



**Vattenfall Wind Power Ltd**

**Thanet Extension Offshore Wind Farm**

## **Scoping Opinion**

June, 2018, Revision A

Document Reference: 6.8.1

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Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind

Scoping Opinion June, 2018

Drafted By:	The Planning Inspectorate
Approved By:	Helen Jameson
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The Planning Inspectorate  
Yr Arolygiaeth Gynllunio

# **SCOPING OPINION**

## **Proposed Thanet Extension Offshore Wind Farm**

Planning Inspectorate Reference: EN010084

February 2017



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## EXECUTIVE SUMMARY

This is the Scoping Opinion (the Opinion) provided by the Secretary of State (SoS) in respect of the content of the Environmental Statement for the Thanet Extension Offshore Wind Farm off the Kent Coast (the Proposed Development).

This report sets out the SoS's Opinion on the basis of the information provided in Vattenfall Wind Power Limited's ('the Applicant') report entitled 'Thanet Extension Offshore Wind Farm Environmental Impact Assessment Report to Inform Scoping' ('the Scoping Report'). The Opinion can only reflect the proposals as currently described by the Applicant.

The SoS has consulted on the Scoping Report and the responses received have been taken into account in adopting this Opinion. The SoS is satisfied that the topic areas 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 (as amended).

The SoS draws attention both to the general points and those made in respect of each of the specialist topic areas in this Opinion. The main potential issues identified are:

### Offshore

- benthic ecology during construction;
- ornithology – displacement, indirect effects and collision risk (including designated sites);
- marine mammals during construction;
- shipping and navigation;
- seascape, landscape and visual impacts; and
- archaeology and cultural heritage.

### Onshore

- terrestrial ecology (particularly upon designated sites);
- land use (in particular agricultural land); and
- archaeology and cultural heritage.

Matters are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the SoS.

The SoS notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations).





# 1 INTRODUCTION

## Background

- 1.1 On 4 January 2017, the Secretary of State (SoS) received the Scoping Report submitted by Vattenfall Wind Power Limited under Regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) in order to request a Scoping Opinion for the proposed Thanet Extension Offshore Wind Farm ('the Proposed Development'). This Opinion is made in response to this request and should be read in conjunction with the Applicant's Scoping Report.
- 1.2 The Applicant has formally provided notification under Regulation 6(1)(b) of the EIA Regulations that it proposes to provide an Environmental Statement (ES) in respect of the Proposed Development. Therefore, in accordance with Regulation 4(2)(a) of the EIA Regulations, the Proposed Development is determined to be EIA development.
- 1.3 The EIA Regulations enable an Applicant, before making an application for an order granting development consent, to ask the SoS to state in writing their formal opinion (a 'Scoping Opinion') on the information to be provided in the ES.
- 1.4 Before adopting a Scoping Opinion the SoS must take into account:
  - (a) *the specific characteristics of the particular development;*
  - (b) *the specific characteristics of the development of the type concerned; and*
  - (c) *environmental features likely to be affected by the development'.*

*(EIA Regulation 8 (9))*
- 1.5 This Scoping Opinion (the Opinion) sets out what information the SoS considers should be included in the ES for the Proposed Development. The Opinion has taken account of:
  - the EIA Regulations;
  - the nature and scale of the Proposed Development;
  - the nature of the receiving environment; and
  - current best practice in the preparation of an ES.
- 1.6 The SoS has also taken account of the responses received from the Statutory Consultees (see Appendix 3 of this Opinion). The matters addressed by the Applicant have been carefully considered and use has been made of professional judgement and experience in order to adopt this Opinion. It should be noted that when it comes to consider

the ES, the SoS will take account of relevant legislation and guidelines (as appropriate). The SoS will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with that application when considering the application for a Development Consent Order (DCO).

- 1.7 This Opinion should not be construed as implying that the SoS agrees with the information or comments provided by the Applicant in their request for an opinion from the SoS. In particular, comments from the SoS in this Opinion are without prejudice to any decision taken by the SoS (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 (NSIP), or Associated Development, or development that does not require development consent.
- 1.8 Regulation 8(3) of the EIA Regulations states that a request for a Scoping Opinion must include:
- (a) a plan sufficient to identify the land;*
  - (b) a brief description of the nature and purpose of the development and of its possible effects on the environment;*  
*and*
  - (c) such other information or representations as the person making the request may wish to provide or make.*

*(EIA Regulation 8 (3))*

- 1.9 The SoS considers that this has been provided in the Applicant's Scoping Report.

## **The SoS's Consultation**

- 1.10 The SoS has a duty under Regulation 8(6) of the EIA Regulations to consult widely before adopting a Scoping Opinion. A full list of the consultation bodies is provided at Appendix 2. A list has also been compiled by the SoS under their duty to notify the consultation bodies in accordance with Regulation 9(1)(a). The Applicant should note that whilst the SoS's list can inform their consultation, it should not be relied upon for that purpose.
- 1.11 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided at Appendix 2 along with copies of their comments at Appendix 3, to which the Applicant should refer in undertaking the EIA.
- 1.12 The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses

from the consultation bodies and how they are, or are not, addressed in the ES.

- 1.13 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Planning Inspectorate's website. The Applicant should also give due consideration to those comments in carrying out the EIA.

## **Structure of the Document**

- 1.14 This Opinion is structured as follows:

- **Section 1:** Introduction
- **Section 2:** The Proposed Development
- **Section 3:** EIA approach and topic areas
- **Section 4:** Other information.

- 1.15 This Opinion is accompanied by the following Appendices:

- **Appendix 1:** Presentation of the ES
- **Appendix 2:** List of Consultation Bodies formally consulted
- **Appendix 3:** Respondents to consultation and copies of replies.

## 2 THE PROPOSED DEVELOPMENT

### Introduction

- 2.1 The following is a summary of the information on the Proposed Development and its site and surroundings prepared by the Applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the Proposed Development and the potential receptors/resources.

### The Applicant's Information

#### Overview and description of the Proposed Development

- 2.2 The Proposed Development comprises up to 34 wind turbines, covering an area of 70km<sup>2</sup>, subsea inter-array and export cables, and associated onshore infrastructure. The Proposed Development would have an electricity generating capacity of up to 340 megawatts (MW).
- 2.3 The Proposed Development's offshore area is located adjacent to and surrounding the existing operational Thanet Offshore Wind Farm (TOWF) zone as shown in Figure 1.1 of the Scoping Report. The offshore area lies approximately 8km northeast of the Isle of Thanet, Kent on the south east coast of England and approximately 13km northeast from the town of Margate.
- 2.4 Electricity generated from the wind turbines would be transmitted to the shore by offshore export cables installed within an offshore export cable corridor. This extends from the Proposed Development's offshore area to a landfall location at either Pegwell Bay or Sandwich Bay (shown as landfall options 1 and 2 respectively on Figure 1.2 of the Scoping Report). At the landfall location (the point at which the offshore cables come ashore) the offshore cable would connect to onshore cabling via a transition bay. The onshore cable route would extend inland from either landfall location option to a substation at the former Richborough power station where it would connect to the national grid.

#### *Offshore*

- 2.5 The Proposed Development comprises the following offshore infrastructure (as described in Section 1.4.1 of the Scoping Report):
- Up to 34 no. wind turbine generators (WTGs), each with a generating capacity of up to 10MW, maximum rotor diameter of 180m, maximum hub height of 125m and maximum tip height 210m.
  - WTG foundations (comprising one or more of the following types):

- Monopiles.
  - Three legged jackets on either pin piles or suction caisson anchoring.
  - Four legged jackets on pin piles or suction caisson anchoring and their associated foundations.
  - 66kv inter-array subsea cables between the WTGs.
  - Subsea export cables between the WTG offshore area and the landfall options 1 or 2 at Pegwell Bay or Sandwich Bay respectively, comprising either:
    - Up to 4 no. 66kV high voltage alternating current (HVAC) cables.
    - Up to 2 no. 132kV or 220kV HVAC cables.
  - Fibre optic communications cables (one per electrical transmission export cable either inside these cables or laid alongside).
  - An offshore substation platform (OSP) (only required in the event of 132kV / 220kV HVAC export cable option).
  - Mattresses or other protective substrate associated with cable crossings (if required).
  - Scour protection around foundations (dependant on foundation type) and on array and export cables.
- 2.6 Table 1.2 of the Scoping Report summaries the various indicative project parameters for the project design in respect of the above including the approximate lengths of the proposed inter array cabling and export cable corridor options.
- 2.7 It is anticipated the layout of WTGs would be regular in plan and set out in rows to align with the existing WTGs at the TOWF zone, although final turbine spacing is subject to optimisation with respect to wind resource conditions and navigational considerations.

#### *Landfall and Onshore*

- 2.8 The onshore grid connection would be from the landfall location, at either of option 1 (Pegwell Bay) or option 2 (Sandwich Bay), to the onshore substation at Richborough as shown in Figures 1.1 and 1.2 of the Scoping Report.
- 2.9 For the purposes of the Scoping Report, the Applicant has defined an 'onshore area of interest' (as explained in the glossary at Page xv of the Scoping Report). Briefly, this is described as comprising:
- the two landfall options.
  - onshore cable route options (based on a 25m corridor);
  - onshore substation area of interest; and

- a 1km buffer around the onshore cable route options and substation area of interest, which indicates the intended extent of survey coverage.
- 2.10 These are depicted on Figure 1.2 of the Scoping Report and further details on each of these are presented in the following Paragraphs.
- 2.11 The key landfall components of the Proposed Development are as follows (as described in section 1.4.2 of the Scoping Report):
- Open trenching or Horizontal Directional Drilling (HDD) techniques to bring the cable beneath the intertidal area (up to 12 no. ducts in up to four trenches).
  - Up to four transition pits of 10m (width) x 15m (length) x 5m (depth) to house the joints between the offshore export cables and the onshore export cables.
  - A second set of smaller jointing pits may need to be provided to house System Control and Data Acquisition (SCADA) equipment if it cannot be housed in the transition pits.
- 2.12 From the transition pits, the following key onshore components will be required:
- Onshore HVAC cables of either 66kV, 132kV or 220kV dependant on the offshore export cabling to be specified for the proposed wind farm as described above and in section 1.4.1.3 of the Scoping Report.
  - Cables will be laid in trenches within individual ducts of either:
    - a maximum of four separate trenches (1.2m deep x 1m wide) with each trench would contain a maximum of three cables and one fibre optic cable, all in separate ducts; or
    - one larger trench (2m deep x 2m wide) containing a maximum of four cables, laid in “trefoil” formation, each within its own duct.
  - Cable jointing bays approximately 15m (length) x 6m (width) x 2m (depth) constructed at regular intervals along the cable route (every 500 - 1000m).
  - Cross bonded link boxes at a “*number of locations*” along the cable corridor to maintain HVAC power rating.
- 2.13 In addition to the above, HDD for a length of about 600-800m is likely necessary to cross underneath the River Stour in the case of landfall option 2 (Sandwich Bay) (subject to further design and refinement of the route corridor).
- 2.14 At the point where the onshore cable reaches the substation area of interest at the site of the former Richborough Power Station (as

described at Paragraph 114 of the Scoping Report and shown at Figure 1.2), the following key components will be required:

- Onshore substation in close proximity to the existing National Grid connection point at Richborough (for which there are two potential configuration options):
  - Two transformers with a 400kV switchyard with electrical infrastructure to be housed outdoors (air insulated) with a 30m x 30m substation building of up to 13.5m in height (overall footprint totalling 200m x 130m).
  - Two transformers and a 400kV switch room whereby the electrical infrastructure is housed indoors (gas insulated) and a 50m x 30m substation building of up to 16m in height (overall footprint totalling 170m x 105m).

2.15 In order to facilitate the construction and installation of the onshore and landfall cabling, temporary construction areas and access roads will be required. The location and size of such areas has yet to be defined and is dependent on the chosen landfall option and cable route selection and refinement.

2.16 Further details of the landfall options and onshore cable corridor are provided in Sections 1.4.2 and 1.4.3 of the Scoping Report and the key parameters applicable to the assessment of the required infrastructure are summarised in Table 1.2.

#### *Consequential development*

2.17 The SoS understands that there may be potential works at or around the existing National Grid Richborough substation. Paragraph 114 of the Scoping Report refers to the need for a connection between the substation and the National Grid GSP (the Point of Connection) via a 400kV interconnecting cable.

### **Description of the site and surrounding area**

#### *Offshore area*

2.18 The offshore area of the Proposed Development comprises the offshore wind farm area and the offshore export cable corridor area as shown on Figure 1.1 of the Scoping Report. The Proposed Development's offshore wind farm area surrounds the existing TOWF zone and covers an area of approximately 70km<sup>2</sup> with water depths that vary from between 13 and 43m across the site.

2.19 The offshore cable corridor would be approximately 20km if landfall option 1 (Pegwell Bay) is chosen or approximately 23km if option 2 (Sandwich Bay) is chosen (See Figure 1.1 of Scoping Report).

2.20 The seabed surface conditions are shown in Figure 2.1 of the Scoping Report. The underlying geology of the offshore export cable corridor

area is chalk bedrock exposed over large areas, with sand overlaying this chalk. The seabed around the Proposed Development's offshore area comprises chalk bedrock covered by a layer of sand less than one metre deep with deeper channels of sand up to six metres deep in the southern area. Further information on the near surface geology within the Proposed Development's offshore area can be found at Section 2.2.1.2 of the Scoping Report.

- 2.21 The existing TOWF zone export cable runs in a south westerly direction along the gently rising chalk bedrock platform continuing in a westerly direction along the south side of the Ramsgate Harbour channel to landfall at Pegwell Bay.
- 2.22 The tidal currents and significant wave height characteristics within the Proposed Development's offshore area are described at Sections 2.2.1.3 and 2.2.1.4 of the Scoping Report.
- 2.23 A designated shellfish water area, the Stour Estuary site depicted in Figure 2.2 of the Scoping Report, is located within the offshore export cable corridor in the area between Ramsgate and Sandwich Bay.
- 2.24 Part of the Proposed Development's offshore area is within the Southern North Sea proposed Special Area of Conservation (pSAC), proposed to be designated for harbour porpoise (described further in Section 2.15 of the Scoping Report and shown in Figure 2.4). On this subject, the SoS notes that on the 30 January 2017, this pSAC (alongside 4 others) were submitted to the European Commission (EC) and are now considered to be candidate SACs (cSAC), pending EC approval<sup>1</sup>.
- 2.25 The proposed offshore export cable corridor area would pass through the Thanet Coast and Sandwich Bay Special Protection Area (SPA) and Ramsar site, the Sandwich Bay Special Area of Conservation (SAC) and the Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI). Other relevant coastal and marine designations are discussed further in Section 2.15 of the Scoping Report.
- 2.26 The offshore site selection process to date for the Proposed Development is described in Section 1.5 of the Scoping Report. Desk based investigations have been conducted to inform the preliminary design alongside the analysis of geographical information system (GIS) constraints data for aspects including:
  - shipping activity on approach to the Thames Estuary;
  - seascape, landscape and visual impacts; and
  - statutory designated sites for ecology (in particular ornithology).

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<sup>1</sup> <http://jncc.defra.gov.uk/page-7369>



*Landfall and onshore area*

- 2.27 The Scoping Report explains that the landfall and onshore cabling for the Proposed Development comprises two separate options which are depicted at Figure 1.2.
- 2.28 The landfall option 1 would be located in the northwest corner of Pegwell Bay, to the south of the disused hoverport. The cable route would run for approximately 2.5km from the transition pit along the A256 Sandwich Road to the proposed substation at Richborough.
- 2.29 The landfall option 2 would be located between Royal St. George's Golf Links and Royal Cinque Ports Golf Links within the Sandwich Bay Estate. The cable route would follow Guilford Road to Tollgate Cottages, cutting across agricultural fields in a north and north-westerly direction for about 6km until it reaches the River Stour (where HDD could be required as described in paragraph 2.13, above. The cable would cross underneath the River Stour, the wharf and Richborough Port for approximately 600-800m to reach agricultural fields on the western side of the A256. It would connect to the proposed substation approximately 200 to 300m to the north across fields from this point. The total length of the cable route for option 2 is approximately seven kilometres.
- 2.30 Section 1.4.3. of the Scoping Report explains that the precise location of the proposed substation has yet to be determined within the substation area of interest (Figure 1.2) and this area includes land used by the existing UK Power Networks BSP substation where the TOWF currently connects to the National Grid network, the Nemo Link interconnector converter station site, and the site where the National Grid GSP substation would be constructed. Neither the "BSP" or "GSP" acronyms are defined further and the SoS understands the reference to the Nemo Link to be in relation to the project to lay high voltage electricity cables between the UK and the wider European electricity generation network via Belgium.
- 2.31 A further description of the Proposed Development's onshore site area is provided in Part 3 of the Scoping Report in respect of the baseline description for each of the environmental topic areas.

