legislation applying to EPS that must be complied with. As part of the consenting process Forewind should also seek alternatives to pile driving methods and if these alternatives are not found to be satisfactory then a fair justification should be provided to the regulator.

This issue should be considered at an early stage to ensure that decisions about the need for a licence and possible mitigation to meet the requirements of any approval can be addresses prior to the application. We would therefore strongly encourage Forewind to discuss this issue with the EPS licensing bodies and their statutory advisors in order to establish EPS licensing requirements as early as possible. Further details of the legislation applying to EPS and requirements for licences are given in Appendix B1 of this response.

Forewind have suggested that disturbance impacts on marine mammals from construction operations can be effectively mitigated through an agreed protocol. JNCC would like to highlight that a noise exposure assessment will need to be undertaken for European Protected Species (EPS) (see Appendix B1) this should consider the duration and frequency of activities, amongst other factors, and should be accounted for in developing mitigation measures to prevent disturbance of EPS. Use of a marine mammal observer protocol provided mitigation for preventing injury to EPS rather than disturbance.

6.6.3 Approach to EIA

It is stated that nine months of aerial and boat-based transect surveys have been undertaken to record bird and marine mammal use of the study area. JNCC believe that this is the case with regards to bird surveys, however, we had understood that marine mammal observations had been undertaken on an ad-hoc basis as part of the bird surveys or when a marine mammal observer was on board the geophysical survey vessel during seismic survey operations. We would welcome clarification on this matter.

A section 6.11 (Noise and Vibration) is referenced, but we were unable to locate this section in the report.

As part of the EIA, Forewind will need to assess the likelihood of committing a disturbance or an injury offence. As part of this assessment, a noise exposure assessment will need to be undertaken, which should consider, amongst other factors, the duration and frequency of activities and intensity of sounds generated. The results of this assessment should be accounted for in developing mitigation measures to maintain the favourable conservation status of the population(s) concerned. Guidance on the assessment process is provided in the document 'The protection of marine European Protected Species from injury and disturbance - Guidance for the marine area in England and Wales and the UK offshore marine area' (JNCC, 2010). This document is currently in draft form and awaiting publication, but a copy can be provided to the developer upon request.

Cumulative effects: It is concluded that as Tranche A is a significant distance away from other development activity the potential for overlapping noise impacts during construction is limited. We would like to highlight to Forewind that any EPS licence assessment would need to determine whether there could be a risk of a significant negative impact on population levels and/or a significant reduction in the natural range or habitat use of EPS species, in order to ensure that the favourable conservation status (FCS) of the population is maintained. Any impact assessment must therefore be population based and consider that certain marine mammal species have wide-ranging populations (including the international area). The risk of cumulative impacts from other wind farm developments cannot be discounted simply based on the distance away from the Forewind development area.

3. Human Environment (Section 7 pages 93-114)

7.2.3 Approach to EIA

We accept that the wind farm will hardly (if at all) be seen from the shore, and also that there will only be a small number of visual receptors present out at sea. So a reduced scale of seascape and visual impact assessment is acceptable. However, there will be a number of recreational users, including sailing boats, passengers on cruise liners and ferries, so the assessment does need to take them into account, and in particular the cumulative effects.

Appendix A3 - Advice relating to the onshore elements of the development

2.1.2 Main onshore project components (page 23-26)

Cable system from onshore transition pit to onshore converter substation (page 23-25)

Impacts on the shoreline, such as the construction of the transition pits, and any associated over-ground works, also need to be assessed carefully both in relation to their potential impacts on dynamic coastal processes, and on the landscape and recreational use of the shore.

It is stated that the future offshore wind projects in the Dogger Bank Zone are likely to be awarded grid connection to Creyke Beck substation and that the installation of ancillary underground ducting could be undertaken at the same time as the cabling works for Dogger Bank Project one. **Natural England supports this process as the impacts from further projects in this zone are likely to be decreased. It is acknowledged that this process is likely to increase the working corridor width and the implications of this will need to be considered against any other constraints that may exist depending upon the cabling route chosen.**

We agree that all structures related to the cable route and the converter substation need to be taken into account in the EIA, including landscape and visual impact assessment. The converter substation (p.25) could be a substantial industrial development, and needs to be assessed as such. The assessment will identify possibilities for mitigation, such as siting to reduce impact, and reconsidering the scale of buildings, their design, and the treatment of surrounding land to effectively incorporate the development into the local landscape. The cable route could result in the loss of several landscape features such as hedgerows and trees, and mitigation including replacement needs to be adequately addressed.

Onshore converter stations (page 26)

Whilst it is acknowledged that the details of the substation are not known at this stage and that detailed design studies will be undertaken, we would recommend that consideration is given to the colours of materials used so that the infrastructure will sit more easily into a rural setting.

3.2 Methodology

Table 3.1: Natural England does not accept that it can be assumed that an assessment of 'Moderate adverse' significance leads to the conclusion that it 'is likely to be tolerable'. Clearly all major adverse impacts are significant, but an assessment of 'Moderate adverse' can arise from the combination of high sensitivity receptors with medium or low magnitude of change, or high magnitude of change with medium or low sensitivity of receptors. So the potential impacts need to be addressed, especially in terms of identifying what can be done to avoid the impact, reduce it, or mitigate it; they should not be dismissed as 'likely to be tolerable'. In Table 3.1, under 'Moderate adverse', the developer should include something to the effect that mitigation measures will need to be considered. The red text in the diagram below highlights where Natural England considers that there are significant impacts that need to be addressed.

Matrix for assessing significance of landscape and visual impacts

Magnitude Sensitivity	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Minor	Negligible
Imperceptible	Negligible	Negligible	Negligible	Negligible

The above table refers specifically to landscape and visual impacts. However we would expect a similar table to be used for the assessment of other environmental impacts that consider the sensitivity of habitats and species.

9.1 Ecology and Nature Conservation Designations (page 124-131)

9.1.1 Existing Environment

It is noted that the applicant has highlighted several ecological designations (as highlighted on Figure 9.1, yet there appears to be no consideration of Local Wildlife Sites (LWS). Please note that Creyke Substation (Wanlass substation) is listed as one of East Riding of Yorkshire's LWS. There are a number of sites scattered throughout the development envelope for the cable routing and as such we would expect the applicant to have due regard to this sites in addition to those that have statutory status. It is important to ensure the integrity of these sites as they can be used as a stepping stone from habitat to habitat (green infrastructure). It should be noted however, that many Local Authorities are currently reviewing all their sites for inclusion or de-designation in their Local Plans/ LDF documents etc, so it is important to obtain this data directly from the Local Authority during the desk study process.

Under the heading of 'species and habitats' for project area A there is no mention of water vole and otter. Clearly from the envelope of area A there are water bodies (e.g. becks, drains) that need to be considered and as such we would expect water vole and otter to be considered, together with project area B, C and D.

9.1.3 Approach to the EIA - Amphibians

Due to the high likelihood of Great Crested Newts (GCNs) along the cable corridor, some 'hot spot' areas may require a >250m survey corridor as part of the pre-construction and or Protected Species Licence application surveys. This additional information will help identify possible mitigation measures.

9.1.3 Approach to the EIA - Bats

In principle we agree with the methodology for bat roost potential, however, we would recommend that trees that do not necessarily meet the criteria as 'mature' are also evaluated for their roosting potential. Many bat species will roost in trees that are not mature for varying reasons such as lack of suitable alternatives (such as mature trees) or they provide the conditions that may superficially look unlikely to support roosting bats. In addition to this, buildings of all states of repair (new and old) are certainly suitable places for bats to roost and as such the extended phase 1 survey should identify all structures that have features that could support roosting bats (i.e. not just dilapidated ones).

9.1.3 Approach to the EIA - Breeding birds

Please note that depending upon the chosen survey route there may be a requirement to undertake breeding bird surveys

9.1.3 Approach to the EIA - Otters and water voles

Please note that as will all protected species mitigation measures will need to be considered for these species

10.2 Landscape and Visual Character (page 136-141)

Natural England has acknowledged and commented on landscape issues in the sections above and below.

10.2 Soils, Agriculture and Land Use (page 141-141)

All project areas contain a number of agricultural agreements such a Countryside Stewardship Schemes, Environmental Stewardship Schemes, Entry and Higher Level Stewardships Schemes. Whilst the presence of these Schemes would not necessarily preclude the laying of cables in this area, the scheme owner would need to liaise with Natural England how the loss of any of the land within the agreement might affect the payments we make to the agreement holder. The applicant will need to be aware of this when making contact with the relevant land owner.

It is acknowledged that the land in all four project areas contains Best and Most Versatile (BMV) Agricultural Land (Grade 2 and 3) and that the applicant is aware of soil structure properties and its importance to retain the function for agricultural production.

Natural England would encourage and the support the preparation of a soil and drainage strategy for all phases of the development.

10.4 Traffic and Transport (page 145-151)

Impact Assessment (page 150)

It is noted that the traffic and transport assessment will deal with the onshore elements of the development and it will exclude the supply of personnel or material for the offshore element. Whilst it is acknowledged that the majority of issues will be associated with the onshore part of the works, the applicant does need to consider the impacts of recreational use of the waters off the coast of Holderness and as such may wish to discuss the reasons for not considering these impacts in the EIA or with stakeholders.

Natural England are happy with the approach that will be taken in respect of onshore issues, but wish to highlight that depending upon the timescales and timings for this works, there may well be an impact on roads outside East Riding of Yorkshire that may well need to be considered, due to the location of this development and its high recreational usage. In addition to this the traffic assessment and subsequent strategy will need to consider (in its cumulative assessments) the effect of this work in conjunction with other projects in the Local Authority area and potentially beyond.

10.5 Air Quality (page 152-153)

We agree with the approach that the impacts from the operation of the converter substation can be scoped out of the EIA.

There is no mention of potential air pollution impacts on designated sites. Depending upon the cabling route opted for; there will be a need to make an assessment as to the implications resulting from the construction phase of the project on nearby sites that have the potential to impact on the features for which the site has been designated. For the pollutants mentioned in the scoping document (i.e. PM10 and NO_2) we would be looking for air pollution assessments for Ramsar, Special Protection Area (SPA), and Special Area of Conservation (SAC) and Special Site of Scientific Interest (SSSI) sites within 200 m of any activity along the proposed cabling route.

10.6 Noise and Vibration (page 154-157)

Whilst the applicant has acknowledged that noise issues for ecological receptors will be addressed in their relevant sections, there is no specific mention of this potential impact. We would therefore advise that they make specific mention and evaluation of the noise implications on specific sites where noise may be of an issue. Of particular note is Hornsea Mere, which is an SPA and SSSI and its notified features are aggregations of non breeding and breeding birds. It is like that this site will need to be considered in terms of noise impacts should any of the routes in area C are considered to be a preferred option.

10.7 Recreation and Tourism (page 157-160)

Natural England would wish to be assured of the continued enjoyment of the countryside by users of local routes and footpaths. Natural England supports opportunities for increasing access linkages both within the site and with the surrounding countryside. We therefore recommend that any Public Rights Of Way within the proposed cable corridor, identified are maintained or enhanced. We recommend that landfall work is undertaken during the winter months when visitor numbers are lower.

The applicant should be aware of two national cycle trails and the Trans Pennine Trail, that have the potential to be impacted to some degree from the proposed works, potentially through diversions or through impact on the enjoyment of the rural character of this area whilst using these trails and other public footpath networks. The works will need to consider the users of the public access network to ensure impact on these users is minimised.

11.1 Conclusion (page 163-165)

Natural England considers the summary of key issues to be a reasonable assessment and as such we are generally happy with those topics to be scoped out. However, we would like to clarify the 'Landscape impacts from offshore components'. There still needs to be an assessment undertaken (although at a reduced scale) on those recreational users offshore (such as sailing boats, ferries etc).