*Surrounding area onshore*

- 2.32 The receiving landscape for the Proposed Development's landfall and onshore areas option areas is primarily rural and coastal around Sandwich Bay, Pegwell Bay and the River Stour, until (heading in land) the landscape changes to the industrialised areas of Richborough Energy Park on the site of the former power station and the Port of Richborough. The landscape features are varied and include; coastal sand dunes, saltmarshes, saline lagoons, lowland fens, maritime cliffs and slopes, coastal and floodplain marshland used for grazing.

- 2.33 The land use is mixed, consisting predominantly of agricultural land with areas of developed and brownfield land intersected by minor and major roads including the A256 dual carriageway. Public Rights of Way (PRoW) such as long distance paths Saxon Shore Way, Stour Valley Walk, the Thanet Coast Path and the England Coast Path, along with National Cycle Routes 1 and 15, are located within the onshore area of interest.
- 2.34 The cable routes for both landfall options 1 and 2 will cross agricultural land classified as Grade 2, 3 and 5, and a number of historical and authorised landfill sites, as shown in Figure 3.5 of the Scoping Report.
- 2.35 Landfall option 1 is located in close proximity to the geological features of the Sandwich Bay and Hacklinge Marshes SSSI designated for its biology and geology. The substation as proposed would potentially result in the permanent loss of land within the boundary of the SSSI. This landfall option is also within the boundary of the Sandwich Bay SAC and the Thanet Coast and Sandwich Bay SPA and Ramsar site. It is also within the Sandwich and Pegwell Bay National Nature Reserve (NNR).
- 2.36 Relevant ecological site designations for the landfall options are shown in Figures 3.6 and 3.7 of the Scoping Report.
- 2.37 The Scoping Report is based on desk-based information which has identified records of, or the potential for, various protected and notable species to be present on or around the Proposed Development's onshore landfall options. Relevant species include; bats, otter, reptiles, breeding and non-breeding birds, and water vole (associated with option 1 the Pegwell Bay option).
- 2.38 To date, no detailed ecological survey data has been collected for landfall option 2 (as described at Paragraph 789 of the Scoping Report). However, this route would cross a number of watercourses, such as the River Stour and its tributaries, the Minster Stream and North and South Streams in the Lyddon Valley and Vigo Sprong as shown on Figure 1.2 of the Scoping Report.
- 2.39 Both landfall options include land within flood zones 1, 2 and 3 as shown in Figure 3.4 of the Scoping Report. Flood defences are situated around the River Stour north-east of Sandwich.
- 2.40 Areas important for groundwater supply which surround the Proposed Development's onshore area of interest are the Monkton and Minster Marshes, and the Ash Levels. The chalk bedrock underneath the watercourses surrounding the onshore area of interest is classified as a major aquifer by the Environment Agency (EA) (paragraph 712 of the Scoping Report). No groundwater source protection zones (SPZs) are identified along either landfall option and substation extension.

- 2.41 There are a number of heritage assets within proximity of the landfall locations. Stonar, as the site of a medieval port, is a scheduled monument within the onshore area of interest, along with seven Grade II listed buildings also in this zone. Figure 3.9 of the Scoping Report shows relevant designated heritage assets within and around the onshore area of interest.
- 2.42 There are a number of small and medium sized settlements within approximately five to ten kilometres of the proposed onshore area of interest, including the coastal towns of Ramsgate, Margate, Broadstairs to the north and Deal to the south. In addition to these towns there are smaller settlements such as Minster to the northwest of the application site and Sandwich adjacent to the south-west.
- 2.43 These towns and villages are considered important tourist destinations within the Proposed Development's onshore area of interest. Tourist attractions such as the Viking Ship, Pegwell Bay Country Park, Royal St Georges and Prince's golf courses are located in the vicinity of the onshore area of interest.

### **Alternatives**

- 2.44 The Applicant discusses the site selection process and alternatives to the Proposed Development at Part 1 of the Scoping Report (Section 1.5.2, Paragraphs 166 to 171), and includes considerations in relation to the design, site boundary delineation, cable routing and landfall, location of substation, constraints, feasibility reviews and consultation with key statutory and non-statutory stakeholders.
- 2.45 Due to the constraints identified onshore at Pegwell Bay, landfall option 2 was identified at Sandwich Bay as described in the previous sections of this Scoping Opinion.

### **Proposed access**

#### *Offshore*

- 2.46 The Scoping Report provides limited detail on the means of access to the offshore area (including offshore cable route corridor) during construction and operation.
- 2.47 Section 1.4.5.3 of the Scoping Report states that during offshore construction activities, the Applicant will apply for safety zones around WTG, platforms and installation vessels as appropriate (under the Energy Act 2004 and the Electricity (Offshore Generating Stations) (Safety Zones) (Applications Procedures and Control of Access) Regulations 2007).
- 2.48 The wind farm would be operated and maintained via crew transfer vessels or supply vessels from the shore direct to the wind farm (Section 1.4.5.6 of the Scoping Report).

*Onshore*

- 2.49 Section 1.4.5.5 of the Scoping Report identifies the need for temporary haul roads during the construction of the onshore cables installations (for either landfall option). At this stage their locations have not been identified.
- 2.50 In terms of operation and maintenance, permanent access roads would be required to the substation site.

**Construction**

*Offshore*

- 2.51 Construction of the offshore elements of the Proposed Development is expected to be in a single phase beginning in 2021. No indicative completion year has been provided.
- 2.52 Section 1.4.5 of the Scoping Report provides some details on the proposed construction methods for the offshore infrastructure including WTGs and offshore cable installation.
- 2.53 Table 1.4 presents an overview of foundation installation types and the required works associated with each. In each case, seabed preparation / dredging will be needed to level the sea bed area. The installation of the turbine foundations may also require the use of scour protection.
- 2.54 The construction of the turbine towers and nacelles would be achieved by using an installation vessel with the units either being pre-erected or erected individually. The turbine blades will be fitted to the tower/nacelle structure as individual components or in a part assembled state.
- 2.55 Offshore cabling is to be installed as follows:
- Inter array cabling: using either a water jetting or ploughing technique.
  - Export cabling: Water jetting, ploughing, trenching and/or cable injector.
- 2.56 Burial depths for the offshore cables would in the range of one to three metres below the seabed, subject to burial risk assessments) and additional protection of cabling may be required in certain locations, comprising rock dumping, frond mats or grout bags.
- 2.57 Cable crossings may be required around existing infrastructure (including subsea cables). The design of these crossings would need to be agreed with the owner/operator of the assets.

*Onshore and landfall*

- 2.58 Sections 1.4.5.4 and 1.4.5.5 of the Scoping Report describe the key construction activities associated with the landfall and onshore works. The SoS understands the description in these sections apply broadly to both the Pegwell Bay (landfall option 1) and Sandwich Bay (landfall option 2) options with the exception of the potential requirement for additional HDD under the River Stour associated with landfall option 2 (see Paragraph 2.13 above).
- 2.59 Onshore construction work at the landfall site for export cables will involve trenchless HDD or open-cut trenching techniques. Cables will be installed through pre-installed ducts. Offshore cables may be installed under existing sea defences and joined to onshore cables at transition pits at the chosen landfall location.
- 2.60 HDD will involve a temporary landfall construction compound (60m x 50m) to accommodate the drilling rig, ducting and associated materials and welfare facilities. The location of this compound is yet to be defined but it would be located in an area suitable for the haulage of equipment along the defined cable route (within the onshore area of interest) to the drilling site (in the case of either landfall option).
- 2.61 The HDD may exit on the beach ('short HDD') or at an offshore location ('long HDD'). If the short HDD is used it will require access to the beach for excavating and associated equipment. Temporary beach closures may be required during drilling and duct installation. Barges may be used at the offshore exit point to position the ducts into the drill holes or alternatively the ducts would be welded in sections and pulled through from the onshore side. During installation of onshore cables the area would be temporarily fenced off, cleared of vegetation and the topsoil stripped. Each cable trench would be excavated, the material stored locally before installation of the cables and infilling the trenches. Following installation of the cables, the land would be reinstated with topsoil replaced and re-seeded if required.
- 2.62 The installation of transition pits and jointing bays would require excavation for placing of precast components, or the construction of a reinforced concrete base slab, walls and cover at each site after which there will be backfilling and reinstatement of the sites.
- 2.63 The substation would require the construction of access roads to it, followed by preparation of the site including, drainage and foundation works which would be either concrete foundation plinths or piles for heavy items (such as transformers).
- 2.64 Onshore construction enabling works are expected to commence from 2020 onwards with the installation of cables, substation plant and landfall ducts in 2021.

## **Operation and maintenance**

### *Offshore*

- 2.65 The Applicant has an existing operation and maintenance facility at Ramsgate, which currently services the operational TOWF, Kentish Flats and Kentish Flats Extension projects and it is expected to be the base for servicing the Proposed Development.
- 2.66 The operation and control of the offshore wind farm would be managed by a SCADA system connecting each turbine to one or more off-site control rooms and allowing the wind farm to be controlled remotely.
- 2.67 The offshore wind farm would be operated and maintained via vessels as described in Paragraph 2.48 above.
- 2.68 During normal operation, a number of visits to each turbine would be required per year to allow for scheduled and unscheduled maintenance (in small vessels).
- 2.69 Although it is not anticipated that large components (e.g. turbine blades or substation transformers) will require replacement during the operational phase, it is a possibility. Should this be required large jack-up or heavy lift vessels may be needed for "significant periods" to carry out these works.
- 2.70 During the operational phase of the Proposed Development there would be no planned maintenance or replacement of the subsea cables; however, repairs could be required should the cable fail or be damaged. Periodic surveys would be required to ensure the cables remain buried and if they do become exposed, re-burial works or additional cable protection would be undertaken.
- 2.71 Further details of the proposed operation and monitoring strategies in relation to the offshore aspects of the Proposed Development are provided in Section 1.4.5.6 of the Scoping Report.

### *Landfall and onshore*

- 2.72 Occasional access would be required at the jointing bays with link boxes.
- 2.73 The substation will not be permanently manned. Operation and maintenance staff will visit on a regular basis (e.g. monthly) to carry out routine checks and maintenance. Key maintenance campaigns will take place every summer, during which time there would be teams working 24/7 in order to complete the tasks quickly and return any affected equipment to service. Most annual maintenance campaigns would be short (approximately one week), but if required some campaigns may be longer (e.g. one to two months).

- 2.74 Security at the substation would be provided using perimeter fencing and gates, plus intruder detection and CCTV systems.

### **Decommissioning**

- 2.75 The decommissioning options for the Proposed Development have been considered in the Scoping Report as options in Section 1.4.6. Detail and scope of the decommissioning works is to be determined by the relevant legislation and guidance at the time of decommissioning, although it is a statutory requirement (through the provisions of the Energy Act 2004 (as amended)). Under this process, the Applicant is required to prepare a decommissioning plan at the request of the relevant SoS and ensure measures are put in place (prior to construction) to safeguard provisions for decommissioning at a later date.
- 2.76 As an alternative, the offshore wind farm could be repowered, although this would be subject to a new consent application.

### *Offshore*

- 2.77 Offshore decommissioning may include the removal of all of the turbine components, part of the foundations (those above seabed level), the inter-array cables, and the export cables subject to agreement with the regulator.
- 2.78 It is a condition of Crown Estate leases for wind farm sites that the Proposed Development be decommissioned at the end of its operational lifetime. To this end a decommissioning plan will be prepared. The decommissioning sequence will generally be the reverse of the construction sequence given above. The Scoping Report refers to this requirement in Section 1.4.6.

### *Landfall and onshore*

- 2.79 The substation would be removed and reused or recycled. If the building is removed, the foundations would be removed to below ground level and the ground covered in topsoil and re-vegetated to return the site to its initial state.
- 2.80 The jointing pits and transition pits would also be reinstated to ground level. It is expected that the onshore cables jointing pits and transition pits would be left in situ.

## **The SoS's Comments**

### **Description of the application site and surrounding area**

- 2.81 In addition to detailed baseline information to be provided within topic specific chapters of the ES, the SoS would expect the ES to include a section that summarises the site and its surroundings. This

would identify the context of the Proposed Development, any relevant designations and sensitive receptors. This section should identify land that could be directly or indirectly affected by the Proposed Development and any associated ancillary facilities, landscaping areas and potential off site mitigation or compensation schemes.

- 2.82 To this end, the SoS welcomes the proposed approach as outlined at Section 1.6.3 of the Scoping Report ('Characterisation of the Existing Environment') and expects that, following refinement of the cable route and the identification of the sites for the landfall, transition pits, jointing boxes and substation, further and more specific details on the existing (baseline) environment will be provided within the ES

### **Description of the Proposed Development**

- 2.83 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 EIA. It is understood that at this stage in the evolution of the project the description of the Proposed Development and even the location of the site(s) 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.
- 2.84 The Applicant should clearly define in the ES and draft DCO which elements of the Proposed Development are integral to the NSIP and which are 'Associated Development' under the Planning Act 2008 (as amended) (PA2008) or are ancillary matters. Associated Development is defined in the PA2008 as development which is associated with the principal development. Guidance on Associated Development can be found in the DCLG publication 'Planning Act 2008: Guidance on associated development applications for major infrastructure projects'.
- 2.85 Any proposed works and/or infrastructure required as Associated Development, or as an ancillary matter, (whether on or off-site) should be assessed as part of an integrated approach to the EIA
- 2.86 The SoS 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 (permanent and temporary) and their duration, including the area of the offshore elements;
  - site preparation works;
  - construction processes, methods and their duration;
  - transport routes (temporary and permanent);



- emissions to the environment during construction and operation including those to water, air and soil pollution, noise, vibration, light, heat and radiation;
  - maintenance activities including any potential environmental or navigation impacts; and
  - 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.
- 2.87 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 as well as the methods of removal and locations of disposal areas. All waste types should be quantified and classified.
- 2.88 Paragraph 101 of the Scoping Report states that “*It is anticipated that the layout of WTGs will be regular in plan (i.e. turbines will be set out in rows)*”. If this layout is relied upon as mitigation (for example in relation to navigation), the Applicant should ensure that this principle is secured through the DCO. Where flexibility is sought, the Applicant should consider a worst case approach with regard to the assessment on a topic specific basis. In the instance above for example, the landscape, visual and seascape assessment will need to consider the effect of any proposed mitigation within the design in respect of turbine layouts. The SoS also notes reference to the potential need to allow for micro-siting of WTG to mitigate for potential impacts in respect of benthic ecological considerations. In this respect the ES should be clear as to how micro-siting tolerances have been considered as part of the assessment of the ‘worst case’ scenario and reiterates the need for a holistic approach in terms of considering differing design mitigation demands.
- 2.89 There are numerous references to the proximity of the Proposed Development to the existing TOWF zone, both in terms of the offshore and export cable areas as well as the and landfall option 1 at Pegwell Bay. The description of the Proposed Development should be clear as to any interaction / overlap with the infrastructure associated with the TOWF zone, and in particular, explain within the offshore and onshore ES topic chapters how the description of baseline conditions reflects the existence of the TOWF zone.
- 2.90 Paragraph 148 of the Applicant’s Scoping Report also describes the Proposed Development being operated and maintained from an existing facility at Ramsgate. The ES should provide a description of this facility and assessment of the type and extent of activities that will support the Proposed Development from this location.
- 2.91 Two different HVAC electrical export options are being considered for the Proposed Development as described in Paragraph 2.5 of this

Opinion. One of these options would require an offshore transformer platform (OSP) to step up the voltage, and the other would require a larger number of export cables. The Applicant states that the decision as to which transmission option (HVDC or HVAC) will be used for the Proposed Development will depend on a technical assessment of the route (including onshore). It is not clear to the SoS as to whether this process will be undertaken prior to or after the submission of the DCO application. The Applicant will need to ensure that the ES provides an adequate assessment of the likely significant effects resulting from the Proposed Development including the required transmission option (s).