With regard to the issues highlighted in green, we acknowledge that some will be potentially scoped out, but conversely some may move into the yellow or buff categories, once more information is available.

APPENDIX B1 - LEGISLATION: EUROPEAN PROTECTED SPECIES AND HABITATS REGULATION APPRAISAL

EUROPEAN PROTECTED SPECIES

Certain species are listed on Annex IV of the Habitats Directive as species of European Community interest and in need of strict protection. The protective measures required are outlined in Articles 12 to 16 of the Directive. The species listed on Annex IV whose natural range includes any area in the UK are called 'European Protected Species' (EPS).

JNCC is the statutory nature conservation body who provides advice on EPS for UK offshore waters, outside of 12nm. A summary of the legal requirements for EPS is as follows:

In England, Wales and UK offshore waters (outside 12nm), Regulations 41(1) and 39(1) of the Habitats Regulations[2] and the Offshore Marine Regulations[3], respectively, provide that a person is guilty of an offence (and would therefore need to be considered for licence) if he:

(a) deliberately captures, injures, or kills any wild animal of a European protected species;

(b) deliberately disturbs wild animals of any such species

For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely—

(a) to impair their ability—

(i) to survive, to breed or reproduce, or to rear or nurture their young; or

(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

JNCC (with Natural England and the Countryside Council for Wales) have produced guidance (*The protection of marine European Protected Species from injury and disturbance: Guidance for the marine area in England and Wales and the UK offshore marine area*, JNCC, CCW and Natural England, 2010) which is currently in draft form awaiting approval, and outlines how developers, regulators and courts assess: a) the likelihood of an offence being committed; b) how this can be avoided; and c) if it can't be avoided, the conditions under which the activity could go ahead under licence**.**

EPS Licences

If there is a risk of injury or disturbance of EPS that cannot be removed or sufficiently reduced by using alternatives and/or mitigation measures, then the activity may still be able to go ahead under licence, but this should be a last resort. A licence can only be granted (1) if the activity fits certain purposes, (2) if there is no satisfactory alternative to the activity

[2] The Conservation of Habitats and Species Regulations 2010, commonly referred to as the Habitats Regulations (HR)
[3] The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended in 2009 and 2010); commonly referred to as the Offshore Marine Regulations (OMR)

proposed that would not incur the risk of an offence, and (3) where the activity will not be detrimental to the maintenance of the populations of the species concerned at a Favourable Conservation Status (FCS) in their natural range.

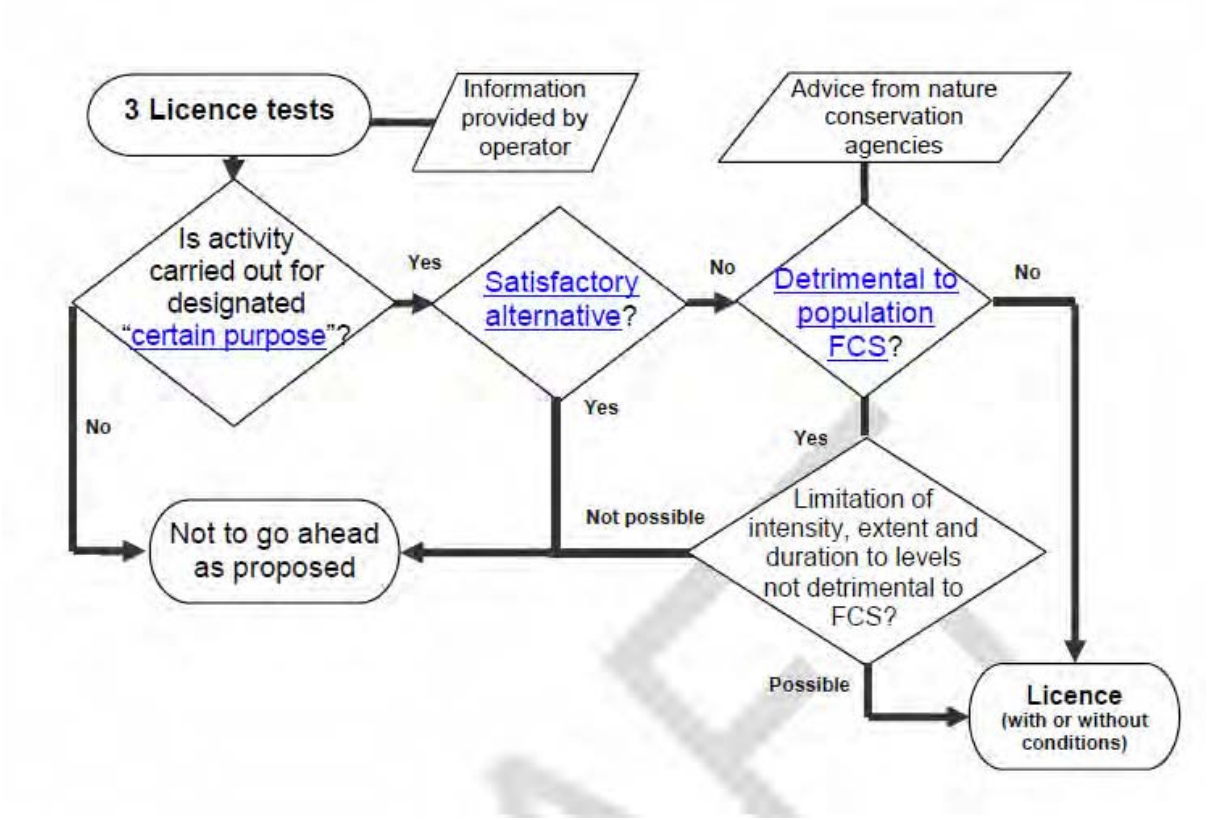
The likelihood of an activity resulting in injury or disturbance offence to a marine EPS will very much depend on the characteristics of the activity, of the environment and the species concerned, hence the need for a case-by-case approach when assessing the risk of it occurring. Pursuing mitigation measures, alternative methods, locations and/or times for carrying out proposed activities might in some cases be sufficient to reduce the risk of causing offence to negligible levels. This would then negate the requirement for a licence.

It is expected that many activities at sea will not require a licence to exempt them from regulations 41(1)(a) and (b) and 39(1)(a) and (b) of the HR and OMR, respectively, since their potential for injury and/or disturbance can be effectively mitigated or because the characteristics of the disturbance will fall below the threshold of an offence.

Any licence application (under regulation 53(1) of the HR and 49(6) of the OMR) will necessitate a detailed assessment of whether the licence should be granted. The licence assessment will be comprised of three tests to ascertain:

1) whether the activity fits one of the purposes specified in the Regulations;
2) whether there are no satisfactory alternatives to the activity proposed (that would not incur the risk of offence); and
3) that the licensing of the activity will not result in a negative impact on the species'/population's Favourable Conservation Status. The licence assessment will be carried out by the appropriate authority with the information provided by the developer and advice from nature conservation agencies.

A flowchart is included below describing this process:



Consideration of European Protected Species should be included as part of the application process, not as an issue to be dealt with at a later stage. Any consent given without due consideration to these species is likely to breach European Directives with the possibility of consequential delays or the project being halted by the EC.

HABITATS & BIRDS DIRECTIVES, & HABITATS REGULATIONS

The two most influential pieces of European legislation relating to nature conservation are the Habitats and Birds Directives. The 'Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora' was adopted in 1992 and is commonly known as the Habitats Directive. It complements and amends Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (this is the codified version of Directive 79/409/EEC as amended), commonly known as the Birds Directive.

The Birds Directive protects all wild birds, their nests, eggs and habitats within the European Community. It gives EU member states the power and responsibility to classify Special Protection Areas (SPAs) to protect birds which are rare or vulnerable in Europe as well as all migratory birds which are regular visitors.

The Habitats Directive builds on the Birds Directive by protecting natural habitats and other species of wild plants and animals. Together with the Birds Directive, it underpins a European network of protected areas known as Natura 2000 comprising SPAs classified under the Birds Directive and Special Areas of Conservation (SACs) designated under the Habitats Directive.

The Habitats Directive has been transposed into the law of England, Wales and Scotland by the Conservation (Natural Habitats &c.) Regulations 1994 (as amended), usually called simply the **Habitats Regulations**[4]. For the UK offshore marine areas within UK jurisdiction, the Habitats Directive has been transposed into UK law by the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended in 2009 and 2010) (the Offshore Marine Regulations).

[4] The Habitats Regulations have been amended several times. Firstly, in relation to Scotland, by the Conservation (Natural Habitats, &c) Amendment (Scotland) Regulations 2007 which came into force in 2007. The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007, which came into force also in 2007, made similar, but not identical, amendments in relation to England and Wales. An amendment adding three new species was made in 2008. Further amendments were made in 2009: The Conservation (Natural Habitats, &c.) (Amendment) (England and Wales) Regulations 2009. In 2010 a consolidated version of the regulations applying to England and Wales came into force: The Conservation of Habitats and Species Regulations 2010.

Habitats Regulations Appraisal

Where a plan or project could affect a Natura site, the Habitats Regulations and Offshore Marine Regulations require the competent authority (the authority with the power to undertake or grant consent, permission or other authorisation for the plan or project in question) to consider the provisions of regulations 61 or 25 respectively. This means that the competent authority has a duty to:

- determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,
- determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then
- make an appropriate assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

This process is now commonly referred to as **Habitats Regulations Appraisal** (HRA). HRA applies to any plan or project which has the potential to affect the qualifying interests of a Natura site, even when those interests may be at some distance from that development site.

The competent authority, with advice from nature conservation agencies, decides whether an appropriate assessment is necessary and carries it out if so. Appropriate assessment focuses exclusively on the **qualifying interests** of the Natura site affected and must consider any impacts on the **conservation objectives** of the site. The applicant is required to provide the information to inform the assessment. A plan or project can only be consented if it can be ascertained that it will not adversely affect the integrity of a Natura site (subject to regulation 62 or 26 considerations).

Transboundary Consultation

In addition to this we advise that as the competent authority the IPC will need to consult with the other EU member states when undertaking the appropriate assessment, where there is a potential for interest features of their designated sites to be impacted by the development. Please also be advised that there is also an onus on the developer to also consult with the member states to obtain all the information that is required to inform the HRA.

Further Information and Advice on HRA

In this scoping response we provide tailored advice for HRA in respect of birds that are qualifying interests of SPAs, and marine mammals, habitats and fish that are qualifying interests of SACs:

- APPENDIX B2 - JNCC and Natural England Advice on Habitats Regulations Appraisal for SPAs
- APPENDIX B3 - JNCC and Natural England Advice on Habitats Regulations Appraisal for SACs

In respect of this, further information on the *qualifying interests* and the *conservation objectives* for each relevant Natura site is available and can be discussed with JNCC and Natural England directly.

APPENDIX B2 - DOGGER BANK ZONE 3 (PROJECT ONE, TRANCHE A): HABITATS REGULATIONS APPRAISAL FOR SPECIAL PROTECTION AREAS

Introduction

In the following advice for HRA we set out the three steps that need to be considered in order to determine whether or not the proposed development of Project One of Tranche A of the Dogger Bank Round 3 offshore wind is likely to have a significant effect on the qualifying interests of SPAs, and any possible adverse impact on site integrity. It is the competent authority (the Infrastructure Planning Commission, in this case) who will carry out the HRA, based on our advice and using information and data collated by the developer.

Under HRA, the potential impacts of the proposal will need to be considered alone and in combination with other plans and projects. It will need to be considered in combination with the other offshore wind farm proposals in the area and we consider that taking a forward view of the further Tranche A projects and subsequent tranches of development within the Round 3 zone may be helpful. It will also need to be considered in combination with other types of industry and activity in the region.

The HRA will become more focused over time through an iterative process – we will continue to review our advice as the developer undertakes their survey work and completes its analysis.

Special Protection Areas for inclusion in HRA

Forewind have identified a number of SPAs in the scoping report and have acknowledged that the list of relevant SPAs will need revision following site specific investigation – and that it may need to be extended to include further afield SPAs for certain far-ranging/ migratory species, and international sites. This iterative approach is welcomed by JNCC and Natural England.

Those sites that have been highlighted as being of relevant to Tranche A include:

- Broadland SPA
- North Norfolk Coast SPA
- The Wash SPA
- Gibraltar Point SPA
- Humber Estuary SPA
- Coquet Island SPA
- Northumbria Coast SPA
- Teesmouth and Cleveland Coast SPA
- Lindisfarne SPA
- Firth of Forth SPA
- Forth Islands SPA
- Horsea Mere SPA
- St Abb's Head to Fast Castle SPA

Further information on SPAs, is available from
http://www.jncc.gov.uk/default.aspx?page=162

Advice for HRA in respect of SPA qualifying interests

We provide advice on the legislative requirement for HRA in Appendix B1. The steps of the process are as follows; our advice is tailored to the consideration of Project One, Tranche A of development in the Dogger Bank Round 3 offshore wind farm zone:

Step 1: Is the proposal directly connected with or necessary for the conservation management of the SPAs?

The proposal is not directly connected with or necessary for the conservation management of any of the SPAs listed above.

Step 2: Is the proposal likely to have a significant effect on the qualifying interests of the SPAs either alone or in combination with other plans or projects?

This step acts as a screening stage: it removes from the HRA those proposals (plans or projects) which clearly have no connectivity to SPA qualifying interests or where it is very obvious that the proposal will not undermine the conservation objectives for these interests, despite a connection.

When this screening step is undertaken at an early stage in the development process, it usually means that it takes the form of a desk-based appraisal. We advise that such desk-based appraisal is kept broad so that potentially significant impacts are not missed out, or discounted too early, in any HRA (or EIA).

The SPA bird interests being considered in respect of offshore wind farms are wide-ranging – many seabirds make long foraging trips, especially during the breeding season, and there are also migratory species to consider such as geese and swans. This means that offshore wind farm proposals may be 'connected to' SPAs at much greater distances than what has so far been experienced in respect of onshore development. Although connectivity is thus established the fact that the proposal is located further away from the designated sites means that direct impacts are less likely on qualifying species while they are within the SPA.

Expert agreement over species sensitivity should help to identify those SPA qualifying interests for which the conservation objectives are unlikely to be undermined by offshore wind farm development, despite any possible connection (e.g. SPA qualifiers which are recorded within a proposed wind farm site but where their flight behaviour and / or foraging ecology means that the wind farm will not have a likely significant effect).

Determination of 'likely significant effect' is not just a record of presence or absence of bird species at an offshore wind farm site, but also involves a judgement as to whether any of the SPA conservation objectives might be undermined. Such judgement is based on a simple consideration of the importance of the area in question for the relevant species. Complex data analysis should not be required at this stage. For example; How many birds have been recorded? What are they using the area for? Is this the only area that they can use for this particular activity? Understanding the behavioural ecology of the species, and the characteristics and context of the proposed wind farm site, will help in determining whether there are likely significant effects.

There are three possible conclusions for this step of HRA:

a) The likely impacts are such that there is clear potential for the conservation objectives to be undermined – conclude likely significant effect.

b) The likely impacts are so minimal (either because the affected area is not of sufficient value for the birds concerned or because the risk to them is so small) that the conservation objectives will not be undermined – conclude no likely significant effect.

c) There is doubt about the scale of the likely impacts in terms of the conservation objectives – conclude likely significant effect.

Step 3: Can it be ascertained that the proposal will not adversely affect the integrity of the SPA, either alone or in combination with other plans or projects?

This stage of HRA is termed **appropriate assessment**, and it is undertaken by the competent authority based on information supplied by the developer, and with advice provided by the relevant nature conservation organisation; by JNCC in respect of Round 3 zones.

Appropriate assessment considers the implications of the proposed development for the conservation objectives of the qualifying interests for which a likely significant effect has been determined. These conservation objectives follow a standard format requiring protection of the qualifying bird interests and protection of the habitat in the SPA which supports them.

Conservation objectives for SPA bird species

To ensure that site integrity is maintained by:

(i) Avoiding deterioration of the habitats of the qualifying species.

(ii) Avoiding significant disturbance to the qualifying species.

To ensure for the qualifying species that the following are maintained in the long term:

(iii) Population of the bird species as a viable component of the SPA.

(iv) Distribution of the bird species within the SPA.

(v) Distribution and extent of habitats supporting the species.

(vi) Structure, function and supporting processes of habitats supporting the species.

repeat of (ii) No significant disturbance of the species.

It is important to recognise that the conservation objectives primarily offer site-based protection and that some of them will not directly apply to species when they are outwith the boundaries of the SPA. This is particularly true of objectives **(i)**, **(v)** and **(vi)** which relate to the supporting habitats within the SPA.

Objective **(iii)** however – maintenance of the population of the bird species as a viable component of the SPA – will be relevant in most cases because:

It encompasses direct impacts to the species, such as significant disturbance to qualifying bird interests when they're outwith the SPA.

It addresses indirect impacts such as the degradation or loss of supporting habitats which are outwith the SPA but which help to maintain the population of the bird species of the SPA in the long-term.

Finally, in rare circumstances, it is possible that factors outside site boundaries may have the capacity to affect the long term distribution of bird species within the SPA – see objective **(iv)**.

Issues to consider under appropriate assessment

The key question in any appropriate assessment for Project One, Tranche A development of the Dogger Bank Round 3 offshore wind farm zone is whether it can be ascertained that this proposal, alone or in combination, will not adversely affect the population of any qualifying bird species as a viable component of the SPAs under consideration.

In considering this matter, we refer to the helpful summary of the main risks of offshore wind farm development to birds provided in Langston 2010.[5] In addition, there may be further issues to consider if the proposal is likely to affect the conservation objectives that relate to bird species while they're in an SPA or to the habitats in the SPA that support them.

- Will the offshore wind proposal(s) cause a deterioration in the habitats of any of the SPAs?

  NB. This question relates specifically to the habitats in the SPAs that support the bird interests.

- Will the offshore wind proposal(s) cause any significant disturbance to bird interests while they're in any of the SPAs? N.B. *See the previous discussion in respect of disturbance outside an SPA.*

- Will the offshore wind proposal(s) alter the distribution of the birds within any of the SPAs?

- Will the offshore wind proposal(s) affect the distribution and extent of the habitats (that support the bird species) in any of the SPAs?

- Will the offshore wind proposal(s) in any way affect the structure, function and supporting processes of habitats in any of the SPAs? NB. *Those habitats which support the bird species.*

[5] Langston (2010). Offshore wind farms and birds: Round 3 zones, extensions to Round 1 & Round 2 sites & Scottish Territorial Waters. RSPB Research Report No. 39.

Future SPA Designation

It is also important to note there is on-going work to establish further marine SPAs and a number of potential ways of addressing this are currently being considered, i.e:

1. Extensions to existing seabird colony SPAs boundaries into the marine environment;
2. Inshore areas used by waterbirds (e.g. seaduck, divers and grebes) outwith the breeding season;
3. Offshore areas used by seabirds, for feeding and other activities; and
4. Other types of SPA not captured by the above approaches.

Please see JNCC's website for potential areas of search.[6]

Ongoing Liaison

As noted above, JNCC will continue to liaise with Round 3 developer in respect of this HRA process. Agreeing the scope of, and information required for, HRA will be an iterative process.

[6] Information on potential new marine SPAs is available at: http://www.jncc.gov.uk/page-4184
And on areas of search at: http://www.jncc.gov.uk/pdf/SPA_AOS_Maps%2020100304.pdf

APPENDIX B3 - DOGGER BANK ZONE 3 (PROJECT ONE, TRANCHE A): HABITATS REGULATIONS APPRAISAL FOR SPECIAL AREAS OF CONSERVATION

Introduction

In the following advice for HRA we set out the three steps that need to be considered in order to determine whether or not the proposed development of Project One of Tranche A of the Dogger Bank Round 3 offshore wind is likely to have a significant effect on the qualifying interests of SACs, and any possible adverse impact on site integrity. It is the competent authority (the Infrastructure Planning Commission, in this case) who will carry out the HRA, based on our advice and using information and data collated by the developer.

Under HRA, the potential impacts of the proposal will need to be considered alone and in combination with other plans and projects. It will need to be considered in combination with the other offshore wind farm proposals in the area and we consider that taking a forward view of the further Tranche A projects and subsequent tranches of development within the Round 3 zone may be helpful. It will also need to be considered in combination with other types of industry and activity in the region.

The HRA should become more focused over time through an iterative process. We will continue to review our advice as the developer undertakes their survey work and completes its analysis. For those SAC qualifying interests that are also European Protected Species (EPS) (i.e. harbour porpoise, white-beaked dolphin and minke whale) please see Appendix B1 for our advice in respect of their EPS status and for advice on EPS licensing assessment. The advice that we give below solely relates to their consideration as an SAC qualifying interest and how the HRA process therefore applies.

Special Areas of Conservation for inclusion in HRA

We have considered all SACs and have included in the list below only those that we consider relevant i.e. where there may be connectivity between the wind farm proposal and the SAC. This consideration should address all elements of the wind farm proposal, onshore works as well as offshore elements. However, at this early stage in the process we do not have full details on the development being proposed or finalised locations of all elements of infrastructure. Therefore, our advice focuses on turbine location / construction for Project One within Tranche A of the Round 3 zone of development.

The following marine and coastal SACs need to be considered:

- **Dogger Bank pSAC** – proposed for subtidal sandbanks.
- **Berwickshire & North Northumberland Coast SAC** - designated for its population of grey seals (*Halichoerus grypus*) and marine habitats including shallow inlets and bays; intertidal mudflats and sandflats; reefs and sea caves.
- **Humber Estuary SAC** - designated for its estuarine habitats including mudflats and sandbanks not covered by water at low tide. There are Annex II species present including Grey Seal (*Halichoerus grypus*), Sea lamprey (*Petromyzon marinus)*, River Lamprey (*Lampetra fluviatilis)*.

We advise that as the competent authority the IPC will need to consult with the other EU member states when undertaking the appropriate assessment, where there is a potential for interest features of their designated sites to be impacted by the development. Please also be advised that there is also an onus on the developer to also consult with the member states to obtain all the information that is required to inform the HRA

Further information on SACs is available from http://www.jncc.gov.uk/default.aspx?page=23

The SAC interests which do require further consideration are discussed below. We can provide advice on HRA for the proposed cable route and associated onshore infrastructure when options have been progressed further.

Advice for HRA in respect of Special Areas of Conservation

We provide advice on the legislative requirement for HRA in Appendix B1. The steps of the process are as follows; our advice is tailored to the consideration of the Project One, Tranche A development in the Dogger Bank Round 3 offshore wind farm zone:

Step 1: Is the proposal directly connected with or necessary for the conservation management of the SACs?

The proposal is not directly connected with or necessary for the conservation management of any of the SACs listed above.

Step 2: Is the proposal likely to have a significant effect on the qualifying interests of the SACs either alone or in combination with other plans or projects?

This step acts as a screening stage; it removes from the HRA those proposals which clearly have no connectivity to SAC qualifying interests or where it is very obvious that the proposal will not undermine the conservation objectives for these interests, despite a connection. When this screening step is undertaken at an early stage in the development process, it usually means that it takes the form of a desk-based appraisal.

While a desk-based review is helpful for this screening step, this part of the HRA will only be fully completed when the wind farm proposal has been further progressed, i.e. when survey work and analyses have been completed, and when the locations of the infrastructure and construction methods, including onshore elements, have been finalised.