- 2.92 The SoS notes that there is limited explanation of the need for and specifications of:
- cross bonded link boxes (referred to at paragraph 120, 157 and 971 of the Scoping Report); and
  - cable relay stations (to which reference is made only within Table 6.3 of the Scoping Report).
- 2.93 The SoS will expect the ES to include a clear description of all infrastructure, their necessity in the context of the Proposed Development and the parameters / specification on which the EIA is based.

### **Grid connection**

- 2.94 The SoS recommends that careful consideration should be given to how the Applicant meaningfully consults on, and properly assesses, the likely impacts arising from the proposed landfall option. It is hoped that the adoption of an iterative approach will result in a more specific route corridor in order for a robust EIA to be carried out.
- 2.95 The ES should provide further description and rationale (accounting for multiple or single cable trench options) as to:
- the working widths of the cable corridors for construction and operation;
  - jointing bay intervals and specifications (including separations)
  - cross bonded link box specifications and numbers; and
  - Cable crossing options for public rights of way including national and regional trails.
- 2.96 The connection of a proposed offshore wind farm into the relevant electricity network is an important consideration. Therefore, the SoS welcomes the intention to include within the proposed DCO application the export cable to shore, the onshore cabling, the converter station and substation as part of the overall project so that all potential effects can be assessed within the accompanying ES. The SoS considers however, that potential impacts resulting from any

alternative connection points/cable routes should also be considered if they are to be retained as options.

- 2.97 The SoS understands that the Applicant is in negotiations with National Grid regarding an agreement for connection to the electricity transmission network at the site of the former Richborough Power Station (as set out in Paragraph 2.14 of this Scoping Opinion) and that grid connection agreement is expected to be in place as some point in 2017. With particular reference to Section 1.4.3.3 of the Scoping Report, the Applicant will need to set out clearly which aspects of the substation / connections will form part of the DCO and which will require separate consent by National Grid. For example, reference is made to the onshore substation "*being connected to the National Grid GSP (the Point of Connection) via a 400kV interconnecting cable*". It is unclear if this connection to the National Grid GSP would be consented and constructed by National Grid and therefore whether it will form part of the application for the Proposed Development.
- 2.98 In this respect, the SoS welcomes the Applicant's approach set out at Paragraph 177 of the Scoping Report in that the "*siting of substation infrastructure will be determined and assessed as part of the EIA*" and expects that this would include, as far as possible, works that may be subject to separate consent by National Grid. This approach is implied by Paragraph 206 which states that "National Grid enabling works" may be considered as part of the cumulative assessment.

### **Flexibility**

- 2.99 The SoS notes the Applicant's intention to apply a Rochdale Envelope approach to the assessment and that, where the details of the scheme cannot be defined precisely for the EIA, the likely worst case scenario will be assessed. The SoS welcomes the reference to Planning Inspectorate Advice note nine 'Using the 'Rochdale Envelope'' but also directs attention to the 'Flexibility' section in Appendix 1 of this Opinion which provides additional details on the recommended approach.
- 2.100 The SoS welcomes that the proposals are to be firmed up during the Pre-application stages but warns that the description of the Proposed Development in the ES (and reflected in the DCO) must not be so wide that it is insufficiently certain to comply with requirements of Paragraph 17 of Schedule 4 Part 1 of the EIA Regulations. In this respect, the Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons.
- 2.101 Based on the description of the WTG parameters in Table 1.2 and Section 1.4.1.1 of the Scoping Report, the Applicant is considering a number of options in terms of the selecting the WTG. It is not clear

to the SoS as to whether it is possible that more than one turbine model would be used as part of the Proposed Development. The EIA will need to reflect this possibility as appropriate.

- 2.102 There are also a number of options in terms of WTG foundation design type, inter-array and export cable installation techniques and the potential need for scour protection in relation to these aspects and a reasoned worst case assessment will be expected in this regard. The SoS advises that it would be helpful in this sense to provide a table within the ES setting out the 'worst case' parameters that have been assessed for each topic area to ensure that a consistent and logical approach has been adopted across all environmental topics in the ES. Care will be needed to ensure that by considering the environmental topics separately, this does not preclude consideration of a worst case arising from a combination of factors.
- 2.103 The SoS 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 to consider, but does draw the attention of the Applicant to the Planning Inspectorate's published guidance and advice on preparing a draft DCO and accompanying application documents. The ES should support and be consistent with the application as defined and set out within the draft DCO.
- 2.104 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. This is particularly pertinent in respect of the potential '*re-routing* [of the onshore cable route] *should this be required post-Scoping*' (Paragraph 4 of the Scoping Report) and the uncertainty that remains whilst the Applicant is still in negotiations with National Grid over a grid connection offer.

### **Proposed access**

- 2.105 Whilst the Scoping Report notes that access will be required for both the onshore and offshore aspects of the Proposed Development, details of these access routes, types of vehicle and numbers of personnel have not been provided. This will need to be considered and assessed as part of the EIA process.
- 2.106 The SoS acknowledges that at this stage of the design it may not be possible to provide details of the access roads and the like. However, it is expected that by the time the DCO application is made, these details should be known.
- 2.107 In terms of offshore construction, it is unclear whether the location of any dockside or port marshalling facilities that may be required for the construction has been chosen, or whether these activities will be undertaken from the operation and maintenance facility in Ramsgate

(as referenced at paragraph 148 of the Scoping Report). This should be clarified in the ES where appropriate (for example in assessing impacts on traffic and transport and navigation).

### **Alternatives**

- 2.108 The EIA Regulations require that the Applicant provide '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' (See Appendix 1).
- 2.109 The SoS welcomes the Proposed Development to consider alternatives within Volume 2 of the ES. The Applicant should ensure that the environmental impacts considered for different options are clearly identified alongside the main reasons for choosing the final design (taking into account environmental effects).

### **Construction**

2.110 It is noted that only very high-level indicative construction programme information has been provided at this stage. The SoS expects that further information and definition of proposed construction phasing will be provided (offshore, landfall and onshore) in order to inform the EIA technical assessments. Information should include:

- construction methodologies, and activities (including likely duration) associated with key construction phases;
- siting and specifications / dimensions / required durations of construction compounds (including on and off site);
- lighting equipment/requirements; and
- number, movements and parking of construction vehicles (both HGVs and staff).

2.111 The SoS welcomes reference to a Code of Construction Practice (CoCP) to be employed during site works and ensure that all appropriate and good practice guidelines are followed (there are multiple references to a CoCP in Section 3 of the Scoping Report).

2.112 The SoS expects clear cross referencing is made between the DCO, the ES and the CoCP (and other management plan documents) so it is clear how the minimum measures relied upon as mitigation in the ES are to be delivered and secured.

### **Operation and maintenance**

2.113 Information on the operation and maintenance of the Proposed Development should be included in the ES and should cover but not be limited to such matters as:

- the number of full/part-time jobs;
- the operational hours and if appropriate, shift patterns; and
- the number and types of vehicle movements generated during the operational stage (including HGVs, LGVs and staff vehicles).

2.114 Further information as to the likely maintenance requirements associated with all project infrastructure including WTGs, cabling and transition pits / jointing boxes and substation(s) should be identified. The SoS expects that this could be informed, for example, by reference or comparison to the experiences at other constructed wind farm developments. In particular the ES should further consider (to the extent that it is possible):

- quantification of the planned maintenance visits / vessel trips required for offshore infrastructure;
- the need for large-scale offshore components (e.g. turbine blades or substation transformers) to require maintenance or replacement during operation and the 'significant' periods which these activities may require (paragraph 151 of the Scoping Report);
- frequency of periodic conditions surveys of cables and potential remedial maintenance activities; and
- definition as to the 'occasional access' that would be required at joint bays / link boxes and the need for and type of unplanned works that may be required at the landfall location.

### **Decommissioning**

2.115 In terms of decommissioning, the SoS 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, including the potential for 'repowering'.

2.116 The SoS encourages consideration of such matters in the ES. To this end, the SoS generally welcomes references to decommissioning as part of the Scoping Report and referred to at Paragraphs 2.75 to 2.80 of this Opinion.

2.117 The Scoping Report does not define the design life of the substation, although reference is made to its likely removal for reused or recycling at Section 1.4.6 of the Scoping Report. The SoS recommends that the EIA covers the life span of the Proposed Development, including construction, operation and decommissioning.

### **3 EIA APPROACH AND TOPIC AREAS**

#### **Introduction**

- 3.1 This section contains the SoS's specific comments on the approach to the ES and topic areas as set out in the Scoping Report. General advice on the presentation of an ES is provided at Appendix 1 of this Opinion and should be read in conjunction with this Section.

#### **EU Directive 2014/52/EU**

- 3.2 The SoS draws the Applicant's attention to European Union (EU) Directive 2014/52/EU (amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment) which was made in April 2014.
- 3.3 Under the terms of the 2014/52/EU Directive, Member States are required to bring into force the laws, regulations and administrative provisions necessary to comply with directive by 16 May 2017.
- 3.4 Whilst transitional provisions will apply to such new regulations, the Applicant is advised to consider the effect of the implementation of the revised Directive in terms of the production and content of the ES.
- 3.5 On 23 June 2016, the UK held a referendum and voted to leave the European Union (EU). There is no immediate change to infrastructure legislation or policy. Relevant EU directives have been transposed in to UK law and those are unchanged until amended by Parliament.

#### **National Policy Statements (NPS)**

- 3.6 Sector specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendations to the SoS and include the Government's objectives for the development of NSIPs.
- 3.7 The relevant NPS' for the Proposed Development are the Overarching NPS for Energy (EN-1), the Renewable Energy Infrastructure NPS (EN-3) and the Electricity Networks NPS (EN-5). These set out both the generic and technology-specific impacts that should be considered in the EIA for the Proposed Development. When undertaking the EIA, the Applicant must have regard to both the generic and technology-specific impacts and identify how these impacts have been assessed in the ES.
- 3.8 The SoS must have regard to any matter that the SoS thinks is important and relevant to the SoS's decision. This could include the draft NPS if the relevant NPS has not been formally designated.

## Environmental Statement Approach

- 3.9 The information provided in the Scoping Report sets out the proposed approach to the preparation of the ES. Whilst early engagement on the scope of the ES is to be welcomed, the SoS notes that the level of information provided at this stage is not always sufficient to allow for detailed comments from either the SoS or the consultees.
- 3.10 The SoS notes and welcomes that an Evidence Plan Process will be undertaken to structure technical stakeholder consultation for both EIA and HRA matters. The SoS suggests that this would be an appropriate mechanism through which to agree wherever possible the timing and relevance of survey work as well as the methodologies to be used. The outcomes of the Evidence Plan process relevant to EIA matters should be documented as part of the ES.
- 3.11 The ES should not be a series of separate reports collated into one document, but rather a comprehensive assessment drawing together the environmental impacts of the Proposed Development. This is particularly important when considering impacts in terms of any permutations or parameters to the Proposed Development.
- 3.12 The SoS recommends that in order to assist the decision making process, the Applicant may wish to consider the use of tables:
- (a) to identify and collate the residual impacts after mitigation on the basis of specialist topics, inter-relationships and cumulative impacts;
  - (b) to demonstrate how the assessment has taken account of this Opinion and other responses to consultation;
  - (c) to set out the mitigation measures proposed, as well as assisting the reader, the SoS considers that this would also enable the Applicant to cross refer mitigation to specific provisions proposed to be included within the draft DCO; and
  - (d) to cross reference where details in the HRA (where one is provided) such as descriptions of sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.
- 3.13 Where the Applicant is proposing mitigation by way of management plans (or similar) and reliance is placed on these in determining significance of residual effects, sufficient detail should be provided as part of the application so as to understand the extent to which they will be effective in mitigating the potential impacts identified, and the minimum measures required to achieve such mitigation.
- 3.14 The SoS would also recommend providing a visual organogram (or similar) of such plans so as to understand the nature of interrelationships across the various plans and topic areas (including reference to their method of delivery through within the DCO).



- 3.15 Sections 2 and 3 of the Scoping Report identify various technical topic areas whereby data has been gathered as part of the pre and post-construction phases of the existing TOWF zone. The SoS generally considers this to be acceptable and welcomes appropriate references to existing data sources in characterising the baseline conditions and informing the assessment of environmental impacts. However, sufficient information should be provided within the ES by way of justifying and explaining the reliance placed on such existing data (and its continuing validity) on a case-by-case basis, particularly if / where this is done in lieu of gathering further information. To this end, the SoS expects the Evidence Plan process referred to above to play a key role in this and will expect to see agreements as to the use and applicability of existing datasets.
- 3.16 Paragraph 192 of the Scoping Report states that a matrix approach will be used (where possible) to frame and present the judgements made within the EIA. The SoS advises that where matrices are used, the terminology used is consistent across the topics. Where other approaches other than matrices are deployed, the ES chapter should explain the rationale for deviating from the overarching approach.
- 3.17 Table 1.6 of the Scoping Report provides an indication of generic 'significance' descriptors and that specific descriptors will be used for each topic area. In each case, the provenance of these criteria should be clearly expressed and justified (particularly where professional judgements have been applied). Each technical assessment chapter of the ES should also define how 'significant' is defined for the purposes of the EIA.
- 3.18 The Secretary of State welcomes the Applicant's intent to include a level of confidence to the assessment in the ES and also that if no mitigation is proposed, that the ES will explain why the effect cannot be further reduced. To this end, the Secretary of State welcomes the Applicants distinction between 'embedded mitigation' and 'additional' mitigation explained at Section 1.6.4.4 of the Scoping Report and recommends that that each of the EIA technical chapters (with cross reference to the overarching project description) presents a clear description in reaching the reported level of effect (residual or otherwise).
- 3.19 The SoS also welcomes reference to the consideration (and assessment where applicable) of inter-relationships between topic areas (as described at Sections 2.16 and 4.4 of the Scoping Report. In order to present an assessment of such effects in a meaningful and clear manner, the Applicant is encouraged to present these in the form of standalone summary chapters for offshore and onshore topic areas respectively but also expects that consideration of these effects is given as part of the topic chapters themselves. The SoS expects that inter-related effects between relevant onshore and offshore considerations and vice versa will also be considered. The way that the Applicant has presented the approach in Tables 2.27 and 3.26 of

the Scoping Report implies that consideration and assessment would be limited to inter-relationships between onshore topics and offshore topics in isolation.

- 3.20 The ES topic chapters should report on any data limitations, key assumptions and difficulties encountered in establishing the baseline environment and undertaking the assessment of environmental effects.
- 3.21 Although Section 2.15 of the Scoping Report provides a summary of the relevant 'offshore designated sites', there does not appear to be a corresponding summary in terms of relevant onshore designations. For clarity, the SoS would expect each relevant topic chapter of the ES (onshore and offshore) to make specific reference to those sites that are considered as part of that topic as well as any particular features of these designated sites.
- 3.22 At Paragraph 203 of the Scoping Report, reference is made to the Planning Inspectorate's Advice note nine in providing guidance for the projects to be considered as part of the cumulative impact assessment (CIA). The SoS assumes that this is an erroneous reference to Advice note seventeen, but welcomes the Applicants general approach to the CIA, including the fact that:
- offshore CIA projects / activities are not limited to those associated with other wind farm projects alone; and
  - the onshore CIA will take into account the necessary National Grid enabling works that may be required associated with the grid connection and other works at the Richborough Energy Park.
- 3.23 The Applicant is advised to agree the projects to be included within the onshore and offshore CIA with relevant consultees and in this regard the SoS welcomes that the CIA will be discussed during the preparation of the EIA and as part of the Evidence Plan Process (Paragraphs 664 and 1066).
- 3.24 The SoS also notes the comments of National Grid at Appendix 3 of this Opinion as to the inclusion of the Richborough Connection Project (for which an application for development consent was made in January 2016) within the assessment of cumulative effects in all relevant chapters of the ES.