There are three possible conclusions to this step of HRA:

a) The likely impacts are such that there is clear potential for the conservation objectives to be undermined - conclude 'likely significant effect'.
b) The likely impacts are so minimal that the conservation objectives will not be undermined - conclude 'no likely significant effect'.
c) There is doubt about the scale of the likely impacts in terms of the conservation objectives - conclude 'likely significant effect'.

However, we are not yet in a position to present a definite conclusion for this step, so we provide a summary of our current advice in respect of the qualifying interests of each SAC:

- **Grey seals** of the Berwickshire and North Northumberland Coast SAC

  Grey seals have a wide foraging range (100+km) from their haul out sites and it is possible that individuals from the Berwickshire and North Northumberland Coast SAC may at times be found within, or in proximity, to the proposed development in Project One, Tranche A of the Dogger Bank Round 3 zone. Boat movements, cable-laying and other construction activity may give rise to the disturbance of grey seals. And there may be impacts to their prey species, either from the placement of infrastructure or due to noise. We advise that there is potential for the proposal to have likely significant effects on grey seals and we discuss below (under step 3) the issues that we think need to be considered. **Summary of our current advice:** Significant effects are likely, and therefore impacts (including cumulative) will need to be considered in appropriate assessment (see step 3).

- **Sandbanks** of the Dogger Bank pSAC

  The installation of the turbines, substations and any associated scour protection will result in direct loss of Annex I sandbank habitat and their associated communities. Furthermore, the installation of inter-array cables may result in seabed disturbance, and the installation of subsea infrastructure may also impact on hydrodynamic and sedimentary processes. We therefore advise that significant effects on the Dogger Bank pSAC qualifying sandbank feature are likely. **Summary of our current advice:** We consider that the proposal is likely to have a significant effect on the Annex I sandbank habitats and their associated communities , and therefore impacts (including cumulative) will need to be considered in an appropriate assessment (see step 3).

<u>Step 3</u>: Can it be ascertained that the proposal will not adversely affect the integrity of the SAC, either alone or in combination with other plans or projects?

This stage of HRA is termed **appropriate assessment**, and it is undertaken by the competent authority based on information supplied by the developer, and with advice provided by the relevant nature conservation organisation; by JNCC in respect of Round 3 zones and by Natural England in respect of territorial waters.

Appropriate assessment considers the implications of the proposed development for the **conservation objectives** of the qualifying interests for which a likely significant effect has been determined. Based on these objectives, we discuss key questions relevant to each interest, to determine overall whether it can be ascertained that the proposal will not adversely affect the integrity of any of these SACs.

Our advice on appropriate assessment, and as to how many of these questions may need to be answered, will become clearer when the development process is further advanced – when baseline data has been collected, and when construction methods, location of infrastructure, choice of port, and other aspects of the proposal have been finalised.

We highlight that noise impact assessment may be an important element of the HRA process in respect of grey seals. HRA will address the impacts of noise in the context of the conservation objectives for each SAC qualifying species.

Berwickshire and North Northumberland Coast SAC: advice on grey seals

The **conservation objectives** for grey seals are: **(i)** to avoid deterioration of their habitat or **(ii)** significant disturbance to them, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the grey seals that the following are maintained in the long term:

(iii) Population of grey seals as a viable component of the site.

(iv) Distribution of grey seals within site.

(v) Distribution and extent of habitats supporting common seals.

(vi) Structure, function and supporting processes of habitats supporting grey seals.

repeat of (ii) No significant disturbance of grey seals.

Based on these conservation objectives the following questions need to be addressed in appropriate assessment of potential impacts of the proposal on the grey seal population of the Berwickshire and North Northumberland Coast SAC:

- Will the proposal cause any deterioration in the SAC habitats which support grey seals?
- Will it affect the extent or distribution of these habitats within the SAC?
- Will it affect the structure and function of these habitats or of any of their supporting processes?
- Will the proposal cause significant disturbance to grey seals while they are in the SAC, and will it cause any change to their distribution within the site?
- Will the proposal cause significant disturbance to grey seals while they are outwith the SAC such that the viability of this SAC population is affected?
- Will the proposal affect the viability of the SAC population of grey seals in any way?

We advise that noise impact assessment is likely to be an important part of assessing any direct disturbance to grey seals, including their potential displacement from feeding grounds and other supporting habitats. While we consider that the construction phase may give rise greatest risk of disturbance, we do highlight that impacts during the operational phase also need to be considered, as well as any repowering and decommissioning work. It will also be important to consider impacts on prey species.

The last question encompasses any direct impacts to grey seals, for example significant disturbance. It also addresses indirect impacts such as the degradation or loss of supporting habitats which are outwith the SAC but which help to maintain the population of common seals in the SAC in the long term. The risk of impacts, and how many of these questions may need answered, will become clearer when the development process is further advanced and construction methods, location of cable routes, choice of port, and other aspects are finalised.

Dogger Bank pSAC: advice on sandbanks

The conservation objectives for the Dogger Bank sandbanks which are slightly covered by seawater all the time are:

Subject to natural change, restore *the sandbanks which are slightly covered by seawater all the time* to favourable condition, such that the:

- The natural environment quality is maintained
- The natural environmental processes are maintained
- The extent, physical structure, diversity, community structure and typical species representative of *sandbanks which are slightly covered by seawater all the time* in the southern North Sea are restored.

Based on these conservation objectives, the following questions may need to be addressed for sandbanks:

- Will the proposal cause any deterioration to the qualifying habitats within the SAC?
- Will it affect the extent or distribution of the qualifying habitats within the SAC?
- Will it affect the structure and function of these habitats or of their supporting processes?
- Will it affect, or cause disturbance, to any of the typical species of these habitats, including their distribution and viability within the SAC?

Our concern is that installation of the project infrastructure may result in effects on the pSAC habitats and their associated communities, although we are uncertain of the potential scale of such effects.

Ongoing Liaison

As noted above, we will continue to liaise with Round 3 developer, in respect of this HRA process. Agreeing the scope of, and information required for, HRA will be an iterative process.

KEYINGHAM LEVEL DRAINAGE BOARD
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Clerk to the Board
R E Ward FRICS FAAV

18 Market Place
Patrington
Hull

Our Ref REW/EA
Your Ref 101012_EN010021_287174
27th October 2010

FAO Mr D Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
BRISTOL
BS1 6PN

Dear Sir

Re Proposed Offshore Wind Farm, Dogger Bank

My Board has noted your proposals and have instructed me to object to the southern cable corridor D as it would be the most lengthy and indirect route and would cause problems throughout the Land Drainage Area

Yours faithfully

R E Ward FRICS FAAV
Clerk to the Board

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Hampshire Court
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EIA and Land Rights Advisor on behalf of IPC
Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN
FAO: David Cliff

Our Reference: REN309

Your Reference: 101012_EN010021_287174

Date: 10th November 2010

Dear David,

Formal scoping request under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 for the proposed Dogger Bank Offshore Wind Farm Tranche 1 Project 1 by Forewind Ltd.

Please accept this letter as the formal response of the Marine Management Organisation (MMO) to the formal Scoping request of the Infrastructure Planning Commission (IPC) regarding a proposed wind farm within the Dogger Bank Offshore Wind Farm (OWF) Round 3 Zone.

The EIA is expected to address all points for the installation, operation and a preliminary assessment of the decommissioning phase of the development. In doing so it is important that attempts are made to try and quantify the significance of the impacts and any seasonal variations on the impacts are identified based on site-specific environmental sensitivities.

Physical Environment- Offshore

It seems likely that a range of foundation type may be used, dependant on changing soil and water depth conditions across the project area. Experience to date suggests that the foundation type will not be decided until late in the application process. As part of evaluating the impacts of all possible foundations to be used the applicant should include in their Environmental Statement details of each type and the impacts they have on the environment including quantified scour, wake and sediment transport impacts. The usage of pre laid scour should also be discussed further.

The arrangement of the foundations also warrants close attention large OWFs increase the potential for scour and wake patterns to extend to adjacent turbines leading to interaction between the two scour patterns. Whether this is an issue will depend on the degree to which scour develops and under what conditions (e.g., storms, tides).

It is very likely that the data-gap analysis will highlight a scarcity of hydrodynamic and sediment transport data at the site. Therefore characterising the environment through deployment of wave and current meters is to be encouraged as part of developing an evidence base for the site. Some devices could be permanently deployed on the meteorological stations and/or the first turbines (E.g. downward looking radar for measuring surface waves). The scour potential could also be assessed by using rotary sonar devices to make regular measurements of the sea floor elevation and bedforms near foundation legs. This may be of interest as scour at the site may be driven by large episodic storms which would be more easily quantified by remote and regular measurements. A summary of the gap analysis and the plans to resolve this would be useful.

The mobility of the tidal sand ridges and other smaller bedforms along the export corridor should be considered as changes in bed levels (frequency and magnitude) may impact on integrity of the cable

The method of landfall along with an understanding of the dynamics of the coast at landfall are required.

Within Chapter 5, the MMO would like the source of the tidal and wave data to be clarified alongside a brief description of its reliability.

Maps of bed shear stress and zones of sediment mobility due to waves and currents (to distinguish the two) would be useful in the ES, to help identify which natural processes are likely to control sediment entrainment.

Within section 5.2.2., future work on extreme events the H1/10 and Hmax statistics should also be included. They are, for example, important to the stresses upon the piles and the design of the foundations.

Standard methods for the use of acoustics to measure waves and velocity profiles involve a fixed bottom-mounted deployment. A new triaxys system has been proposed that measures waves from a standard buoy and also used an ADCP to measure velocity profiles. This is a new technology and there may be some risk in relying upon it as a primary data source for the measurement of currents. Such measurements will require a convincing demonstration of their applicability and accuracy both from the manufacturer and from independently gathered evidence in the field, preferably by Forewind at the Dogger Bank Offshore Wind Farm Round 3 Zone. Given the current speeds are believed to be low, the error from such a system may be relatively large.

The impact of a very large number of turbines on the hydrodynamic and sedimentary environment should be considered. This should be a feature of both this application and the ZAP process. Numerical modeling will be required and appropriate consideration should be given to the foundation type with a Rochdale envelope/worst case scenario approach.

Biological Environment- Offshore

The data sources identified to support and inform the EIA process for Dogger Bank Project 1 appears to be relatively comprehensive. However, a number of additional publications may prove useful in informing the characterisation of the area of interest and interpreting the findings in the context of the Environmental Impact Assessment (see below):

Kröncke, I., 1990. Macrofauna standing stock of the Dogger Bank. A comparison: II. 1951-52 versus 1985-87. Are changes in the north-eastern part of the Dogger Bank due to environmental change? *Netherlands Journal of Sea Research*, **25** (1/2), 189-198.

Kröncke, I. and Rachor, E., 1992. Macrofauna investigations along a transect from the inner German Bight towards the Dogger Bank. *Marine Ecology Progress Series*, **91**, 269-276.

Kröncke, I., Stoek, T., Weiking, G. and Palojärvi, A., 2004. Relationship between structural and functional aspects of microbial and macrofaunal communities in different areas of the North Sea. *Marine Ecology Progress Series*, **282**, 13-31.

Reiss, H. and Kröncke, I., 2005. Seasonal variability of infaunal community structures in three areas of the North Sea under different environmental conditions. *Estuarine, Coastal and Shelf Science*, **65**, 253-274.

Wieking, G. and Kröncke, I., 2001. Decadal changes in macrofauna communities on the Dogger Bank caused by large scale climate variability. *Senckenbergiana maritime*, **31**(2), 125-141.

Wieking, G. and Kröncke, I., 2005. Is benthic trophic structure affected by food quality? The Dogger bank example. *Marine Biology*, **146,** 387-400.

The main impacts predicted to occur as a result of the development (during construction, operational and decommissioning phases) appear to have been properly considered. However, the level of information provided regarding intended survey work to be conducted in support of the EIA is not sufficient to allow detailed comment on its fitness for purpose at this stage. Therefore, with this in mind we would very much welcome the opportunity to comment and advise on the more detailed proposed survey designs, sample collection protocols and sample processing protocols prior to the surveys being mobilised.

Given the location of the proposed site with respect to the proposed SAC, it is considered that conservation issues will be significant. It is therefore recommended that the developer solicits fully the views of the relevant conservation bodies regarding potential for impact resultant from the project.

The EIA must include an assessment of the environmental effects of those species and habitats on the OSPAR List of Threatened and Declining Species and Habitats.

A short-snouted seahorse was caught in the Dogger Bank area, (Pinnegar *et al*, 2008). This is a species of conservation and relevant considerations should be observed.

Pinnegar, J.K., Stelzenmuller, V., Van der Kooij, J., Engelhard, G.H., Garrick-Maidment, N. and Righton, D.A., 2008. Occurance of the short-snouted seahorse *Hippocampus hippocampus* in the central North Sea. *Cybium,* **32** (4): 343-346.

Fish and Shellfish Resource

The document is well set out with appropriate consideration of the resident marine community and associated fisheries in the area.

We note that spring and autumn surveys are suggested. However, throughout the year a wide variety of species have at least part of their life cycle in the area it would be advisable to have quarterly surveys to adequately describe the seasonal variation of species. It is also important to remember that spawning ranges will vary, temporally and spatially, from one year to another.

No specific survey proposals have been given and as before with the ecological importance of the area and the diversity of species we would recommend that separate demersal and pelagic (with acoustic support) surveys are considered. We endorse the use of gear types operated by fishermen in the area, also, we recommend, if possible, using the local fishing community and fishing methods to survey the area.

We suggest use of Cefas IBTS data (North Sea ground fish survey) as 5 ‘prime’ sites are inside/close to total area of the wind farm.

In addition, sandeel species are abundant in the area and would not necessarily be adequately sampled using demersal or pelagic gear. Hence it may be appropriate to carry out a targeted sandeel survey at appropriate times of year using gear such as e.g. sandeel dredge. Areas within the development site have been previously surveyed for sandeel, (Engelhard, *et al* 2008).

Engelhard, G.H., van der Kooij, J., Bell, E.D., Pinnegar, J.K., Blanchard, J.L., Mackinson, S. and Righton, D.A., 2008. Fishing mortality versus natural predation on diurnally migrating sandeels *Ammodytes marinus*. Marine Ecology Progress Series, **369**: 213-227.

We suggest that demersal surveys, especially epibenthic, in the vicinity of the cable route sample elasmobranch eggs. This would provide information about adult presence and potential spawning areas.

A fisheries monitoring plan hasn't been suggested in this report. We would recommend that monitoring is carried out during construction and subsequently in the operational phase so that the impacts on the marine community can be adequately assessed. It is important to emphasize that consistent survey gear and methodology are used throughout the process to allow comparability across surveys.

We fully endorse the consultation and maintenance of good communication with local fishermen throughout the process. In addition, we also recommend more consultation with other international users of the area. It is acknowledged that 'domestic and European' representatives from the fishing industry were present at the stakeholder workshops. However, this together with consultation with the NSRAC alone is probably not sufficient to properly take into account international considerations. The workshops carried out were based in the UK alone and given the international importance of the area, it may be prudent to hold workshops in relevant places abroad and establish good consultation and communication with relevant groups, in particular those from Holland and Denmark.

Within section 7.1.1 patterns of fishing activity within the Zone have been initially assessed by analysis of VMS and flight surveillance data from 2006-2008. However, similar analysis for the cable corridor area is based on 2006 VMS data only. Clarification is required as to why similar periods and sources of data were not used for both areas.

Within section 7.1.3 a 28 day vessel survey is proposed to help characterize the fishing vessel activity baseline of the study area. It is unclear whether the 28 days are spread throughout the year or are to be carried out consecutively. The latter will not adequately consider any seasonal differences in activity and we would therefore recommend a survey programme that accounts for seasonal variation.

In addition to the data collection suggested for commercial fisheries we would expect to see large amounts of information from commercial fisheries in the EIA in light of international activity on the Dogger Bank, for example landings data.

We suggest that the possible impact on spawning Crustaceans are further investigated. Particular emphasis should be places on the Holderness Coast Area moving out towards Dogger Bank. Whilst in the early stages the eggs of Crab and Lobster are Planktonic, and therefore disturbances to the water column and seabed may be of concern.

It is encouraging that the developer is looking to gather data on all types of fishing gear used in the project environs.

Noise

We would expect the EIA to include information on the impact on marine mammals, fish and any other large mobile species both in terms of construction and operation.

Where the potential impact zone from the propagation of underwater noise overlaps with potential spawning grounds, it is likely that a timing restriction will be imposed on 'noisy' activities, e.g. seismic surveys and pile-driving during the spawning season of the key species of the area. This is the default position based on the available evidence, however, this should also be the trigger for developers to take action to:

- Ensure that the costs for such downtime on pile-driving are properly factored into the budgets and schedules for the construction of the offshore wind farm at the earliest opportunity;

- Investigate the need and scope for more detailed studies at the site to better define the timing and extent of the peak spawning period (via a combination of sea bed, newly hatched larvae and spawning/maturity state surveys) – this may require a series of surveys over a number of years (the extent and specification of such surveys should be agreed with Cefas);

- Undertake underwater sound propagation modelling, calibrated with locally relevant sound and seabed topography data;

- Investigate mitigation measures that can be designed into the construction or tested on site early in the project development to reduce sound emissions.

Human Environment- Offshore

The variety of fishing methods used in the area are, again, highlighted.

Of some concern is the described use of safety zones, during both the operational and construction phase of the wind farm. The fishing industry will be anxious for clarification on this matter, and how the developer will view access to the site during the operational phase.

The North West Roughs aggregate extraction licence (Area 466) is just 600 meters from the perimeter of the Tranche A area. Detailed consideration of the impacts of aggregate extraction at this site will be required including any impacts of the Offshore Wind Farm and aggregate extraction upon each other and any in combination impacts of these closely related activities.

Kind regards,

Ben Lander
Offshore Renewables Licensing Officer

Navigation Safety Branch
Bay 2/04
Spring Place
105 Commercial Road
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David Cliff
Infrastructure Planning Commission
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BS1 6PN

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E-mail: paul.townsend@mcga.gov.uk

Your ref: **101012EN010021_287174**
Our ref: **MNA 053/049/0015**

27 October 2010

Dear David

PROPOSED OFFSHORE WIND FARM - DOGGER BANK

We have now had an opportunity to review the Environmental Impact Assessment Scoping Report, provided by Royal Haskoning on behalf of Forewind, for the proposed Dogger Bank Offshore Wind Farm project and would comment as follows:

The Environmental Statement should supply detail on the possible the impact on navigational issues for both Commercial and Recreational craft, viz.

Collision Risk
Navigational Safety
Visual intrusion and noise
Risk Management and Emergency response
Marking and lighting of site and information to mariners
Effect on small craft navigational and communication equipment
The risk to drifting recreational craft in adverse weather or tidal conditions
The likely squeeze of small craft into the routes of larger commercial vessels.

A Navigational Risk Assessment will need to be submitted in accordance with MGN 371 (and 372) and the DTI/DfT/MCA Methodology for Assessing Wind farms.

Particular attention should be paid to cabling routes and burial depth for which a Burial Protection Index study should be completed and, subject to the traffic volumes, an anchor penetration study may be necessary

Reference should be made to any Marine Environmental High Risk Areas (MEHRAS) established on adjacent coastlines.

The cumulative and in combination effects require serious consideration, and particulary the adjacent Windfarm proposals.

Casualty information from the MAIB and RNLI would also be good data sources, in establishing the risk profile for the area.

Given that neither the capacity nor structure of the individual wind turbine generators have been decided the principles of the Rochdale envelope should be used in the EIA. Minimum safe air clearances between Mean High Water Springs (MHWS) and turbine blades ahould be suitable for the vessel types identified in the traffic survey and not less than 22 metres.

Any reference to IALA recommendations on the marking of wind farms should refere to O-139 Edition 1 December 2008 which replaced all previous versions.

The MCA Shipping Route template does not recommend the development of windfarms within a distance of 5 nautical miles from the entry/exit of a Traffic Separation Scheme (TSS) and furthermore recommends a minimum separation of 3.5 nautical miles between turbines on opposite sides of a route.

The shipping and navigation study should include radar and manual observations in addition to AIS data to ensure vessels of less than 300gt are captured. Given the potential displacement of traffic to the east of the site full consideration of the implications to all identified marine users will need to be assessed.

The offshore human environment should also include recreational and other sport activities. Any application for operational safety zones will need to be carefully assessed and additionally supported by experience from the Dogger Bank development and operational wind farms.

Particular consideration will need to be given to the implications of the site size and location on SAR resources and Emergency Response & Co-operation Plans (ERCOP) and Guard Vessel provisions.

Developers need to be aware that the radar effects of OWF on ship's radars are an important issue and will be subject to further discussion within the radar sub group of NOREL. The radar effects will need to be assessed on a site specific basis taking into consideration previous reports on the subject available on the MCA website at: http://www.mcga.gov.uk/c4mca/mcga07-home/shipsandcargoes/mcga-shipsregsandguidance/mcga-windfarms/offshore-renewable_energy_installations.htm
Extending the wind farm in the proposal will significantly increase the exposure of vessels to these effects.

Yours sincerely

Captain Paul Townsend
Navigation Safety Branch

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4000 Parkway
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F: 01489 444013
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David Cliff
Infrastructure Planning Commission

Sent via email: ipcscopingopinion@infrastructure.gsi.gov.uk

18th October 2010

Your Ref: 101012_EN010021_287174
Our Ref: W(F)9267

Dear Sir,

Wind Farm: Dogger Bank

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NERL (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NERL in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully,

Sarah Allen
Technical Administrator
On behalf of NERL Safeguarding Office

From: McDermott, Mike
To: IPC Scoping Opinion;
cc: Ellul, Ivan; Allison, Tim;
Subject: Proposed Offshore Wind Farm - Dogger Bank
Date: 08 November 2010 18:18:05

Dear Colleague

NHS East Riding of Yorkshire has reviewed the Dogger Bank Project One Environmental Impact Assessment Scoping Report and confirm that we do not have any comments on the document.

Cheers

Mike

Mike McDermott
Head of Emergency Planning & Community Cohesion
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Willerby
East Yorkshire
HU10 6DT

Tel. 01482-672120
Fax 01482-672079

Email: mike.mcdermott@erypct.nhs.uk
Website: www.erypct.nhs.uk

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these organisations.

****

Correspondents should note that all communications to Department for Communities and Local Government may be automatically logged, monitored and/or recorded for lawful purposes.

****

NHS Hull

David Cliff
Infrastructure Planning Commission
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Temple Quay
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BS1 6PN

The Maltings
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Tel: 01482 344814
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Email: wendy.richardson@hullpct.nhs.uk

Your ref : 101012_EN010021_287174

11th November 2010

Dear Mr. Cliff,

Proposed Offshore Wind Farm, Dogger Bank ('the Project')
Proposal by Forewind ('the Applicant')
Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI2263 ('the EIA Regulations')

I am in receipt of your communication of 14th October regarding the above planning consultation and your invitation to provide information for consideration within the 'scoping' stage of this proposal.

I thank you for your advance communication in this respect.

Forwind has asked the Infrastructure Planning Commission(IPC) for its opinion ('scoping opinion') on the information to be provided in an environmental statement relating to a proposal to construct and operate an offshore wind farm project with a generating capacity of up to 1.4W, referred to as 'Dogger Bank Project One', as part of an overall national project which would comprise the world's largest offshore wind farm.