## **Environmental Statement Structure**

- 3.25 Section 1.6.5 of the Scoping Report sets out the proposed structure of the ES and notes that it is anticipated that the ES will be produced in three volumes:
- Volume 1: Non-Technical Summary;
  - Volume 2: Environmental Statement;

- Part 1: Introductory Chapters
  - o Need for the Project
  - o Policy and Legislative Context
  - o Site Selection and Assessment of Alternatives
  - o Project Description
  - o EIA Methodology
- Part 2: Offshore Environment
  - o Marine Geology, Oceanography and Physical Processes
  - o Marine Water and Sediment Quality
  - o Benthic and Intertidal Ecology
  - o Fish and Shellfish Ecology
  - o Marine Mammal Ecology
  - o Offshore Ornithology
  - o Commercial Fisheries
  - o Shipping and Navigation
  - o Offshore Archaeology and Cultural Heritage
  - o Offshore Landscape, Seascape and Visual Impacts
  - o Aviation and Radar
  - o Infrastructure and Other Users
- Part 3: Onshore Environment
  - o Ground Condition and Contamination
  - o Air Quality
  - o Water Resources and Flood Risk
  - o Land Use
  - o Onshore Ecology
  - o Onshore Ornithology
  - o Onshore Archaeology and Cultural Heritage
  - o Onshore Landscape and Visual Impacts
  - o Noise and Vibration
  - o Traffic and Transport
  - o Health
- Part 4: Wider Scheme Aspects
  - o Socio-economics
  - o Tourism and Recreation
- Part 5: Cumulative and Transboundary Impacts

- Offshore CIA
- Transboundary Impacts
- Onshore CIA
- Summary of Impacts
- Volume 3: Technical appendices

3.26 The SoS considers the CIA and the transboundary impact assessment to be separate from one another and expects both separate aspects to be clearly and separately addressed as part of the ES (with appropriate cross referencing as necessary).

### **Matters to be Scoped in/out**

3.27 Matters are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the SoS.

3.28 The Scoping Report has proposed to scope out the topic of offshore air quality as a whole, as detailed below. Where certain matters within a topic are proposed to be scoped out, these are addressed within the relevant topic sections of this Opinion.

3.29 Whilst the SoS may not agree to scope out certain topics or matters within this Opinion on the basis of the information available at the time, this does not prevent the Applicant from subsequently agreeing with the relevant consultees to scope matters out of the ES, where further evidence has been provided to justify this approach. This approach should be explained fully in the ES.

3.30 In order to demonstrate that topics have not simply been overlooked, where topics are scoped out prior to submission of the DCO application, the ES should still explain the reasoning and justify the approach taken.

### **Offshore Air Quality**

3.31 The Scoping Report considers that the number of vessels (up to approximately 12 during construction) and the associated atmospheric emissions would be small in comparison to the total shipping activity in the southern North Sea. It also notes that, marine exhaust emissions are limited in line with the provisions of International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78. Section 2.4 of the Scoping Report therefore proposes to scope out impacts on offshore air quality due to the likely negligible increases of air pollutants on site and the distance from any shore-based receptors.

3.32 On this basis, the SoS agrees that offshore air quality can be scoped out of the EIA.

## Topic Areas – Offshore Environment

### **Marine Geology, Oceanography and Physical Processes (see Scoping Report Section 2.2)**

- 3.33 The SoS notes references to 'planned' further survey work in respect of hydrodynamic and geomorphological datasets at Table 2.1 and Paragraph 240. Figure 2.1 of the Scoping Report shows the intertidal area of the landfall option 1 and a larger section of the landfall option 2 are outwith the characterised area. The same applies to the extent of the proposed offshore wind farm area on Figure 2.1. The SoS assumes that additional survey efforts will target these areas, or if not, will expect that the ES will explain and justify the absence of the need for such data to inform the impact assessment.
- 3.34 The Scoping Report makes limited reference to the actual method(s) to be employed to quantify the potential impacts and effects. The ES should provide details of the models used and explain the assumptions and limitations and how these have been taken into account in making the assessment. Where 'expert based assessment' is to be undertaken, the SoS will expect this to be based on applicable and up to date information.
- 3.35 Paragraph 221 provides a description of surge events in the southern North Sea but the concluding text implies it has been scoped out due to their infrequency (though this is not quantified further). The ES should provide further justification as to the link between surge events and other topic areas included within the scope of the EIA.
- 3.36 Section 2.3 of the Scoping Report makes limited reference to the relevant designated sites and the potential effects that could occur in respect to this topic area. The SoS does welcome later reference to the designated sites provided in summary at Section 2.15 of the Scoping Report and consideration of inter-relationships between Marine Geology, Oceanography and Physical Processes and other topic areas in Table 2.27. However, for the avoidance of doubt, the SoS considers that the ES should include an assessment of the effects to relevant designated sites resulting from impacts to Marine Geology, Oceanography and Physical Processes.
- 3.37 In the case of the physical processes, the assessment should have regard to the overlap with the onshore geology assessment. The assessment should ensure there is clarity as to where the physical process effects on the intertidal area are being considered. The SoS notes there is minimal reference to the intertidal area within Section 2.2 of the Scoping Report.
- 3.38 Paragraph 230 of the Scoping Report makes reference to a comparison between TOWF zone pre-construction and post construction surveys highlighting that the extent of scour was 'considerably worse' than the worst case scenario identified in the

TOWF zone ES. The SoS expects that the need for scour protection is appropriately justified through robust evidence base and assessed accordingly.

- 3.39 The Applicant seeks to scope out consideration of effects to hydrodynamic regimes during construction of the Proposed Development on the basis that the 'worst case' is effectively on completion of the Proposed Development (which will be covered in the operational assessment) (see Paragraph 223 of the Scoping Report). The SoS agrees with this on the basis that this position is clearly reflected and presented in the ES chapter.

**Marine Water and Sediment Quality (see Scoping Report Section 2.3)**

- 3.40 The SoS notes the reference at Paragraph 266 of the Scoping Report to the comparison of changes as a result of the Proposed Development to the applicable standards set in the EC Directives. The SoS refers the Applicant to comments on the Water Framework Directive (WFD) provided in Section 4 of this Opinion, particularly in respect of the coastal waterbody designation as shown on Figure 2.2 of the Scoping Report.
- 3.41 As part of the assessment of water quality affects as outlined in Table 2.5, the SoS would expect to see specific consideration of the Proposed Development's construction effects upon bathing waters.
- 3.42 Paragraph 253 of the Scoping Report proposes to scope out release of contaminated sediments during construction on the basis of evidence gathered (sampling) for the existing TOWF zone. This indicated that concentrations of key contaminants were below detection limits. However, Paragraph 254 states that this conclusion is subject to further consultation with relevant consultees (the Marine Management Organisation (MMO), Cefas, Natural England (NE)), and on this basis, the SoS cannot agree to this being scoped out as this stage. Reference is also made at Table 2.4 to data sources for sediment contamination being available from the Proposed Development area obtained in 2016 and, given this data is not currently available for review (and that dredging may be required as part of the Proposed Development), the SoS does not agree that no further contaminant testing of sediments is required at this stage.
- 3.43 Paragraphs 256 and 257 of the Scoping Report propose to scope out from the assessment the accidental release of contaminants during construction, operation and decommissioning. The justification for this is that good practise techniques and procedures would be employed and that all vessels would comply with MARPOL 73/78. The SoS agrees that with the implementation of such measures, any potential impacts on water and sediment quality are unlikely to be significant and therefore further assessment is not required. However, in order to provide confidence to the assessment the ES

should specify with details the measures to be employed and how they are secured by the DCO or other legally binding commitment including through any deemed marine license (DML) condition. The SoS would expect draft versions of any plans containing such measures to be provided with the DCO application detailing the 'embedded mitigation including adherence to MARPOL'.

- 3.44 The comments in the above paragraphs relating to construction impacts apply equally to decommissioning as the Applicant has likened the two phases in terms of potential effects at Paragraph 161 of the Scoping Report.
- 3.45 Reference is made to potential release from of contaminants from the former Hoverport in landfall option 1 (Pegwell Bay) being considered as part of the onshore assessment of water resources (Section 3.4 of the Scoping Report) and the SoS would also expect to see specific consideration of this as part of the offshore marine water and sediment quality assessment.
- 3.46 The Scoping Report proposes to scope out all operational impacts on marine water and sediment quality on the basis that:
- scour effect at each turbine would be 'highly localised' and not expected to result in significant change to water quality (any re-suspension of contaminated sediments by scouring effects would be localised and no significantly contaminated sediments are expected to be encountered);
  - suspended sediment loads during operation would be lower than those during construction; and
  - accidental release of contaminants can be controlled through adherence to best practice as per construction.
- 3.47 Again, the Applicant seems to be partly relying on evidence gathered for the TOWF in justifying these conclusions with regard to baseline conditions. Paragraph 248 of the Scoping Report states that Cefas previously agreed that the no specific chemical analysis was required in respect of the TOWF area. It is not entirely clear as to the extent to which the area of the Proposed Development extends beyond that previously covered by the aforementioned TOWF surveys. The age of some of the sediment sampling data is raised amongst some of the consultee responses in Appendix 3 of this Opinion and the SoS would expect the Applicant to further discuss the need for updated survey information with those relevant consultees in order to provide reliable baseline data from which to undertake the assessment (and be able to demonstrate this as part of the ES). On this basis, the SoS considers that 'changes to water quality' during construction, operation and decommissioning remain scoped in to the EIA process.
- 3.48 Paragraph 249 of the Scoping Report in particular states that further analysis of sediment quality may be undertaken as part of the benthic

ecological assessment works. On this basis, the SoS considers that insufficient evidence has been provided to justify scoping out these topics at this stage; for example there is no definition of 'highly localised', nor what would constitute a 'significant change to water quality'. The results of any additional survey work will also need to be analysed to determine the significance of any proposed risk of the release of contaminated sediments. The Applicant also acknowledges that the proposal to scope out this aspect is subject to further consultation with relevant consultees.

- 3.49 In terms of cumulative effects, the SoS does not agree that Marine Water and Sediment Quality effects during construction can be scoped out of the EIA. In particular, these should be considered in conjunction with the other activities as listed in Section 2.14.1 of the Scoping Report (this is discussed further in later sections of this Scoping Opinion).

**Benthic and Intertidal Ecology (see Scoping Report Section 2.5)**

- 3.50 Paragraph 272 of the Scoping Report highlights Figure 2.3 as showing the planned locations for the 2016 survey effort, although no such locations are shown. Furthermore, Figure 2.3 shows the extent of the sediment types in the proposed offshore wind farm area but no figures have been provided to show the extent of similar data in respect of the export cable options (even though this is cited at Paragraph 275). Figures presented in the ES should be clear as to the extent of survey areas so as to satisfy the SoS that the baseline conditions have been appropriately characterised.
- 3.51 The SoS welcomes reference to the habitats of principal importance within the study area and expects the ES to give specific consideration of these as part of the assessment of the construction, operation and decommissioning effects.
- 3.52 The SoS welcomes the detailed reference to relevant designated sites that will need to be considered in terms of the two landfall options (Paragraphs 287 and 288 of the Scoping Report). The SoS considers that the potential benthic and intertidal ecological effects in relation to cable laying within designated offshore areas to be of particular importance and given the sensitivity of the receiving environment, would expect the EIA to include specific detail in this regard.
- 3.53 The SoS notes that at present Section 2.5 of the Scoping Report makes no reference to the Thanet Coast MCZ or the Goodwind Sands rMCZ, any effects to these sites will need to be assessed and presented in the ES.
- 3.54 The SoS notes references to Marine Evidence-based Sensitivity Assessments (MarESA) available on the Marine Life Information



Network (MarLIN) website and encourages agreement is reached on its use in the assessment as part of the evidence plan process.

- 3.55 When assessing the potential impacts from loss of habitat, the ES should give consideration not only to habitat loss resulting from scour that occurs around foundations, but also to habitat loss resulting from the introduction of required scour protection. Paragraph 302 also states that there no evidence of significant changes of seabed beyond the vicinity of the structures themselves; however, comments by the MMO at Appendix 3 of this Opinion cite potential changes in benthic communities up to 50m from the turbine scour protection.
- 3.56 The Scoping Report has proposed to scope out benthic and intertidal effects in terms of changes to water quality. As with the assessment for Marine Water and Sediment Quality, the SoS does not agree that this can be scoped out at this stage and expects the interrelationship between these topic areas is given due consideration (the inter-relationship is not currently reflected as part of Table 2.27 of the Scoping Report).
- 3.57 The Scoping Report proposes to scope out underwater noise and vibration during all phases of the development. Having regard to the construction and decommissioning phases and comments made by MMO and NE at Appendix 3 of this Opinion, the SoS does not agree that this can be scoped out at this stage. With regard to operational noise and on the basis that monitoring studies of operational turbines (North Hoyle, Scroby Sands, Kentish Flats and Barrow wind farms) show noise levels to be only marginally above ambient noise levels the SoS agrees that this can be scoped out of the EIA and also points to the comments received from NE in this regard at Appendix 3 of this Opinion.
- 3.58 Paragraph 304 of the Scoping Report proposes to scope out electromagnetic fields (EMF) on benthic species. The Scoping Report references studies that show EMFs do not impact benthic species and habitats. The Secretary of State notes that Paragraph 131 of the Scoping Report suggests the cable would be buried at depths between one to three metres deep. The SoS reminds the Applicant of relevant policy in NPS EN-3 that states that offshore cables should be buried at depths of at least 1.5m below the sea bed in order to avoid the need to assess the effect of the cables on sub tidal or intertidal habitats.
- 3.59 The Scoping Report identifies the presence of 'large aggregates' of *S. spinulosa* reef (Annex I habitat) within the existing site. The ES should consider not only potential direct impacts from construction, but also the potential impacts from maintenance and decommissioning activities on reef that may colonise the cables during the operational phase. Colonisation during operation is considered at Paragraph 302 of the Scoping Report and Paragraph 305 acknowledges the effect of additional loss in terms of

decommissioning. The SoS does not agree that this effect can be scoped out of consideration in terms of decommissioning (as is proposed in Table 8.2).

- 3.60 The SoS also notes reference to micro-siting being required to avoid impacts to *S. spinulosa* (Paragraph 310 of the Scoping Report) and this approach will need to be clearly outlined with detail as to how it is to be assessed in the ES.
- 3.61 Paragraph 295 of the Scoping Report seeks to scope out effects of loss of habitat during construction on the basis that installation of WTG turbine foundations will result in a permanent loss which will be considered under operation rather than construction. Paragraph 295 does not make reference to offshore export cable installation effects in terms of habitat loss during construction and so the SoS does not agree that this can be scoped out at this stage.
- 3.62 The SoS draws the Applicant's attention to the comments of the MMO in relation to further assessment of impacts on epifauna being required and also that faunal sediment samples gathered are unsuitable for the analyses and assessment of contaminants (see Appendix 3 of this Opinion).