The Dogger Bank Zone is located in the North Sea off the east coast of Yorkshire, and comprises an area of 8,660km2 /3,343 sq.miles at a distance from shore of 125 to 290km and I understand Dr. Tim Allison, Director of Public Health for East Riding of Yorkshire is also aware of this consultation. This proposal encompasses both offshore and associated on-shore development. The city of Hull falls within the scope of the 'Zone Appraisal Planning'(ZAP) for this proposal.

The offshore developments include the installation of wind turbine generators, including relevant foundations and inter-array cabling and installation, collector sub-stations and converter sub-stations, and export cabling to shore, as well as the installation of a number of meteorological monitoring stations(masts). Once operational, the project will require regular inspections, service and maintenance throughout its lifetime.

The offshore developments may produce 'spoil' as part of the installation process, either through drilling or suction dredging, and it is proposed that this could be disposed of on site, or off-site at a 'licensed spoil disposal area', subject to assessment and licensing, as

appropriate.

In addition to offshore developments, the project includes onshore components which include:
• Onshore transition pit;
• Cable system - from onshore transition pit to onshore converter substation;
• Ancillary cable ducts – these are buried ducts running adjacent to the cable system;
•Cable system - from onshore converter substation to National Grid Electricity Transmission (NGET) substation; and
• Up to two converter substations

Forewind has accepted a grid connection offer made by National Grid to connect the first approximately 1.4GW of the Dogger Bank project into the existing Creyke Beck substation, near Cottingham, and to the north of the Hull city boundary.

Project Area A: comprises a 4km radius area centred on Creyke Beck substation within which it is likely that up to two new converter substations will be constructed. Cabling between the converter substations and the NGET substation will pass through this project area, as will cabling between the converter stations and the landfall location.

In addition it is proposed that cabling corridors will pass around the north and eastern boundaries of the city, and that the cable route will avoid the main built up area of Hull due to the high density of residential properties. Potential impacts in relation to Kingston upon Hull are referred to within project Area D (Southern Area), where to the west of Project Area D are the outskirts of Kingston upon Hull, and it is envisaged that any cable route is likely to avoid this area.

The onshore construction period is estimated to have a duration of up to 24 months.

Forwind also propose that during the operational phase of the wind farm, the impacts arising from the onshore components are limited. Access will be required to the converter substation, throughout the lifetime of the project for monitoring and maintenance purposes and occasional access may be needed to the landfall transition pit and cable joint pits.

This request for a scoping opinion is a precursor to an intensive and detailed independent assessment of the environmental impact of the proposed development.

Whilst the Health Protection Agency provide consultative responses in relation to health protection issues associated with chemicals and radiation, the scope of Hull PCT's response focuses on wider health issues, associated with current health status and future health protection for the population of Hull, and environ.

The city of Kingston-upon-Hull has a population of 260,000 and is the 11th most deprived local authority in England based on the Index of Multiple Deprivation 2007. It has several neighbourhoods with high deprivation, both in the city centre and the outlying estates. Half of Hull's lower layer super output areas (LLSOAs; which are geographical areas used in deprivation calculation with average of 1,500 residents) are in the most deprived 20% nationally with a further quarter in the second most deprived 20%.

Only 7% are in the second least deprived 20% nationally and none of Hull's LLSOAs are in the least deprived 20% nationally. North Locality has fewer people (63,000) than the other two localities and is slightly more deprived, with particularly high deprivation in the

northwest (Orchard Park and North Hull Estate) and northeast (Bransholme) sectors.

In consideration, Hull has relatively high rates of chronic disease and mortality, including under 75 death rates for cancer, CHD and stroke which are 20 to 80% above the national average. The absolute gap between England and Hull for mortality from early cancer and circulatory disease is reducing, but the absolute gap between England and Hull is increasing for a number of indicators such as life expectancy at birth and all age all cause mortality rate.

The advice offered by NHS Hull is impartial and independent.

NHS Hull recommendations regarding the scoping document
From my initial review of the web-based information referred to in your letter at: http://infrastructure.independent.gov.uk/wp-content/uploads/2010/10/Dogger-Bank-Project-One-Scoping-Report.pdf the following outlines the information that NHS Hull considers should be provided in the environmental statement.

General approach
The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA(DCLG 2006). It is essential that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational and decommissioning phases.

The applicant should ensure that the EIA contains sufficient information for relevant authorities to be able to fully assess the potential impact of the development on public health, including potential off-site effects and threats to health in the event of an accident and it is recommended that a separate section be included in the environmental statement summarizing the impact of proposed development on public health: setting out risk assessments, proposed mitigation measures, and residual potential impacts on health, in relation to relevant sections of the application. Compliance with national policy statements requirements and with relevant guidance and standards should be highlighted.

The document should be reviewed by the IPC to ensure that the application is of sufficient quality to be submitted for consultation. I note your advice on the PCTs duty (under Regulation 9(3), if so requested by the applicant, to make available information held by the PCT which is considered relevant to the preparation of the environmental statement, however, the PCT considers that the onus should be on the applicant to gather and clearly present the information required and requested by statutory consultees, and that it should not be the role of statutory consultees to undertake the relevant assessments on the applicant's behalf; this would pose significant resource implications and would conflict with the consultee's position as an impartial and independent body. The onus is therefore on the applicant to ensure that the relevant public health issues have been identified and addressed.

The PCT would expect to see comprehensive coverage of public health issues and potential impacts. Such health effects will include impacts arising from construction and traffic related pollution, air quality impacts, potential impacts on health arising from emissions to water and conservation of water quality, and potential health impacts related to contaminated land, as well as identification and mitigation of potential impacts on health related to waste creation, storage, transport and disposal. The assessment of impacts on health should extend beyond the standard 'harm to health' to include an assessment of the

social and economic impacts(positive and negative) for local communities within the city of Kingston upon Hull within range of the development.

Electromagnetic fields
There is a potential health impact associated with the electric and magnetic fields around substations and the connecting cables or lines. The Health Protection Agency(HPA) makes recommendations on limiting public exposure to electromagnetic fields (HPA website) and supports the view that precautionary measures should address solely the possible association with childhood leukaemia, as opposed to other more speculative health effects.

The PCT would expect the environmental statement to set out clearly all information as specified by the Health Protection Agency in their detailed recommendations to this consultation, and cited within the position statement issued by the Health Protection Agency: 'Planning Act 2008: HPA position in relation to applications for onshore and offshore wind farms' to be fully addressed.

Accessed at: http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1284473361539

Liaison with other stakeholders, comments should be sought from:

- Neighbouring local authorities relating to noise, odour, vermin and dust nuisance
- The Environment Agency for matters relating to flood risk potential to impact on controlled waters

Consideration and assessment of this installation in relation to other renewable energy developments which approximate to the Hull city boundary and environ should also be included.

Environmental Permitting
The Environmental Statement should seek evidence and assurances to limit potential impacts on public health based on the utilisation of 'best practice' and the adherence to legal and regulatory limits relevant to all phases of the development.

Amongst other permits and consents, the development will require an environmental permit from the Environment Agency to operate (under the Environmental Permitting (England and Wales) Regulations 2007). Therefore the installation will need to comply with the requirements of bet available techniques (BTA). The PCT is consultee to environmental permit applications and will respond separately to any such consultation.

I look forward to further consultative opportunities as this development progresses.

Yours sincerely

Dr Wendy Richardson
Director of Public Health for Hull

Environmental Impact Assessment: A guide to good practice and procedures – A consultation paper, 2006; Department for Communities and Local Government. Available from:
http://www.communities.gov.uk/archived/publications/planningandbuilding/environmentalimpactassessment

HPA: http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/

Application Number: CON/2010/1205
(please quote in all correspondence)

Case Officer: William Hill Tel: 01724 297482
Email: planning@northlincs.gov.uk

Your Ref: 101012_EN010021_287174

20 October 2010

IPC
22 OCT 2010
REF:

NORTH LINCOLNSHIRE COUNCIL

www.northlincs.gov.uk

Geoff Popple
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Laura Allen
EIA and Land Rights Advisor
Infrastructure Planning Commission
Temple Quay House
Temple Quay
BRISTOL
BS1 6PN

Dear Sir/Madam

CONSULTATION BY AN ADJACENT AUTHORITY

Proposal: Proposed offshore windfarm

Site Location: Proposed offshore Windfarm, Dogger Bank

Applicant: Mr Mark Thomas, Onshore & Cable Project Manager, Forewind

Thank you for the formal consultation of the above application dated 14 October, 2010. It is hoped to have a response to you by 11 November, 2010. Please direct any enquiries to the case officer.

Yours faithfully

Mike Welton
Head of Planning

From: Carl Bunnage
To: IPC Scoping Opinion;
Subject: Proposed Offshore Windfarm - Dogger Bank
Date: 27 October 2010 09:44:49

Dear Sir/Madam,

Thank you for your letter dated 14 October 2010 (your ref: 101012_EN010021_287174) consulting North Yorkshire County Council on the EIA Scoping Report in relation to the proposed offshore windfarm proposal by 'Forewind' at Dogger Bank.

I wish to confirm that North Yorkshire County Council does not have any specific comments to make at this stage.

Thank you once again however for consulting us on this matter.

Yours faithfully

Carl Bunnage
Team Leader Regional and Strategic Policy,
Economic and Rural Services,
North Yorkshire County Council.

E: Carl.Bunnage@northyorks.gov.uk
Tel: 01609 532523

If you receive an automatic response stating that the recipient is away from the office and you wish to request information under either the Freedom of Information Act, the Data Protection Act or the Environmental Information Regulations please forward your request by e-mail to the Data Management Team (datamanagement.officer@northyorks.gov.uk) who will process your request.

North Yorkshire County Council.

****

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From: William J Hill
To: IPC Scoping Opinion;
Subject: Proposed Offshore Windfarm, Dogger Bank. Forewind. Scoping Request.
Date: 21 October 2010 15:16:05

Fao David Cilff.

Dear Sir.

Further to your consultation with North Lincs Council dated 14 October 2010.

Please consider this email as formal notification that this Council have no comments to make at the Scoping stage.

Yours sincerly

William Hill
Principal Planner
NLC

PRESTON DRAINAGE BOARD
Tel 01964 630531 *Fax 01964 631203*
Email: auctions@frankhillandson.co.uk

Clerk to the Board
R E Ward FRICS FAAV

18 Market Place
Patrington
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HU12 0RB

IPC
28 OCT 2010
REF:

Our Ref REW/EA
Your Ref 101012_EN010021_287174
27th October 2010

FAO Mr D Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
BRISTOL
BS1 6PN

Dear Sir

Re Proposed Offshore Wind Farm, Dogger Bank

My Board has noted your proposals and have instructed me to object to the southern cable corridor D as it would be the most lengthy and indirect route and would cause problems throughout the Land Drainage Area

Yours faithfully

R E Ward FRICS FAAV
Clerk to the Board

From: JOHN MCWATT
To: IPC Scoping Opinion;
Subject: Dogger Bank Offshore Wind farm
Date: 18 October 2010 14:14:35

We would like EIA to cover; seismic vibration,piling and drilling on the seabed, with regards to coastal erosion escalation on our coast

Yours
John Mcwatt
Chairman Rimswell Parish Council

Rudston Parish Council

Ref: 101012 EN010021 287174

25 Station Road,
Nafferton,
Driffield.
East Yorkshire.
YO25 4LS.

Infrastructure Planning Commission
Temple Quay House,
Temple Quay,
Bristol.
BS1 6PN.

18th October, 2010

F.A.O: David Cliff

Dear Mr. Cliff,

It came as a surprise that this small village parish council should be identified as a consultation body in such a "distant" matter as a proposed Wind Farm on (in?) the Dogger Bank.

However, I will simply confirm that we have no comments.