### **Fish and Shellfish Ecology (see Scoping Report Section 2.6)**

- 3.63 The SoS welcomes reference to monitoring studies that have been conducted in respect of the existing TOWF zone both pre and post-construction and understands the Applicant's broad position that there is lack of evidence to suggest gross changes to the fish and shellfish community. Table 2.9 identifies a significant number of available fish datasets including site specific surveys for the Proposed Development offshore export cable area. The Applicant should ensure that the need for or absence of further survey effort in support of the assessment is justified in the context of these existing datasets.
- 3.64 Table 2.5 of the Scoping Report scopes in an assessment of water quality effects during construction, and Table 2.27 cites the potential interrelationship between the water quality and fish and shellfish topic areas. The SoS therefore does not agree with Paragraph 321 and Table 2.11 that changes to water quality in respect of fish and shellfish impacts can be scoped out of the assessment in terms of construction and decommissioning. Paragraph 321 of the Scoping Report also implies that the Applicant will need to consult further with relevant consultees prior to making a decision on scoping out this topic.
- 3.65 The SoS considers the approach outlined at Paragraph 320 in respect of suspended sediments and smothering during construction is appropriate, and notes the importance and reliance on the physical processes assessment to inform the assessment on physical,

migratory and spawning patterns of sensitive fish and shellfish species (which should be specifically defined).

- 3.66 In terms of EMF effects on fish and shellfish during operation, the Applicant is seeking to scope this out due to the lack of evidence to suggest there is potential for an impact. The SoS is aware of other offshore wind farm projects that have acknowledged potential EMF impacts on fish within a few metres proximity of offshore cables. Given this and the potential proximity to the existing TOWF zone export cable (and therefore the combined effect of the Proposed Development with the existing TOWF zone EMF baseline conditions), the SoS does not agree that this can be scoped out of the assessment at this time.
- 3.67 Loss of habitat during construction and decommissioning is proposed to be scoped out of the EIA on the basis that the effects would be small in a regional context. The SoS does not consider that sufficient evidence is provided in order to agree to this being scoped out at this stage.
- 3.68 Section 2.6.3 of the Scoping Report states that it is considered unlikely that mitigation for fish and shellfish ecological effects will be required. The SoS expects that this will be kept under review as the assessment progresses and draws the Applicant's attention to the distinction between embedded mitigation and additional mitigation (as defined at Section 1.6.4.5 of the Scoping Report) as Section 2.6.2 appears to describe mitigation in respect of fish and shellfish ecological impacts.

### **Marine Mammal Ecology (see Scoping Report Section 2.7)**

- 3.69 The Applicants approach relies on a variety of existing but unspecified marine mammal data sources which are listed at Paragraph 341 of the Scoping Report as well as 'incidental sightings' of marine mammals during:
- pre-construction (2004 to 2005), during construction (2009 to 2010) and post-construction monitoring (2010 to 2013) of the TOWF zone; and
  - ongoing pre-application ornithological survey work being conducted for the Proposed Development.
- 3.70 The overall approach is summarised succinctly at Paragraph 378 of the Scoping Report Area, which states that "*Given the relatively low numbers of marine mammals in and around the proposed Wind Farm Area, specific marine mammal surveys are not thought to be required as any data collected is likely to be limited and therefore probably not adequate to generate robust site densities*". The SoS expects the Applicant to make efforts to agree with the statutory nature conservation bodies the appropriate approach to the assessment of marine mammals (including survey efforts and methodologies). The

SoS recognises that this could be achieved as part of the Evidence Plan process. To this end, the SoS endorses the comments of NE at Appendix 3 of this Opinion who suggest that Small Cetaceans in the European Atlantic and North Sea III (SCANS III) data should be used (where possible) to inform the assessment (noting that the Applicant has referred to SCANS II data at Section 2.7.1 of the Scoping Report).

- 3.71 The SoS also notes the location of the Proposed Development within the boundary of the Southern North Sea pSAC (now cSAC) and that harbour porpoise is stated to be the only cetacean species recorded within the TOWF zone (Paragraph 343 of the Scoping Report). At present there is no information regarding the likely population size or number of sightings of harbour porpoise associated with the TOWF zone through the pre-construction through post-construction surveys (and the same applies to grey seal and harbour seal as cited at Paragraphs 344 and 347). This should be specifically addressed as part of the ES and cross referred to in considering potential risks to European Protected Species (EPS) and any need for EPS licences for example, for harbour porpoises and grey seals. Further information on EPS is provided in Section 4 of this Opinion.
- 3.72 The Applicant's attention is drawn to Paragraph 2.6.92 of NPS EN-3 and the need to provide details of likely feeding areas; known birthing areas/haul out sites; nursery grounds; and known migration or commuting routes for marine mammals. To this end, Paragraph 358 of the Scoping Report is welcomed in that potential disturbance to seal haul-out sites will be given further particular consideration in light of the landfall locations. There is also a known presence of harbour seals at a haul-out point on the River Stour Estuary and Goodwin sands (see comments of Dover District Council (DDC) at Appendix 3 of this Opinion).
- 3.73 The Applicant's attention is drawn to the Defra Marine Noise Registry which could inform the baseline noise environment and may provide a useful reference in preparing the assessment. Similarly, the SoS draws the attention of the Applicant to the comments of NE at Appendix 3 of this Opinion that the National Oceanic and Atmospheric Administration (NOAA) thresholds for injury and disturbance to marine mammals should be considered as part of the assessment of underwater noise impacts.
- 3.74 Paragraphs 359, 368 and Table 2.12 of the of the Scoping Report propose to scope out impacts to marine mammals from changes to water quality during all phases of the development, as accidental releases would be mitigated through contingency planning remediation measures and adherence to best practice. At this stage there is uncertainty as to the project parameters, the volume of sediment that could be mobilised and the resultant sediment plumes and their broad chemical composition are unknown. The SoS also notes that potential impacts from increased suspended sediments

have not been scoped out of the Fish and Shellfish Ecology chapter (Table 2.11 of the Scoping Report). Therefore, the SoS does not agree impacts on marine mammals relating to changes in water quality during construction and decommissioning can be scoped out of the EIA. However, the Secretary of State does agree to scope the impacts out in relation to the operational phase.

- 3.75 Table 2.12 of the Scoping Report proposes to scope out physical barrier effects during construction, although no justification is provided within Section 2.8.2.1 other than at Paragraph 356 (vessel interactions). The SoS does not agree that this aspect can be scoped out and expects that the pertinent aspects of physical barrier effects during construction should be picked up as part of vessel and other construction infrastructure interaction effects (as is implied at paragraph 357).
- 3.76 The SoS agrees that, on the basis of literature references provided at Paragraphs 366 and 367 of the Scoping Report, operational effects on marine mammals in terms of physical barriers and EMF can be scoped out of the EIA.
- 3.77 In respect of Paragraph 360 of the Scoping Report, the SoS notes the Applicants view that the existing underwater noise environment is subject to high levels of shipping activity and that increases as a result of the proposed WTG are not likely to be significant against this baseline. However, the SoS does not agree that operational impacts of the Proposed Development in terms of underwater noise can be scoped out and echoes the comments of NE in this respect (see Appendix 3 of this Opinion).
- 3.78 Given that fish aggregation, change to / loss of fish habitat and physical disturbance to fish during operation are being considered as part of the assessment of fish and shell fish ecological effects (see table 2.11 of the Scoping Report), the SoS does not agree with Paragraph 363 of the Scoping Report that operational effects in terms of marine mammal prey impacts can be scoped out of the EIA. Paragraph 379 of the Scoping Report also highlights the need to further consider potential impacts on marine mammals and their prey as advised by NE (and does not limit this to the construction phase only).
- 3.79 The SoS has also commented on the need to consider effects on marine mammals in terms of unexploded ordnance (UXO) (see Paragraph 3.123 of this Opinion).
- 3.80 The SoS welcomes the proposal for both soft-start piling and the preparation of a marine mammal mitigation plan (MMMP) in consultation with key stakeholders (Section 2.7.3 of the Scoping Report). The ES should clearly set out how these measures are to be secured as part of the DCO and / or any DML.

**Offshore Ornithology (see Scoping Report Section 2.8)**

- 3.81 The Scoping Report provides very limited detail regarding the survey data coverage for the offshore cable corridor and landfall locations. In particular the SoS considers the level of information provided in terms of intertidal ornithological information is limited and fails to reflect the potential impacts that may occur particularly during construction (Section 2.8.2.1 of the Scoping Report). The ES should ensure that this aspect is appropriately assessed.
- 3.82 The SoS notes that collision risk assessment will be a relevant and important consideration for the assessment of offshore ornithology. The proposed use of larger WTGs at greater spacing intervals and the interaction with the TOWF zone will affect the predicted collision risk assessment. The SoS is pleased that the Scoping Report commits to an assessment undertaken in line with industry-standard approach. The ES should describe which collision risk model has been applied (e.g. Masden), the avoidance rates used, flight height variations and any other relevant information. The assessment should also account for any flexibility that is applied for in the DCO. The SoS supports the view of NE at Appendix 3 of this Opinion that the Applicant should make use of the update to the Band (2012) model by Masden (2015) in undertaking their collision risk modelling.
- 3.83 The Applicant's collision risk assessment should explain the extent to which monitoring and modelling of the existing TOWF zone has been taken into account in informing the baseline assessment (and any key assumptions that are made in this context).
- 3.84 Although Table 2.16 seeks to scope out barrier effects during construction, the SoS expects that, the pertinent issues in this regard should be captured as part of the construction disturbance and displacement assessment and should include consideration of cable laying vessels and associated infrastructure. The SoS also expects this to apply in respect to the assessment of collision risk during construction. In undertaking the assessment the SoS recommends appropriate reference to the joint statutory nature conservation bodies' guidance note "*Advice on how to present assessment information on the extent and potential consequences of seabird displacement from Offshore Wind Farm (OWF) development*"<sup>2</sup>.
- 3.85 Paragraph 405 of the Scoping Report proposes to scope out indirect impacts on birds resulting from disturbance to prey species within the offshore cable corridor and their habitat on the basis that impacts are likely to be short term and indiscernible. In absence of any further justification, the SoS does not consider this should be scoped out of the EIA. This is also consistent with the need to assess likewise effects as they apply to marine mammals.

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<sup>2</sup> Available from: <http://jncc.defra.gov.uk/page-4274>

- 3.86 Paragraph 407 of the Scoping Report proposes to scope out disturbance and displacement impacts resulting from maintenance or repair activities along the cable route. The justification is given that any potential impacts would be highly localised and episodic. The SoS agrees this can be scoped out of the EIA in terms of the offshore export cable. In respect of the inter-array cables, the SoS does not agree that disturbance and displacement effects during operation can be scoped out at this stage.
- 3.87 The Applicant intends to submit the DCO application and accompanying ES making use of a single year of survey data to inform the baseline assessment. The Applicant suggests that this position may also be supplemented by the release of the Offshore Renewables Joint Industry Programme (ORJIP) study into bird collision risk and avoidance rates. The SoS notes the comments from NE in this regard and encourages that the sufficiency of survey information be discussed and agreed as part of the Evidence Plan Process. The SoS draws the Applicant's attention to the comments at Appendix 1 of this Opinion and the need for the ES to meet the minimum requirements of Schedule 4 of the EIA regulations. Similarly, the SoS endorses the comments of NE at Appendix 3 of this Opinion in respect of:
- the Applicant's reliance on the existence of other historical surveys to justify a single year of survey being representative;
  - their standing advice remains that two years of baseline survey data are a minimum requirement for characterising the baseline in order to capture the inter-annual variation in densities and distribution of species; and
  - digital aerial survey coverage of peak periods for red throated divers.
- 3.88 The SoS notes that the impact assessment will be undertaken in line with recognised guidance prepared by IEEM on marine ecological impact assessment.

**Commercial Fisheries (see Scoping Report Section 2.9)**

- 3.89 The SoS notes the Applicant's recognition of the important inter-relationship between impacts on commercial fishing and impacts on fish and shellfish that will be assessed within other ES topic chapters, and that both assessments should reflect this.
- 3.90 The Applicant does not propose site specific surveys for commercial species. The SoS would appreciate evidence to demonstrate agreement with relevant consultees regarding this matter. However, given the comprehensive nature and currency of the information in Table 2.17, the proposed approach appears to be reasonable.

- 3.91 Section 2.9.4 of the Scoping Report outlines that some of the key aspects of the assessment will rely on certain estimations of activity levels and importance of the Proposed Development's area in the context of national and international fleets. The SoS expects a robust justification to be included in the ES in this regard.
- 3.92 In terms of design mitigation, the ES will need to be clear as to the need for exclusion zones (or similar) which may be incorporated within the design envelope to be assessed using a 'worst case' approach. Reference is also made to fishing liaison by way of mitigation although none is made as to how this might be specifically delivered e.g. through a Fisheries Liaison Officer (FLO) or similar as part of the construction and /or operational phases.

**Shipping and Navigation (see Scoping Report Section 2.10)**

- 3.93 The SoS welcomes the commitment to further survey effort required to reflect refinements in the site boundary of the Proposed Development and which is to be undertaken in 2016/2017.
- 3.94 Paragraph 101 of the Scoping Report anticipates that the WTGs will be set out in rows but there are other references in the topic assessment chapters as to the need for micro-siting, buffer zones (or similar) as potentially mitigating effects. In this respect, the navigation assessment chapter of the ES should be clear as to what aspects of the project have been designed in to the layout for the purposes navigation and how the use of the 'Rochdale Envelope' approach in terms of design flexibility is captured by the assessment.
- 3.95 The SoS expects that the Navigation Risk Assessment (NRA) will comprise an appendix to the ES or otherwise there should be extensive cross reference between the two documents.
- 3.96 The SoS welcomes the proposed consultation with the long list of stakeholders identified in Paragraph 513 of the Scoping Report and to the wide range of cited guidance at Paragraphs 514 and 515 as informing the assessment.
- 3.97 The Applicant's attention is drawn to the specific comments from the Port of London Authority (Appendix 3 of this Opinion) that the NRA should take specific account of the impacts on pilot boarding and landing operations, the London Vessel Traffic Services (VTS) and provide further information as to the effects on shipping routes in the Thames Estuary. The comments of the Maritime and Coastguard Agency (MCA) and Trinity House also reflect these concerns and raise further points in relation to the reduction in the available "sea room" (between the WTG and the coast) at the south western edge and that further information will need to be presented as to how this could be mitigated.



- 3.98 Particular attention should also be paid to the need for cable Burial Protection Index studies and anchor penetration studies in terms of assessing the impacts on navigable water as highlighted in the comments from the MCA (Appendix 3 of this Opinion).

**Offshore Archaeology (see Scoping Report section 2.11)**

- 3.99 Reference is made to desk based survey information gathered as part of the TOWF zone being used to inform the definition of baseline conditions (Section 2.11.1). However, there is no reference in this data to 20<sup>th</sup> century global conflicts and the associated remains that may be affected by the proposals. The comments of Historic England and KCC at Appendix 3 of this Opinion reflect a number of issues surrounding the currency of the survey data and the potential need for it to be updated using further data from survey works of other developments in the area.
- 3.100 The SoS notes the potential overlap between archaeological data gathered and any survey data collected in the context of benthic and marine geology / physical processes topic chapters as previously described in this Opinion. The SoS notes and agrees with the comments of Historic England at Appendix 3 of this Opinion on the need to incorporate archaeological considerations into the planned geophysical and geotechnical surveys listed at Table 2.1 of the Scoping Report.
- 3.101 Table 2.27 acknowledges the potential interrelationship with the offshore landscape and visual impacts topic and the SoS welcomes this and expects that the characterisation of the archaeological baseline environment and assessment should make clear cross reference in this context.
- 3.102 Any required archaeological exclusion zones (AEZ) should be clearly defined as part of the project description in the ES and information included as to how these will be safeguarded through provisions in the DCO.
- 3.103 The SoS agrees that the operational effects in terms of physical disturbance (direct and indirect) and disturbance of setting at the landfall location can be scoped out of the EIA on the basis that these aspects will be considered as part of the construction assessment. This agreement is also reflected in the comments of Historic England at Appendix 3 of this Opinion.
- 3.104 Reference is made to a Written Scheme of Investigation (WSI) in delivering mitigation for "*unavoidable impacts to potential receptors*" and "*to deal with the discoveries once impacts have occurred and been identified*". The SoS expects that the assessment of effects and presentation of mitigation measures within the WSI will give consideration to the need for (and likelihood of) "*exceptional maintenance activities*", defined at Paragraph 535 of the Scoping

Report as including (but not limited to) cable replacement. The WSI should also set out how the mitigation measures recommended in the ES are to be delivered through scheme specific method statements and how the NPS EN-3 is satisfied in terms of identifying any beneficial effects on the historic marine environment. The Secretary of State expects that a draft WSI is provided as part of the DCO application documents

- 3.105 With regard to Paragraph 524, the SoS notes that anchorage of the Kent Downs and the wrecks of Goodwin Sands are of international significance (as highlighted in the comments of Historic England at Appendix 3 of this Opinion). On this basis, that the SoS expects specific reference be made to these features as part of the assessment.
- 3.106 The SoS expects further consideration of the potential for transboundary effects in the context of cultural heritage and the description at Paragraph 2.11.2.5 is not sufficient to agree that it can be scoped out of the EIA.