Yours sincerely,

Phillip Crossland
(Clerk to Rudston Parish Council)

Regeneration and Planning
Town Hall, St Nicholas Street
Scarborough
YO11 2HG

Head of Service
Ms P Elliott

Contact: Mrs J Low
Tel: 01723 232438
Fax: 0870 191 03997
e-mail: jill.low@scarborough.gov.uk
Web site: www.scarborough.gov.uk/planning

Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Your Ref 101012_EN010021_287174
Our Ref

11 November 2010

Dear Mr Cliff,

Proposed Offshore Wind Farm, Dogger Bank, by Forewind
Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263

I refer to your letter dated 14 October 2010, regarding the proposals for an offshore wind farm at Dogger Bank by Forewind. I confirm that the Planning Authority is satisfied with the information contained in the Environmental Impact Assessment Scoping Report and that we have no comments to make at this stage.

Yours sincerely

Mrs J Low
Planning Manager

From: dylan jones
To: IPC Scoping Opinion;
Subject: Dogger Bank off shore wind farm - Attention of David Carr
Date: 20 October 2010 09:47:36

Good morning David.

I have just looked at the website in relation to the consultation that you have sent Selby District Council in relation to the above and due to the distance of the site to the district, I do not wish to raise any comments on behalf of the Council on the scheme.

Thanks

Dylan Jones
Manager of Development Management
Selby District Council
An 'Excellent' Council

Tel: 01757 292083
Fax: 01757 292090
Email: djones@selby.gov.uk
Web:www.selby.gov.uk

Selby District Council, Civic Centre, Portholme Road, Selby, YO8 4SB - DX 27408 SELBY - Tel: 01757 7051

Skidby Parish Council

East Yorkshire

P A Wharton
Parish Clerk

Tel : (01482) 848408

10 Old Village Road
Little Weighton
Cottingham
East Yorkshire
HU20 3US

Your ref 101012_EN010021_287174

Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

6 November 2010

Proposed Offshore Wind Farm, Dogger Bank

Thank you for your letter of 14 October 2010 informing the Council that they are identified as a consulting body for the above project.

One item which the Council would like to see identified in the environmental statement is specific detail on the land based infrastructure which will be necessary to support the wind farm. Where will the power generated be brought to shore and where will transformers, substations and new pylons to connect to the National Grid be situated.

Yours faithfully

Philip A. Wharton

Clerk to the Council

The COAL AUTHORITY

INVESTOR IN PEOPLE

200 Lichfield Lane
Berry Hill
Mansfield
Nottinghamshire
NG18 4RG

Tel: 01623 637 119 (Planning Enquiries)

Email: planningconsultation@coal.gov.uk

Web: www.coal.gov.uk/services/planning

Mr David Cliff – Case Leader on behalf of the IPC
Infrastructure Planning Commission

[By Email: ipcscopingopinion@infrastructure.gsi.gov.uk]

05 November 2010

Your Ref: 101012_EN010021_287174

Dear Mr Cliff

Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263

Proposed Offshore Wind Farm at Dogger Bank

Thank you for your letter dated 14 October 2010 consulting The Coal Authority on the scoping opinion for the above proposal.

Coal Authority Response
The proposed EIA development may impact on future proposed Underground Coal Gasification (UCG) projects off the coast of Humberside for which we have either received an application or have already granted a licence.

The Coal Authority is therefore pleased to note that Section 7.6.1 of the EIA Scoping Report identifies the current situation with regard to UCG proposals in the vicinity of the proposed development, which gives us confidence that the applicant will afford this issue appropriate consideration in the Environmental Statement.

The Coal Authority considers that the potential for UCG operations to be undertaken within the area should be fully considered and addressed as part of the Environmental Statement for the Dogger Bank proposal. In particular, the Environmental Statement should identify and address the potential impacts that future UCG operations might have in relation to the proposed development, including the potential for subsidence, along with any mitigation measures that are necessary as a consequence.

UCG Licence Information
Further information on the issues above can be obtained by the applicant from The Coal Authority's Licensing Team on 01623 637 344 or via our website: http://www.coal.gov.uk/services/licensing/index.cfm.

In accordance with our consultation requirements, we look forward to receiving the

planning application and Environmental Statement for comment in due course.

I trust this is acceptable, please do not hesitate to contact me if you require any additional information or would like to discuss this matter further.

Yours sincerely

Mark E. N. Harrison *B.A.(Hons), DipTP, MRTPI*
Planning Liaison Officer

16 New Burlington Place
London, W1S 2HX

General enquiries: 020 7851 5000
Web: www.thecrownestate.co.uk

THE CROWN ESTATE

Infrastructure Planning Commission
Attention: David Cliff
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Dr Tim Norman
Senior Planning Manager
Tel: 020 7851 5045
Fax: 020 7851 5125
E-mail: tim.norman@thecrownestate.co.uk

05 November 2010

Dear Mr Cliff

PROPOSED OFFSHORE WIND FARM, DOGGER BANK
FOREWIND

Reference is made to your letter dated 14 October 2010 inviting The Crown Estate to comment on the scoping opinion sought for the Environmental Statement for the above proposal.

I can advise that, in this instance, The Crown Estate has no comments on the scoping report for this proposal.

Should you have any queries or require any additional information with regard to this matter, please do not hesitate to contact me on 0207 851 5045.

Yours sincerely,

Dr Tim Norman
Senior Planning Manager

Your Reference: EN0101012_EN010021_287174
Our Reference: IPCConsultation/2010/DoggerBank/05.11.10

From:	Navigation Directorate
To:	IPC Scoping Opinion;
Subject:	101012_EN010021_287174 Comments on Scoping Report for Dogger Bank Project One
Date:	11 November 2010 12:24:19

FAO David Cliff

Your ref:- 101012_EN010021_287174
Our ref:- OWF/EC/10

Dear David

Response by Trinity House to the consultation on the Scoping Report for the Dogger Bank Project One.

I write in reply to the letter dated 14 October from Laura Allen under the above reference seeking comments from Trinity House on the Environmental Impact Assessment Scoping Report for the proposed Dogger Bank Project One Offshore Wind Farm.

Trinity House is the General Lighthouse Authority for England and Wales with statutory responsibilities under the Merchant Shipping Act 1995 for the superintendence and management of aids to navigation off the coasts of England & Wales. As part of these responsibilities we advise the appropriate consenting authorities how developments in the offshore marine environment should be required to be marked by a developer as part of the conditions of any consent authorising development and operation. Our particular interest is therefore concerned with the interaction between the development (during construction, operation, decommissioning and beyond if any obstruction remains due to the wind farm which at the time is considered to be a danger to navigation) and all types of shipping (including commercial, commercial fishing and leisure) so that the risk is reduced to a low as reasonably practicable and that any aids to navigation required to mitigate the risk conform in all respects to the internationally agreed standards.

The contents of the scoping report have been carefully studied particularly as regards the assessment of the impact of the development on shipping and I can advise as follows:-

- Trinity House concurs with the need for the further navigation studies identified in the scoping report, noting that a survey has already been undertaken to establish the volume and pattern of traffic in and around the site and endorses the developers intention to augment this by continuing observations undertaken by the vessels carrying out geophysical surveys in the area.
- We look forward to further discussions with the developer regarding the location of the Dogger Bank Project One development and the likely possible locations for other developments within the Tranche A area. In this connection it would be helpful if the developer were to include the co-ordinates for tranche A in Latitude and Longitude (WGS84 Datum) in any such documentation.
- It is considered that the wind farm will need to be marked by the developer / operator in accordance with the general principles outlined in IALA (International Association of Marine Aids to Navigation & Lighthouse Authorities) Recommendation O-139 (section 2.3) on the Marking of Man-made Offshore Structures as a risk mitigation measure. This should be addressed in the environmental statement accompanying the development application, preferably by means of indicative marking for a "worse case" indicative layout. This should be a matter for discussion / agreement between us and the developer during the EIA. In this connection the EIA should address reducing the risk to shipping to as low as reasonably practicable by orientating the layout of structures within the wind farm so that they are sympathetic to the existing routes taken by shipping.

- We are concerned at the possible cumulative and in-combination effects on shipping routes and patterns and on the possible implications for marine navigational marking through the construction of one (or more) individual wind farms within this zone, when proposals have not yet been developed to indicate where later developments may take place within this zone and other adjacent Round 3 zones and extension developments. Whilst we fully appreciate that a start must be made somewhere we would request that during the EIA the developer make every effort to establish the likely overall impact on routes taken by shipping of these developments and particularly those likely to be progressed in the East Anglia and the Hornsea Offshore Wind Farm Zones, whilst also bearing in mind that routes taken by shipping may be constrained by the draught of the vessel.
- Trinity House appreciates the acknowledgement in the Scoping Report for the environmental effects of eventual decommissioning to be briefly addressed in the EIA. This consideration should extend to a situation where it is not possible to remove all the obstructions resulting from the development, operation or decommissioning that it was intended to remove. This may then necessitate navigational marking of that obstruction if it is considered to be a danger to navigation by the developer / operator until such time as the obstruction is removed or is no longer considered to be a danger to navigation.
- The EIA should address the possible requirement for navigational marking of the export cable(s) and the vessels laying them and if it is necessary for the cables to be protected by rock armouring or concrete mattresses (or similar protection) which lie clear of the surrounding seabed, the impact on navigation and the requirement for appropriate risk mitigation measures to be assessed.

I hope that these comments are of assistance in preparing the scoping opinion for this project.

Regards

John Cannon
Navigation Services Officer
Trinity House.

****

From: John Hague
To: IPC Scoping Opinion;
Subject: PROPOSED OFFSHORE WIND FARM, DOGGER BANK SCOPING OPINION
Date: 04 November 2010 08:10:33

For attn. David Cliff,

In response to your letter of 14th October 2010 ref 101012_EN0100221_287174, Watton Parish Council consider that the following should be provided in the environmental satement.

1. Plans to mitigate disturbance to important natural habitats.

2. Impact on fish stocks and how such impact is assessed.

3. Impact of onshore electric cable connection to the National Grid on the local environment.

Yours faithfully,

Ruth Hague

Clerk to Watton Paish Council.

WILBERFOSS & THORNTON LEVEL DRAINAGE BOARD

(A Member of the York Consortium of Drainage Boards)

WILLIAM SYMONS
CLERK TO THE BOARD
DERWENT HOUSE
CROCKEY HILL
YORK
YO19 4SR

IPC
22 OCT 2010
REF:

Telephone (01904) 720785
Fax (01904) 720800

Email: bill.symons@yorkconsort.gov.uk

Please ask for David Fullwood

Our Ref: DFF/MA

19 October 2010

Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Dear Sir,

Proposed Offshore Wind Farm, Dogger Bank ("the Project")
Proposed by Forewind ("the Applicant")
Infrastructure Planning (Environmental Impact Assessment)
Regulations 2009 SI 2263 ("the EIA Regulations")

I refer to your letter dated 14th October 2010 regarding the above project.

I would advise that at this stage the Board/Consortium does not have any comments to make in respect of the EIA.

Yours faithfully,

D Fullwood

W Symons
Clerk and Engineer to the Board

WINESTEAD LEVEL DRAINAGE BOARD
Tel 01964 630531 Fax 01964 631203
Email: auctions@frankhillandson.co.uk

Clerk to the Board
R E Ward FRICS FAAV

18 Market Place
Patrington
HULL
HU12 0RB

Our Ref REW/EA
Your Ref 101012_EN010021_287174
27th October 2010

FAO Mr D Cliff
Infrastructure Planning Commission
Temple Quay House
Temple Quay
BRISTOL
BS1 6PN

Dear Sir

Re Proposed Offshore Wind Farm, Dogger Bank

My Board has noted your proposals and have instructed me to object to the southern cable corridor D as it would be the most lengthy and indirect route and would cause problems throughout the Land Drainage Area

Yours faithfully

R E Ward FRICS FAAV
Clerk to the Board

YORK CONSORTIUM OF INTERNAL DRAINAGE BOARDS

WILLIAM SYMONS
CLERK TO THE BOARD
DERWENT HOUSE
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YORK
YO19 4SR

Telephone (01904) 720785
Fax (01904) 720800

Email: bill.symons@yorkconsort.gov.uk

IPC
22 OCT 2010
REF:

Please ask for David Fullwood

Our Ref: DFF/MA

19 October 2010

Infrastructure Planning Commission
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Dear Sir,

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Proposed by Forewind ("the Applicant")
Infrastructure Planning (Environmental Impact Assessment)
Regulations 2009 SI 2263 ("the EIA Regulations")

I refer to your letter dated 14th October 2010 regarding the above project.