**Offshore Seascape, Landscape and Visual Impact Assessment  
(see Scoping Report section 2.12)**

- 3.107 The SoS understands the rationale behind the definition of a 45km radius around the Proposed Development's offshore WTG area on the basis of it being an outer limit where likely significant effects could occur. The SoS would expect reference to specific guidance or other evidence to indicate that this is indeed appropriate. It is indicated at Paragraph 563 that beyond 35km, theoretical visibility is restricted as "*layers of landform combine to limit visibility*" but it is unclear if this applies in the context of landscape and seascape. On this basis, and in the absence of reference to definitive criteria, the SoS does not specifically agree at this stage to scope out those aspects that are proposed in Table 2.23 on the basis of being outwith the 45km radius.
- 3.108 The SoS welcomes the selection of representative viewpoints for consideration in the Seascape Landscape and Visual Impact Assessment (SLVIA) in consultation with Thanet District Council (TDC), DDC, Kent County Council (KCC), NE and Historic England (Paragraphs 41 to 43 and Table A.1 of Appendix 1 of the Scoping Report). It is expected that further consultation would also extend to the agreement of the study areas as described in the previous paragraph of this Opinion. The response to the Scoping Consultation from DDC (at Appendix 3 of this Scoping Opinion) implies that viewpoints have yet to be agreed with them and the SoS recognises the need for further discussion in this regard. Engagement with the MMO is also recommended regarding the strategic level of seascape work commissioned by the MMO in respect of the South Marine Plan area.

- 3.109 A number of the identified viewpoints are from public rights of way and other recreational areas and the SoS would expect the interrelationship between the SLVIA and the assessment of tourism and recreational impacts to be considered (Section 4.3 of the Scoping Report (under 'wider scheme aspects')). The SoS also notes the omission of the England Coast Path from the list of key walking routes identified.
- 3.110 The subject of Appendix 1 to the Scoping Report is 'offshore SLVIA' and the SoS draws the Applicant's attention to the comments of DDC as to the potential need for the seascape assessment to consider effects on areas and features inland. The SoS agrees with this view and recommends the Applicant consult further with the local planning authorities as to the overlap between the seascape and landscape assessments and interface with the high water mark so as to ensure the transitional intertidal area is not undervalued as part of either or both assessments.
- 3.111 Paragraph 571 of the Scoping Report recognises, amongst other points, the cumulative impacts associated with the Proposed Development and the existing TOWF zone. In particular, with regard to proposed closer proximity of WTG to the Thanet coastline and the changes in horizontal and vertical scale from receptor points associated with the larger structures and increased spatial extent. The SoS is unclear from the description of the Proposed Development in the Scoping Report whether the proposed WTG could comprise a mixture of turbine models (which is likely to affect the visual impact assessment). To address this and to provide clarity the ES should include appropriately defined assessment scenario(s) ensuring that any flexibility requested in the DCO has been adequately assessed as part of the SLVIA.
- 3.112 It should also be clear whether the existing TOWF zone (and other existing offshore wind farms) are being assessed as part of the baseline conditions or are being considered in terms of the cumulative effects assessment or the infrastructure and other users assessment (Section 2.14 of the Scoping Report).

**Aviation and Radar (see Scoping Report Section 2.13)**

- 3.113 Paragraph 582 of the Scoping Report states that, in terms of baseline conditions, and on the basis that the TOWF zone did not impact on the operation of the Ministry of Defence (MoD) and NATS, that the Proposed Development would also avoid any impact on these operations. Without further justification of this, and given the fact that the spatial extent of the Proposed Development extends beyond that of the TOWF zone in all directions, the SoS considers that this should be assessed as part of the ES. The SoS does not agree that impacts on military training areas can be scoped out at this stage, but notes that the Scoping Report makes multiple references to the

need for further consultation with a number of bodies as listed at Paragraph 610.

- 3.114 Reference to the provision of an Emergency Response Co-operation plan (ERCoP) is welcomed and this is also referred to in terms of navigation risk at Section 2.10 of the Scoping Report. Given that it is being proposed by way of mitigation, an outline version of this plan should accompany the DCO application and be referred to as part of the ES so as the minimum measures required can be understood and are capable of being delivered by the DCO.
- 3.115 The SoS also draws the Applicant's attention to the specific comments of the MCA in respect to the ERcOP (see Appendix 3 of this Opinion).

**Infrastructure and Other Users (see Scoping Report Section 2.14)**

- 3.116 The SoS does not consider that effects during construction, operation or decommissioning of the Proposed Development upon the TOWF zone, London Array and Kentish Flats (and its extension) can be scoped out. The proximity of the Proposed Development and the fact that operation and maintenance activities in support of these take place from Ramsgate suggest that effects may occur.
- 3.117 The SoS does agree that interference with oil and gas operations and aggregate dredging activities can be scoped out of the assessment on the basis that there are no such relevant operations identified (and in the case of oil and gas operations, future activity in the area is not likely).
- 3.118 Section 2.14.1.3 and 2.14.2.1 of the Scoping Report on sub-sea cables fail to make specific reference to the presence of the planned NEMO Link (the offshore installation of which is expected to commence in 2017 as described in Paragraph 236 of the Scoping Report). The SoS would expect this to be specifically considered as part of the ES alongside the other 'in-service' cables that are described. The SoS agrees that effects on sub-sea cables during operation of the Proposed Development can be scoped out on the basis that standard industry techniques would be followed for maintenance and/or replacement to ensure that other operators' cables and pipelines are not impacted.
- 3.119 In terms of disposal sites, the Scoping Report acknowledges the potential need to dredge and dispose of arisings from the preparation and installation of foundations or the clearance of sand waves under construction activities. The SoS will require the assessment to characterise any a new disposal site to include:
- the need for the new disposal site;
  - the dredged material characteristics;

- the disposal site characteristics;
- the assessment of potential effects; and
- the reasons for the site selection.

3.120 Where existing, licensed disposal sites are proposed to be used, the disposal method should be described as part of the ES including the estimated volume of material to be disposed of and an assessment of the proposed activity to be included in the DCO.

3.121 Paragraph 631 of the Scoping Report infers that only the transit routes to and from these dredging disposal sites would need to be considered as part of the assessment. Given the proximity to existing disposal sites as identified on Figure 2.13 of the Scoping Report, it is not agreed that direct and indirect impacts on these sites can be scoped out of further assessment during construction, operation and decommissioning of the Proposed Development.

3.122 Impacts on MoD activities are discussed at Paragraph 3.113 of this Opinion and they apply here in that, whilst the Applicant is highlighting the need for further consultation with a number of bodies as listed at Paragraph 610, the SoS does not agree that impacts on MoD activities can be scoped out at this stage (as is the Applicant's intention at Table 2.26 of the Scoping Report).

3.123 The Secretary of State agrees that the Initiation of UXO during all phases of the development can be scoped out of further assessment as detailed geophysical survey and investigations would identify abandoned UXO and this is a health and safety risk which will be carefully mitigated rather than being a specific environmental impact. However, the Secretary of State advises that the mitigation proposed in the event that UXO is found should take into account environmental impacts (e.g. on species and habitats) and that the geophysical survey and mitigation is secured by a suitably drafted condition within any DML. The comments of NE at Appendix 3 of this Opinion are noted here and the Secretary of State agrees that some assumptions (based on experience) should be made as to an assessment of noise impacts from UXO upon marine mammals.

3.124 Given these points, the SoS does not agree that an assessment of cumulative effects can be scoped out entirely of the infrastructure and other users assessment. Those plans and projects to be included should be kept under review and agreed with the relevant consultees and stakeholders in the offshore environment. This is particularly in relation to the potential cumulative effect of the Proposed Development's offshore and cable route activities with existing and operational disposal sites (and potential future sites).

**Offshore Designated Sites Summary (see Scoping Report Section 2.15)**

- 3.125 The SoS notes the comments in relation to designated sites where applicable as part of the comments on topic chapters.
- 3.126 The Applicant's attention is also drawn to the comments of NE at Appendix 3 of this Opinion who advise that the EIA and HRA should also include reference to SPAs that may be affected directly and indirectly in terms of cumulative or in-combination effects.

**Topic Areas – Onshore Environment**

**Ground Conditions and Contamination (see Scoping Report Section 3.2)**

- 3.127 The Scoping Report provides general information on the baseline environment including; geology, designated geological sites, hydrology and hydrogeology and land quality. The corresponding description section in the ES should be accompanied by figures, showing the location of the features described.
- 3.128 The SoS notes that matters in relation to hydrology and hydrogeology are dealt with in Section 3.4 of the Scoping Report (Water Resources and Flood Risk). Cross-referencing between these topics needs to be transparent in the ES to ensure that all matters are comprehensively assessed. To this end, reference to the consideration of inter-related effects between these topic areas at Table 3.26 of the Scoping Report is welcomed.
- 3.129 The SoS considers that specific reference is made to the identified historic landfill sites including during the characterisation of baseline conditions, effects of the Proposed Development and need for mitigation.
- 3.130 The Scoping Report proposes to scope out operational and maintenance activity from the ES. Paragraph 678 states that "*there are unlikely to be any significant effects*" impacts from operation and maintenance activities. The justification for this is that any maintenance would be subject to robust and effective planning and risk assessment procedures following standard procedures to avoid or mitigate any impact. The SoS considers that given the nature of the development, this conclusion is reasonable and therefore agrees that onshore operational ground conditions effects can be scoped out of the assessment.
- 3.131 Table 3.1 of the Scoping Opinion sets out the data sources to be used to inform the baseline assessment. The SoS recommends that the study area for the desk based study should be agreed with relevant consultees and justified within the ES. The SoS understands that no site surveys are proposed to be undertaken to inform the baseline

and considers that this approach should be discussed and agreed with relevant consultees and kept under review, for example, should potential contamination be identified through the desk studies, noting the presence of landfill sites within the onshore area of interest.

- 3.132 Whilst the ES acknowledges that the approach to the assessment and data gathering will be discussed and agreed with relevant bodies, this discussion should be evident in the ES, specifically when it relates to matters being scoped out of the assessment.
- 3.133 Paragraph 674 of the Scoping Report provides baseline information by reference to the ES submitted for the TOWF zone. The SoS notes the relative age of this data (dating back to 2005) and expects that any reference to and / or reliance upon such data be corroborated and justified to ensure its validity.
- 3.134 The Scoping Report does not set out the intention to undertake site specific modelling to inform the assessment of potential impacts, nor does it explain how, in the absence of this information, the assessment will be undertaken. The SoS reminds the Applicant of the need to ensure there is sufficient information to inform an adequate assessment of the likely significant effects.
- 3.135 Paragraphs 675 and 676 of the Scoping Report identify the likely excavation work for the onshore cable and note the potential to mobilise contaminants. The Scoping Report suggests that the CoCP will mitigate the risks of this occurrence. The SoS recommends that the ES clearly establishes what the risks are and is specific with regard to the mitigation necessary in the CoCP. Furthermore, for the CoCP to provide effective mitigation, a draft of the document should be included as part of the application. It should also be appropriately secured to give confidence to its delivery.
- 3.136 The assessment methodology and details of any guidance used to come to support the assessment should be presented within the ES.
- 3.137 Paragraph 684 explains that the study area will be an area extending 500m from the cable route and 1km from the substation. The Scoping Report does not provide any justification for this; but this should be included in the ES. Similarly, the study area for the consideration of cumulative impacts is defined as "*within 1km of the Onshore Area of Interest*" and this should be further justified in the ES and agreed with relevant statutory bodies.
- 3.138 Section 3.2 of the Scoping Report makes no reference to factors to be taken into account or the methodology to be employed to determine the significance of effect, although Section 1.6.4.3 of the Scoping Report states that this will be explained and presented for each topic area within ES. In the absence of this information the SoS is unable comment as to the acceptability of the proposed approach.

3.139 The SoS notes that under the Land Use topic chapter (Section 3.5 of the Scoping Report), a Soil and Drainage Management Plan is proposed, and the Applicant is requested to consider whether this plan may overlap between mitigation for impacts on ground conditions. The use of a Construction Environmental Management Plan (CEMP) alongside the CoCP should also be considered along with the interaction with other topic chapters in the ES, with clear cross-referencing.

**Air Quality and Dust (see Scoping Report Section 3.3)**

3.140 The Scoping Opinion states at Paragraph 691 that the Proposed Development's onshore area of interest is adjacent to an Air Quality Management Area (AQMA). This is depicted on Figure 3.2 which shows the northern part of the study area overlapping with the AQMA. The SoS expects to see due consideration of this as part of the EIA process.

3.141 The comments of NE at Appendix 3 of this opinion are also noted here regarding the need to consider designated nature conservation sites with dust sensitive ecological receptors within 200m of construction activities (not 50m as is proposed at Paragraph 692 of the Scoping Report). The SoS recommends that the distances to be used in the study area are justified and agreed with Statutory Consultees.

3.142 The ES should also consider how traffic and transport to and from the site (particularly during construction) would contribute to air quality levels in the AQMA. NE have provided comments regarding the specifics of undertaking such an assessment in relation to ecological receptors (see Appendix 3 of this Opinion).

3.143 The Scoping Report does not provide any information regarding the need for surveys in order to characterise the baseline environment or otherwise inform the Air Quality Impact Assessment. The Scoping Report does not contain details of a methodology to assess the potential impacts of dust and road traffic emissions although the Secretary of State expects this to be considered.

3.144 The Scoping Report proposes to scope out operational air quality. Paragraph 698 states that "*impacts during the operation..... and maintenance activities will not lead to a significant change in vehicle flows within the study area*". This conclusion is not justified through the provision of vehicle movement figures. These figures are also not present in the traffic and transportation chapter. However, the SoS considers that having had regard to the likely numbers of movements associated with this activity the conclusion is reasonable and therefore agrees that onshore operational air quality can be scoped out of the assessment.

3.145 The SoS welcomes the commitment to the preparation of an Air Quality Management Plan as part of the CoCP. The Applicant should



ensure that drafts of these documents, demonstrating the minimum measures relied upon as mitigation, are submitted with the ES and appropriately secured.

**Water Resources and Flood Risk (see Scoping Report Section 3.4)**

- 3.146 The SoS welcomes the proposal for a Flood Risk Assessment (FRA) and a Water Framework Directive (WFD) compliance assessment; these assessments should form an appendix to the ES. The scope of these assessments should be discussed and agreed with relevant consultees including the EA, the relevant internal drainage boards and local planning authorities. Section 4 of this Opinion provides further comments as to the need for WFD assessment.
- 3.147 The FRA should consider the most up to date climate change allowances and cover tidal flood risk as well as fluvial impacts under present and projected sea level scenarios.
- 3.148 The SoS notes that flood risk impacts have been identified for the onshore components during construction and the substation during operation. As such, the SoS recommends that a draft drainage strategy is provided with the ES. The location of any swales and/or attenuation basins used to mitigate flood risk should be identified. The Applicant should consider any related impacts. NE in their consultation response, note that appropriate cross referencing should be made to the assessment of Onshore Ecology as a result of the likely interaction with designated nature conservation sites and ecological receptors.
- 3.149 The Applicant is advised that Flood Defence Consents that may be required for working in/over/adjacent to watercourses have been replaced by Flood Risk Activity Permits under the Environmental Permitting (England and Wales) Amendment (no 2) Regulations 2016.
- 3.150 The SoS welcomes the use of a CoCP to secure mitigation. The Applicant should ensure that sufficient detail is included in the draft CoCP and that the content is appropriately secured.
- 3.151 In relation to any HDD activities that may be required, the ES should address potential risks to both groundwater resources and surface water bodies from leakage of drilling fluid and provide details of measures that will be implemented to address such risks.

**Land Use (see Scoping Report Section 3.5)**

- 3.152 The SoS welcomes reference to the Agricultural Land Classification (ALC) system in characterising the baseline environment. However, the SoS endorses the comments of NE at Appendix 3 of this opinion particularly in respect of the following:

- The Scoping Report makes no reference to the potential impacts of the Proposed Development on best and most versatile (BMV) agricultural land;
  - Figure 3.5 appears to have been based on the 'Provisional Series' of ALC maps which were designed at a 1:250,000 scale, but these maps are not sufficiently accurate for use in assessment at individual development level; and
  - The Applicant should consider the need to undertake their own ALC and soil survey of the land to be affected by the Proposed Development (particularly in respect of the 8ha of land which may be lost for the substation (Paragraph 754 of the Scoping Report).
- 3.153 Careful consideration should also be given to the siting of the onshore infrastructure in relation to grade 2 agricultural land; the potential temporary and permanent loss of ALC land should be assessed within the ES. The potential effects on soil quality should be considered and relevant mitigation measures proposed.
- 3.154 The consideration of the potential impacts on agricultural land should also be assessed in the context of socio-economics, namely those financial effects on productive farmland and small holdings during construction, operation and decommissioning. With this in mind, the SoS welcomes the acknowledgement of the inter-relationship between the socio-economic and land use topics at Table 3.26 of the Scoping Report.
- 3.155 The Scoping Report in Paragraph 749 states there is a potential for the Proposed Development to impact on drainage during construction and then notes that drainage is discussed in Section 1.4.5 (Construction Methods) of the Scoping Report. The SoS would expect the ES to clearly describe the nature of these potential effects on natural and artificial drainage systems, what construction methods and "best practice and appropriate procedures" are to be put in place and how these are to be secured as part of the DCO (where they are relied upon as mitigation in the ES). In particular, this should include reinstatement of any land required for temporary haul routes.
- 3.156 Drainage is referred to again in Paragraph 758 where is stated that there will be an impact on drainage during operation associated with the presence of buried cables. It is therefore unclear as to whether drainage is proposed to be assessed in full under the 'land use' section in the ES or whether the consideration of these effects will be made by cross-referred to the water resources assessment in the ES. The Applicant is requested to be clear on where topics are discussed and assessed in the ES in respect of drainage.
- 3.157 The ES should consider the potential for sterilisation of land or temporary loss of land availability along the cable route, including interrelated socio-economic effects.

- 3.158 In relation to consideration of farming practices, the ES should take into account any impacts including the need for jointing boxes and their effects on land use and drainage.
- 3.159 At Paragraph 756 the Scoping Report states that PRow and cycle paths will not be temporarily or permanently closed during the operational period. The Scoping Report does not make reference to any maintenance (planned or un-planned) in this section. The ES will need to consider these aspects.
- 3.160 Table 3.6 sets out matters to be scoped in and out of the assessment. The SoS has insufficient information at this stage to agree to the scoping out of the assessment of operational effects in terms of agricultural productivity, existing utilities and PRow. The SoS suggests that the Applicant has regard to the comments made above and encourages the Applicant to seek agreement on the approach with relevant consultees.
- 3.161 Paragraph 762 of the Scoping Report notes the potential for a Soil and Drainage Management Strategy to be prepared. There are also references to a CoCP, Soil Management Plan and "construction method statement and management plans" in this section. The Secretary of State refers the Applicant to Paragraph 3.13 and 3.14 of this Opinion and the need to be clear in setting out how mitigation is secured and the relationships between management plan style documents.

### **Onshore Ecology (see Scoping Report Section 3.6)**

- 3.162 The SoS recommends that the surveys should be thorough, up to date and take account of other development proposed in the vicinity. Therefore, the SoS has some concerns regarding the proposed reliance on ecological data collected in 2005 for the TOWF zone. The use of the Updated Phase 1 Habitat Survey (2008) and monitoring data (2010) is also now out of date and should be updated. There is a partial commitment made at Paragraph 774 of the Scoping Report to supplement the data by desk-based ecological data collection in September 2016. However, the ES will be required to demonstrate up-to-date information regarding populations and features beyond desk-based studies. More up-to-date Saltmarsh Monitoring Surveys have been undertaken in 2010 to 2012, however, as with other data these are now four years old and may require updating.
- 3.163 In listing the designated sites in Table 3.8, NE in their consultation response note that the Thanet Coast and Sandwich Bay designations should be listed and described separately for features applicable to Ramsar and SPA designations as they differ.
- 3.164 It is noted in the Scoping Report that the Phase 1 Habitat Survey did not cover both landfall options. The ES should ensure that proportionate data is collected to inform the assessment of each

route enabling a robust evaluation of alternatives. The SoS notes from Paragraph 789 of the Scoping Report that no ecological survey data has been collected to date for the Sandwich Bay option (landfall option 2), and draws the attention of the Applicant to the concerns of NE in this regard (see Appendix 3 of this Opinion).

- 3.165 The SoS does note the intention to update surveys as described at Paragraph 810 of the Scoping Report. Limited information is given as to the scope and coverage of these surveys other than that they will include a phase 1 habitat survey, species specific ecological surveys and an updated desk based assessment. The SoS strongly encourages the Applicant to agree the scope of such with the relevant statutory consultees and would expect to see this as part of the Evidence Plan process. The comments of NE at Appendix 3 of this Opinion note a number of organisations that the Applicant should consult with in relation to locally designated sites. The SoS notes the use of a CIEEM's Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (Second Edition) (2016). KCC also request that the Applicant consider the British Standard Biodiversity: Code of Practice for Planning and Development (BS 42020: 2013) and demonstrate adherence to the mitigation hierarchy.
- 3.166 The SoS considers that the assessment of potential disturbance to protected species should take account of impacts from noise, vibration and air quality (including dust). Cross reference should be made to the appropriate chapters of the ES where these aspects are considered. The SoS also expects that the onshore ecology and ornithology assessments give due consideration to the potential interrelated effects associated with mobilisation of contaminants.
- 3.167 The Scoping Report notes the potential for presence of non-native invasive species. The ES should include a detailed assessment of non-native invasive species present in water bodies and/or sensitive receptors along the cable route, together with the necessary management plans or mitigation measures that may be required.
- 3.168 The Scoping Report describes the potential loss of land at the Sandwich Bay to Hacklinge Marshes SSSI due to the location of the substation. The SoS shares the views of NE in terms of the loss of SSSI habitat at this location and recommends that the Applicant engage with NE to seek to mitigate this impact (in particular NE note the need for robust assessment of alternatives along with extensive survey work within the SSSI). The ES should set out the measures for reinstating habitats which are removed during construction. In accordance with NPS EN-1, the Applicant should demonstrate the efforts made to ensure that activities will be confined to the minimum areas required for the works.

- 3.169 The ES should identify the likely locations where there would be loss of important habitats for example, hedgerow and/or ancient woodland.
- 3.170 Paragraph 803 explains the actions required if a cable fails, this does not appear to be dealt with or addressed consistently in other chapters. The ES must ensure that there is consistency in the approach to assessment in this regard.
- 3.171 The SoS notes the intention to scope out the impacts to Prince's Beachland Local Nature Reserve (LNR) from further assessment in the ES. The SoS does not consider that sufficient information and justification is provided within the Scoping Report in order to agree to this approach.
- 3.172 Whilst Table 3.9 does not indicate that the Applicant intends to scope any matters out of the ES in relation to impacts on Ecology, the comments of NE at Appendix 3 of this Opinion deem that some impacts have not been included in this table. The Applicant is encouraged to discuss these points further with NE and aim to agree the approach.
- 3.173 The SoS welcomes the adoption of an Ecological Management Plan (EMP) including for non-native invasive species and suggests that the Applicant consider widening the scope to also include protected species and any potential loss of habitat. Furthermore, the EMP should be linked to the CoCP to ensure best working practices for robust mitigation. It should also consider any overlapping measures such as those required for landscape mitigation. A draft of the EMP should be submitted as part of the application and cross-referred as part of the ES where appropriate.
- 3.174 The Scoping Report does not make reference to a lighting strategy at the substation during construction or operation. The Applicant is advised to consider this as part of the suite of mitigation.

**Onshore Ornithology (see Scoping Report Section 3.7)**

- 3.175 The SoS refers back to the comments made in the onshore ecology section of this Opinion relating the age of baseline data and reliance on ecological data collected as part of the TOWF zone.
- 3.176 The ES is required to be up to date in respect of information relevant to the assessment particularly regarding ornithology and species populations and the location of protected sites and features.
- 3.177 The SoS notes that the need for further surveys will be determined based on the desk assessment data and the Updated Phase 1 Habitat Survey. The SoS notes the intention to undertake the impact assessment in line with CIEEM guidance for ecological impact assessment. The SoS recommends that the Applicant seek agreement

with relevant statutory consultees on the extent of study areas and the scope of survey effort that is necessary.

- 3.178 The onshore ornithology section of the Scoping Report does not provide cross-reference to noise or lighting or any other of the topic specific chapters in terms of inter-related effects. However, it is noted that Table 3.26 of the Scoping Report identifies air quality, water resources and noise as topics where inter-related effects with ornithology would be considered.
- 3.179 In relation to operational impacts and the potential need to access cables and jointing pits etc, the Applicants ornithological assessment should include an assessment of these impacts and ensure that any necessary mitigation is capable of being secured as part of the EMP or otherwise.
- 3.180 The Applicant should note that Table 3.12 appears to be incorrectly labelled and Paragraph 832 also appears to make reference to the incorrect Local Nature Reserve.

**Onshore Archaeology and Cultural Heritage (see Scoping Report Section 3.8)**

- 3.181 The Applicant should ensure that study areas are agreed with relevant statutory consultees. Specific attention is drawn to the consideration of the impact on heritage assets outside of the study area, specifically those at Sandwich which is just outside the proposed 500m buffer zone. KCC, in their consultation response draws the Applicant's attention to the use of the Kent Historic Environmental Record as (in their view) it is an incomplete record and is not advised to be used for planning purposes. KCC in their response do provide information regard locations or archaeological remains and the Applicant should consider this in defining the scope of archaeological assessment works.
- 3.182 The Scoping Report does not provide information regarding action required during cable failure which is noted as a potential impact during operation in other sections of the Scoping Report.
- 3.183 The Scoping Report sets out that there would be no impacts on archaeology during decommissioning. The SoS is would expect a justification of this conclusion and notes that some components of the project will be removed during decommissioning and that removal of infrastructure may have an impact greater than that of constructions e.g. if removal of foundations or remediation of contaminants is required.
- 3.184 The SoS agrees that operational impacts on archaeology can be scoped out.

- 3.185 The SoS welcomes the use of relevant standards and guidance in terms of methodology and welcomes the use of a WSI as part of the mitigation on the impact on archaeology. Furthermore, it is welcomed that such documents and the methodology to be implemented are to be agreed with KCC and Historic England.
- 3.186 The Scoping Report section does not cross refer to the Landscape and Visual Impact Assessment (LVIA). The LVIA should consider the need for viewpoints from heritage assets and impacts on settings and therefore the SoS would expect to see such cross-referencing.

**Onshore Landscape and Visual (see Scoping Report Section 3.9)**

- 3.187 The SoS welcomes the use of best practice guidance in the methodology. Paragraph 899 of the Scoping Report notes that a Zone of Theoretical Visibility (ZTV) will define the visual baseline; however, the Scoping Report does not set out how the ZTV itself will be defined. The ES should describe the model used, providing information on the area, timings of any survey work and the methodology used.
- 3.188 The Scoping Report states that study areas differ for the cable route, the landfall, and the substation. The reasons set out for this include professional judgement and an understanding of the local landscape and scale of construction. The SoS requests that the ES include more detail on this including, a clear justification for the definition of each of the study areas chosen.
- 3.189 The SoS considers it more appropriate for the study area of the onshore cable route to extend from the outer edges of the cable corridor and not from the centre line.
- 3.190 Justification for the five viewpoints chosen has not been provided in the Scoping Report, this should be included in the ES. The SoS notes that viewpoints will be agreed with stakeholders, and welcomes this approach. The Applicant should take note of NE's view on their involvement in providing comments in relation to this topic chapter as set out in their consultation response (Appendix 3 of this Opinion).
- 3.191 Table 3.18 sets out that cumulative landscape and visual impacts of landfall options are to be scoped out for all stages of the development. The SoS endorses the comments of DDC in their consultation response (Appendix 3 of this Opinion) that cumulative impacts with consented projects at the former power station site and the Richborough Connection Project should be assessed.
- 3.192 It is also noted that landscape and visual (and cumulative impacts) of landfall options and onshore cable route options (outwith one kilometre buffer study area) and onshore substation area of interest (outwith five kilometre radius study area) are to be scoped out for all

stages of the development. As a result of the study areas not being shown on a map or explained in terms of typology for example, the SoS deems there to be insufficient information to support this conclusion at this stage. Furthermore, as the projects to be considered in the CIA have not yet been determined, the SoS does not agree that construction phase cumulative impacts can be scoped out as it cannot be certain that other large developments may not be constructed concurrently and in proximity to the Proposed Development.

- 3.193 The Scoping Report also states in Table 3.18 that that landscape and visual impacts of landfall options (within one kilometre radius study area and onshore cable route options (within one kilometre buffer study area) should be scoped out for operation and decommissioning. The SoS agrees with this approach as minimal work will be required during operation and the works outlined are to remain in situ and not be decommissioned.
- 3.194 The SoS advises that the ES should make use of photomontages to illustrate the landfall and the substation sites. In producing visualisations, including photomontages and wireframes, views should be verified and visualisations should accord with industry standards. To this end, the visualisations provided in Appendix 2 of the Scoping Report are welcomed (though they relate to the offshore SLVIA element).
- 3.195 The LVIA should also include an assessment of any permanent access roads and other infrastructure required at the landfall and the substation.
- 3.196 The assessment should include the consideration of any temporary lighting required for construction, and any permanent lighting for the cable relay station, substation and access roads (if required).
- 3.197 The SoS welcomes the development of a Landscape Strategy to mitigate the impacts of the project. SoS will expect any landscaping strategy to be developed so as to ensure it is not contradictory to any measures that may be included in any ecological management plans. This should be developed with relevant statutory bodies and secured through the DCO. Lighting Strategies and other mitigation outlined in other topic chapters of the ES may also relate to the LVIA assessment and these should be clearly referenced in the ES.
- 3.198 In terms of the substation, the SoS requests that careful consideration should be given to the form, siting, and use of materials and colours in terms of minimising the adverse visual impact of these structures.