I would advise that at this stage the Board/Consortium does not have any comments to make in respect of the EIA.

Yours faithfully,

W Symons
Clerk and Engineer to the Board

APPENDIX 3

PRESENTATION OF ENVIRONMENTAL STATEMENT

APPENDIX 3

PRESENTATION OF THE ENVIRONMENTAL STATEMENT

An environmental statement is described under the EIA Regs as a statement:

> '(a) that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and of any associated development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile; but
>
> (b) that includes at least the information required in Part 2 of Schedule 4'.
>
> *(EIA Regs regulation 2)*

The EIA Regs Schedule 4, Parts 1 and 2, set out the information for inclusion in an ES. Part 2 sets out the minimum requirements and is included below for reference:

> Schedule 4 Part 2
>
> - a description of the development comprising information on the site, design and size of the development;
> - a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;
> - the data required to identify and assess the main effects which the development is likely to have on the environment;
> - an outline of the main alternatives studies by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects;
> - a non-technical summary of the information provided [*under the four paragraphs above*].

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 SI 2264 set out the requirements for information which must be provided as part of the DCO application. Applicants may also provide any other documents considered necessary to support the application. Information which is not environmental information (this is defined in Regulation 2 of the EIA Regs) need not be replicated or included in the ES.

The Commission advises that the ES should be laid out clearly with a minimum amount of technical terms and should provide a clear objective and realistic description of the likely significant impacts of the proposed development. The information should be presented so as to be comprehensible to the specialist and non-specialist alike.

The Commission recommends that the ES be concise with technical information placed in appendices.

ES Indicative Contents

The Commission emphasises that the ES should be a 'stand alone' document in line with best practice and case law.

Schedule 4 Part 1 of the EIA Regs sets out the aspects of the environment likely to be significantly affected by the development which should include '*in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors*' (paragraph 19).

The content of the ES should include as a minimum those matters set out in Schedule 4 Part 2 of the EIA Regs. This includes the consideration of 'Alternatives' which the Commission recommends could be addressed as a separate chapter in the ES.

Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the Commission considers it is an important consideration *per se*, as well as being the source of further impacts in terms of air quality and noise and vibration.

Balance

The Commission recommends that the ES should be balanced, with matters which give rise to a greater number or more significant impacts being given greater prominence. Where few or no impacts are identified, the technical section may be much shorter, with greater use of information in appendices as appropriate.

The Commission considers that the ES should not be a series of disparate reports and stresses the importance of considering inter-relationships between factors and cumulative impacts.

Physical Scope

In general the Commission recommends that the physical scope for the EIA should be determined in the light of:

- the nature of the proposal being considered;
- the relevance in terms of the specialist topic;
- the breadth of the topic;
- the physical extent of any surveys or the study area; and
- the potential significant impacts.

Therefore, the Commission recommends that the study area for the EIA should include at least the whole of the application site, and include all offsite

works. For certain topics, such as landscape and transport, the study area will need to be wider. The study area for each specialist topic should be clearly defined and determined by establishing the physical extent of the likely impacts in accordance with good practice.

The Commission considers that the study areas should be agreed, wherever possible, with the relevant statutory consultees and local authorities.

Temporal Scope

The assessment should consider:

- environmental impact during construction works;
- environmental impacts on completion/operation of the development;
- environmental impacts a suitable number of years after completion of the development in order to allow for traffic growth or maturing of any landscape proposals; and
- decommissioning.

In terms of decommissioning, the Commission acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment is to enable the decommissioning of the works to be taken into account in the design and use of materials such that structures can be taken down with the minimum of disruption, materials can be re-used and the site can be restored or put to a suitable new use. The Commission encourages consideration of such matters in the ES.

The Commission recommends that these matters should be set out clearly in the ES and that the suitable time period for the assessment should be agreed with the relevant statutory consultees.

The Commission considers that the duration of effects should use a standard terminology, which should be defined.

Baseline

The Commission recommends that the baseline should describe the position from which the impacts of the proposed development are measured. The baseline should be chosen carefully and, where possible, be consistent between topics.

The identification of a single baseline is to be welcomed in terms of the approach to the assessment, although the Commission considers that care should be taken to ensure that all the baseline data remains relevant and up to date. The Commission recommends that the baseline environment should be clearly explained in the ES, including any dates of surveys. Wherever possible the baseline should be agreed with the appropriate consultees.

For each of the environmental topics, the data source(s) for the baseline should be set out together with any survey work undertaken with the dates.

Identification of Impacts and Method Statement

Legislation and Guidelines

In terms of the EIA methodology, the Commission recommends that reference should be made to best practice and any standards, guidelines and legislation that have been used to inform the assessment. This should include guidelines prepared by relevant professional bodies.

In terms of other regulatory regimes, the Commission recommends that relevant legislation and all permit and licences required should be listed in the ES where relevant to each topic. This information should also be submitted with the application in accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 SI No. 2264.

In terms of assessing the impacts, the ES should approach all relevant planning and environmental policy – local, regional and national (and where appropriate international) – in a consistent manner.

Assessment of Effects and Impact Significance

The EIA Regs require the identification of the '*likely significant effects of the development on the environment*' (Schedule 4 Part 1 paragraph 20). Therefore, the Commission considers it is imperative for the ES to define the meaning of 'significant' in the context of each of the specialist topics` and for significant impacts to be clearly identified.

The Commission recommends that the criteria should be set out fully and that the ES should set out clearly the interpretation of 'significant' in terms of each of the EIA topics. Quantitative criteria should be used where available. The Commission considers that this should also apply to the consideration of cumulative impacts and impact inter-relationships.

Potential Environmental Impacts

The Commission considers these under Section 3: the EIA Topic Areas of this Opinion.

Inter-relationship Impacts

The inter-relationship of impacts on the same receptor should be taken into account. These occur where a number of separate impacts, eg. noise and air quality, affect a single receptor such as fauna.

The Commission considers that the inter-relationship between aspects of the proposed development should be assessed and that details should be provided as to how inter-relationships will be assessed in order to address the environmental impacts of the proposal as a whole.

Cumulative Impacts

The ES should describe the baseline situation and the proposed development within the context of the site and any other proposals in the vicinity.

Other major development in the area should be identified beyond the proposal itself including any associated development. The Commission recommends that this should be identified through consultation with the local planning authorities on the basis of major developments that are:

- built and operational;
- under construction;
- permitted application(s), but not yet implemented;
- submitted application(s) not yet determined;
- projects on the Commission's Programme of Projects;
- identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited; and
- identified in other policy documents, (for example in Wales the Technical Advice Notes which establish strategic search areas) as development reasonably likely to come forward.

Details should be provided in the ES, including the types of development, location and key aspects that may affect the EIA and have been taken into account as part of the assessment.

Associated development

The ES should give equal prominence to any development which is associated with the proposed development to ensure that all the impacts of the proposal are assessed.

The Commission recommends that the applicant should distinguish between development for which development consent will be sought and any other development. This distinction should be clear in the ES.

Alternatives

The ES must set out an outline of the main alternatives studied by the applicant and provide an indication of the main reasons for the applicant's choice, taking account of the environmental effect (Schedule 4 part 1 paragraph 18).

Matters should be included, such as *inter alia* alternative design options and alternative mitigation measures. The justification for the final choice and evolution of the scheme development should be made clear. Where other sites have been considered, the reasons for the final choice should be addressed.

The Commission advises that the ES should give sufficient attention to the alternative forms and locations for the off-site proposals, where appropriate, and justify the needs and choices made in terms of the form of the development proposed and the sites chosen.

Mitigation Measures

Mitigation measures may fall into certain categories: namely avoid; reduce; compensate or enhance; and should be identified as such in the specialist sections (Schedule 4 part 1 paragraph 21). Mitigation measures should not be developed in isolation as they may relate to more than one topic area.

The effectiveness of mitigation should be apparent. Only mitigation measures which are a firm commitment should be taken into account as part of the assessment.

The application itself will need to demonstrate how the mitigation would be delivered, and only mitigation which can be shown to be deliverable should be taken into account as part of the EIA.

It would be helpful of the mitigation measures proposed could be cross referred to specific provisions and/or requirements proposed within the draft development consent order. This could be achieved by means of describing the mitigation measures proposed either in each of the specialist reports or collating these within a summary section on mitigation.

Trans-boundary Effects

The Commission recommends that consideration should be given in the ES to any likely significant effects on the environment of another Member State of the European Economic Area. In particular, the Commission recommends consideration should be given to discharges to the air and sea and to potential impacts on migratory species.

Presentation

The Commission recommends that all paragraphs in the ES should be numbered. This is for ease of reference. Appendices must be clearly referenced, again with all paragraphs numbered. All figures and drawings should be clearly referenced.

Cross References and Interactions

The Commission recommends that all the specialist topics in the ES should cross reference their text to other relevant disciplines. Interactions between the specialist topics is essential to the production of a robust assessment, as the ES should not be a collection of separate specialist topics, but a comprehensive assessment of the environmental impacts of the proposal and how these impacts can be mitigated.

As set out in EIA Regs Schedule 4 Part 1 paragraph 23, the ES should include an indication of any technical difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

Terminology and Glossary of Technical Terms

The Commission recommends that a common terminology should be adopted. This will help to ensure consistency and ease of understanding for the decision making process. For example, 'the site' should be defined and used only in terms of this definition so as to avoid confusion with, for example, the wider site area or the surrounding site.

A glossary of technical terms should be included in the ES.

Summary Tables

The Commission recommends that in order to assist the decision making process, the applicant may wish to consider the use of tables to identify and collate the residual impacts after mitigation. This would include the EIA topics, and inter-relationship and cumulative impacts.

A table setting out the mitigation measures proposed would assist the reader and the Commission recommends that this would also enable the applicant to cross refer mitigation to specific provisions proposed to be included within the draft Order.

The ES should also demonstrate how the assessment has taken account of this Opinion and other responses to consultation. The Commission recommends that this may be most simply expressed in a table.

Bibliography

A bibliography should be included in the ES. The author, date and publication title should be included for all references.

Non Technical Summary

The EIA Regs require a Non Technical Summary (EIA Regs Schedule 4 Part 1 paragraph 22). This should be a summary of the assessment in simple language. It should be supported by appropriate figures, photographs and photomontages.

Consultation

The Commission recommends that any changes to the scheme design in response to consultation should be addressed in the ES.

It is recommended that the applicant provides preliminary environmental information to the local authorities.

Consultation with the local community should be carried out in accordance with the SoCC which will state how the applicant intends to consult on the preliminary environmental information (this term is defined in the EIA Regs under regulation 2 'Interpretation'). This preliminary information could include results of detailed surveys and recommended mitigation actions. Where effective consultation is carried out in accordance with s47 of the Planning Act, this could usefully assist the applicant in the EIA process – for example the local community may be able to identify possible mitigation measures to address the impacts identified in the preliminary environmental information. Attention is drawn to the duty upon applicants under s50 of the Planning Act to have regard to the guidance on pre-application consultation.

Environmental Management

The Commission advises that it is considered best practice to outline in the ES, the structure of the environmental management and monitoring plan (EMMP) and safety procedures which will be adopted during construction and operation.