**Onshore Noise and Vibration (see Scoping Report Section 3.10)**

- 3.199 The SoS recommends that the methodology and choice of noise receptors should be agreed with the relevant Environmental Health Department of the local planning authority and NE.
- 3.200 Although Section 3.10 of the Scoping Report discusses the onshore area of interest in respect of noise and vibration, no reference is provided to maps or figures illustrating this in order to aid understanding and context. It is expected that such figures will be provided as part of the ES to include the layout of the onshore, offshore and landfall infrastructure and the main sources of noise from these elements identified.
- 3.201 Paragraph 926 of the Scoping Report describes potential offshore noise sources of relevance to the assessment. There is no reference to the potential for increases in airborne noise levels during construction, operation and decommissioning. The SoS considers that further assessment will be required as to the potential effects at residential populations along the coast during each of the phases of the development (but particularly that associated with cable laying/pulling and landfall activities close to the shoreline). In this respect, Paragraph 932 of the Scoping Report states that "vessel or cable laying noise would be indistinguishable from background". The SoS considers that there is insufficient information provided to justify this conclusion.
- 3.202 Table 2.27 includes a row and column for "Offshore Airborne Noise" although there is no corresponding topic section in part 2 of the Scoping Report and so is perhaps an omission.
- 3.203 Paragraph 946 of the Scoping Report states that the spatial scope of the construction noise assessment would be "*400m from the cable corridor routes where significant activities could affect noise sensitive receptors*". The ES should clearly set out what 'significant activities' would comprise, and should include for potential recreational users of PRow. The SoS expects further explanation and justification be provided in the ES to support the 400m distance used for the assessment.
- 3.204 Similarly, paragraph 946 of the Scoping Report states that traffic routes subject to "*significant changes in traffic flows*" would be included in the ES for assessment. The ES should explain how a 'significant change' has been determined in accordance with relevant guidance, with cross reference to the traffic and transport chapter where appropriate.
- 3.205 Table 3.20 lists the distances of the residential receptors from the onshore area of interest. It is not stated as to whether this measurement is taken from the centre or edge of the area of interest.

Furthermore, the preceding paragraph (Paragraph 929) in the Scoping Report notes that the list in Table 3.20 includes additional receptors that were identified in the September 2016 desk study. However, the list includes the same receptors as listed in Paragraph 928 and therefore, it is unclear as to the differences in this list and the extent to which there are 'additional receptors'.

- 3.206 DDC in their consultation response express that Table 3.20 should include more properties, it is therefore recommended that this be discussed with DDC and a list of receptors agreed prior to commencing the assessment.
- 3.207 The SoS welcomes consideration of noise impacts on nature conservation areas. Consideration should also be given to ecological receptors (e.g. protected species) and appropriate cross reference made to the Onshore Ecology chapter.
- 3.208 When considering receptors to be scoped in or out of the ES, the Applicant is placing substantial reliance on the TOWF zone assessment. The SoS considers that the scope of the assessment for the Proposed Development should be sufficient to assess the effects applicable to the development concerned. Over reliance on out dated or irrelevant information with regard to the current Proposed Development should be avoided.
- 3.209 The Applicant at Paragraph 928 of the Scoping Report notes that Little Cliffend Farm is to be scoped out of the assessment for noise and vibration due to its distance from the onshore cable route – 1,016m. The SoS agrees with this conclusion.
- 3.210 The SoS welcomes the use of industry guidance in defining the methodology and discussion with the Local Authorities and relevant bodies regarding methodology. This should also include agreeing receptors to be included in the assessment.
- 3.211 The ES should provide a description of the noise generation aspects of the Proposed Development for both the construction and operation stage. Any distinctive tonal, impulsive or low frequency characteristics of the noise should be identified.
- 3.212 The Scoping Report does not set out information regarding the types of vehicles and plant to be used during the construction phase. This information should be included in the ES. Furthermore, the assessment should consider a 'worst case' for receptors, i.e. that it reflects the impact of vehicles and plant at the closest possible point between works and the receptors (including for any limits of deviation which may be sought).
- 3.213 In setting out which components of the project would potentially result in temporary impacts during onshore construction, the Applicant states that "*vibration would only be considered as an issue*

*where significant piling works are required*". The SoS recommends that the ES clearly defines what constitutes a 'significant' effect to enable the methodology for the assessment to be understood. Furthermore, there is no inclusion of other construction techniques which may lead to impacts from vibration such as HGVs. The SoS is of the view that the ES should consider all potential sources of vibration, particularly those in proximity to residential and other sensitive receptors.

- 3.214 The SoS is content that noise from turbines during operation be scoped out of the onshore noise and vibration assessment. The SoS also notes that the Applicant wishes to scope out vibration from all aspects of the Proposed Development's operation onshore (although without further justification beyond Paragraph 937 of the Scoping Report). In the absence of information provided to substantiate this, the SoS does not agree this can be scoped out at this stage. The potential for cumulative vibration effects of the Proposed Development and other infrastructure at the Richborough Energy Park should also be considered.
- 3.215 Table 3.21 also seeks to scope out cumulative operational noise impacts from the EIA, although, this is not explained in the text. Similarly to the above paragraph, the SoS recognises the proposed level of activity at the Richborough Energy Park and therefore does not agree that cumulative operational noise can be scoped out on the basis of the justification provided.
- 3.216 The SoS welcomes the commitment to a CoCP to cover onshore noise and vibration mitigation. The Scoping Report also sets out the range of mitigation measures which will be sought as part of the scheme, whilst the SoS welcomes this, it is important that such measures are taken into account in other topic chapters of the ES such as Landscape and Visual Impact.
- 3.217 Consideration should be given to monitoring noise complaints during construction and operation.

### **Traffic and Transport (see Scoping Report Section 3.11)**

- 3.218 The Scoping Report does not make any reference to how data will be collected to form the baseline assessment. Information is provided regarding the baseline but this is taken from the TOWF zone ES and is therefore now over ten years old. The Scoping Report does not indicate if or how this will be updated.
- 3.219 The SoS welcomes the Applicant's intention to agree the scope of assessment with KCC as the local highway authority. Agreeing approaches with Highways England is also encouraged. This is particularly important in agreeing the baseline position and the receptors which will be deemed sensitive in the assessment. It is also important that methodologies are justified, for example, why the

Guidelines for the Assessment of the Environmental impact of Road Traffic (GEART) has been chosen over Design Manual for Roads and Bridges (DMRB). The comments of Highways England (Appendix 3 of this Opinion) highlight documents that they suggest the Applicant adhere to in undertaking any assessment.

- 3.220 The SoS expects the Applicant to undertake an assessment of impact, specifically construction impacts on the Strategic Road network. Attention is drawn to the role of Manston Airport in 'operation stack'. The Applicant is encouraged to discuss these matters and their assessment in the ES with Highways England.
- 3.221 Paragraph 946 of the Scoping Report notes in relation to noise and vibration that the noise assessment will consider traffic routes subject to "*significant changes in traffic flows*". The traffic and transport chapter of the Scoping Report does not reference how '*significant changes*' will be determined to enable such routes to be fed into the noise and vibration assessment.
- 3.222 Any cross-referencing between topic chapters should be clear within the ES and the SoS welcomes the consideration of inter-relationships on traffic and transport at Table 3.26 of the Scoping Report in this regard.
- 3.223 Sensitive receptors are referred to within the Scoping Report; these should be specifically identified and their levels of sensitivity defined within the ES.
- 3.224 The Scoping Report identifies in Paragraph 951, that cables will be installed using open trenching techniques. The Scoping Report notes that some sections, depending on the route chosen may require HDD. The ES will be required to set out the traffic demand that has been assumed for the assessment and the reasons for the assumptions made.
- 3.225 The SoS welcomes that potential impacts associated with employee and HGV movements for the offshore construction and operation will be considered; however, does note that this is dependent upon a port being chosen before the application is made.
- 3.226 The Scoping Report sets out in Table 3.23 matters to be scoped out. This includes operation impacts except those relating highway safety and driver delay at the base port. HGV movements during operation and maintenance have not been provided and as such the SoS is unable to agree to such matters being scoped out at this stage.
- 3.227 The SoS welcomes the commitment to produce a Construction Traffic Management Plan (CTMP). The content of this plan should be secured through the DCO and the Applicant should consider how this plan would interact with the CoCP and other relevant plans.

**Health (see Scoping Report Section 3.12)**

- 3.228 The SoS welcomes the proposed provision of a Health Impact Report (HIR). Further comments on Health Impact Assessment are made in Section 4 of this Opinion.

**Topic Areas - Wider Scheme Aspects**

**Socio-economics (see Scoping Report Section 4.2)**

- 3.229 The types of jobs created should be considered in the context of the available workforce in the area, this applies equally to the construction and operational stages.
- 3.230 The SoS notes that the rows relating to socio-economics in Table 3.26 has not been filled in, this is assumed to be an oversight.
- 3.231 The socio-economics topic chapter discusses attractions in the area and it is important to be clear about the separation between the socio-economic assessment and that carried out for tourism impacts as the SoS considers there is potential for substantial overlap in this respect. This also applies to the consideration of PRow within the land use topic chapter.
- 3.232 The SoS notes that the Local Enterprise Partnership (LEP) is not listed in the chapter as being involved in the collation of the baseline or the agreement of the methodology. The Applicant is requested to consider the involvement of the LEP.

**Tourism and Recreation (see Scoping Report Section 4.3)**

- 3.233 The SoS welcomes the proposed tourism and recreation assessment. The Applicant should agree the baseline and methodology with the relevant local authorities, the LEP and other key stakeholders including but not limited to NE and Historic England. DCC have identified a number of attractions that they believe should be included in the assessment (see Appendix 3 of this Opinion). Furthermore, they note that the assessment should include recreational uses of the river and the Secretary of State agrees with this.
- 3.234 The SoS notes that the rows relating to Tourism in Table 3.26 has not been filled in, this is assumed to be an oversight.
- 3.235 Paragraph 1041 notes the Ramsgate Western Undercliffs bathing waters; however, a distance is not provided to demonstrate the proximity of the waters to the landfall locations. The Applicant is requested to consider this in relation to the requirement to carry out a WFD assessment (discussed further in Section 4 of this Opinion).

## 4 OTHER INFORMATION

- 4.1 This section does not form part of the SoS's Opinion as to the information to be provided in the ES. However, it does respond to other issues that the SoS has identified which may help to inform the preparation of the application for the DCO.

### **Pre-application Prospectus**

- 4.2 The Planning Inspectorate offers a service for Applicants at the Pre-application stage of the NSIP process. Details are set out in the prospectus 'Pre-application service for NSIPs'<sup>3</sup>. The prospectus explains what the Planning Inspectorate can offer during the Pre-application phase and what is expected in return. The Planning Inspectorate can provide advice about the merits of a scheme in respect of national policy; can review certain draft documents; as well as advice about procedural and other planning matters. Where necessary a facilitation role can be provided. The service is optional and free of charge.
- 4.3 The level of Pre-application support provided by the Planning Inspectorate will be agreed between an Applicant and the Inspectorate at the beginning of the Pre-application stage and will be kept under review.

### **Preliminary Environmental Information (PEI)**

- 4.4 Consultation forms a crucial aspect of environmental impact assessment. As part of their Pre-application consultation duties, Applicants are required to prepare a Statement of Community Consultation (SoCC). This sets out how the local community will be consulted about the Proposed Development. The SoCC must state whether the Proposed Development is EIA development and if it is, how the Applicant intends to publicise and consult on PEI. Further information in respect of PEI may be found in Advice note seven 'Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping'.
- 4.5 The SoS notes the Applicant's intended approach to PEI outlined at Section 5 of the Scoping Report.

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<sup>3</sup> The prospectus is available from:  
<http://infrastructure.planninginspectorate.gov.uk/application-process/pre-application-service-for-Applicants/>

## Habitats Regulations Assessment (HRA)

- 4.6 The SoS notes that European sites<sup>4</sup> could be potentially affected by the Proposed Development as described in particular at Sections 2.15 and 3.6.1.2 of the Scoping Report (for offshore and onshore effects respectively).
- 4.7 The Habitats Regulations require competent authorities, before granting consent for a plan or project, to carry out an appropriate assessment (AA) in circumstances where the plan or project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects). Applicants should note that the competent authority in respect of NSIPs is the relevant SoS. It is the Applicant's responsibility to provide sufficient information to the competent authority to enable them to carry out an AA or determine whether an AA is required.
- 4.8 The Applicant's attention is drawn to Regulation 5(2)(g) of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (The APFP Regulations) and the need to include with the DCO application a report identifying European sites to which the Habitats Regulations applies and Ramsar sites, which may be affected by the Proposed Development.
- 4.9 The report to be submitted under Regulation 5(2)(g) of the APFP Regulations with the application must deal with two issues: the first is to enable a formal assessment by the competent authority of whether there is a likely significant effect; and the second, should it be required, is to enable the carrying out of an AA by the competent authority.
- 4.10 The Applicant's attention is also drawn to UK Government policy<sup>5</sup>, which states that the following sites should be given the same protection as European sites: possible SACs (pSACs); potential SPAs (pSPAs); and (in England) proposed Ramsar sites and sites identified, or required, as compensatory measures for adverse effects on any of the above sites. Therefore, Applicants should also consider the need to provide information on such sites where they may be affected by the Proposed Development.
- 4.11 Further information on the HRA process is contained within Planning Inspectorate Advice note ten 'Habitat Regulations Assessment

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<sup>4</sup> The term European Sites in this context includes Sites of Community Importance (SCIs), Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), possible SACs, potential SPAs, Ramsar sites, proposed Ramsar sites, and any sites identified as compensatory measures for adverse effects on any of the above. For a full description of the designations to which the Habitats Regulations apply, and/or are applied as a matter of Government policy, see PINS Advice Note ten

<sup>5</sup> In England, the NPPF paragraph 118. In Wales, TAN5 paragraphs 5.2.2 and 5.2.3.

relevant to nationally significant infrastructure projects', available on the Planning Inspectorate's website. It is recommended that Applicants follow the advice contained within this Advice note.

### **Plan To Agree Habitats Information**

- 4.12 A Plan may be prepared to agree upfront what information in respect of Habitats Regulations the Applicant needs to supply to the Planning Inspectorate as part of a DCO application. This is termed an Evidence Plan for proposals in England or in both England and Wales, but a similar approach can be adopted for proposals only in Wales. For ease these are all termed 'evidence plans' here.
- 4.13 An evidence plan will help to ensure compliance with the Habitats Regulations. It will be particularly relevant to NSIPs where impacts may be complex, large amounts of evidence may be needed or there are a number of uncertainties. It will also help Applicants meet the requirement to provide sufficient information (as explained in Advice note ten) in their application, so the ExA can recommend to the SoS whether or not to accept the application for Examination and whether an AA is required.
- 4.14 The SoS welcomes that the Applicant has already commenced an Evidence Plan Process that will encompass not only HRA matters, but also EIA matters (see Paragraph 1074 of the Scoping Report).

### **Sites of Special Scientific Interest (SSSIs)**

- 4.15 The SoS notes that a number of SSSIs are located close to or within the Proposed Development. Where there may be potential impacts on the SSSIs, the SoS has duties under sections 28(G) and 28(I) of the Wildlife and Countryside Act 1981 (as amended) (the W&C Act). These are set out below for information.
- 4.16 Under s28(G), the SoS has a general duty '... to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest'.
- 4.17 Under s28(I), the SoS must notify the relevant nature conservation body (NCB), JNCC and NE in this case, before authorising the carrying out of operations likely to damage the special interest features of a SSSI. Under these circumstances 28 days must elapse before deciding whether to grant consent, and the SoS must take account of any advice received from the NCB, including advice on attaching conditions to the consent. The NCB will be notified during the Examination period.
- 4.18 If Applicants consider it likely that notification may be necessary under s28(I), they are advised to resolve any issues with the NCB



before the DCO application is submitted to the SoS. If, following assessment by Applicants, it is considered that operations affecting the SSSI will not lead to damage of the special interest features, Applicants should make this clear in the ES. The application documents submitted in accordance with Regulation 5(2)(1) could also provide this information. Applicants should seek to agree with the NCB the DCO requirements which will provide protection for the SSSI before the DCO application is submitted.

## **European Protected Species (EPS)**

- 4.19 Applicants should be aware that the decision maker under the PA2008 has, as the CA, a duty to engage with the Habitats Directive. Where a potential risk to a European Protected Species (EPS) is identified, and before making a decision to grant development consent, the CA must, amongst other things, address the derogation tests in Regulation 53 of the Habitats Regulations. Therefore the Applicant may wish to provide information which will assist the decision maker to meet this duty.
- 4.20 If an Applicant has concluded that an EPS licence is required the ExA will need to understand whether there is any impediment to the licence being granted. The decision to apply for a licence or not will rest with the Applicant as the person responsible for commissioning the proposed activity by taking into account the advice of their consultant ecologist.
- 4.21 Applicants are encouraged to consult with NE and, where required, to agree appropriate requirements to secure necessary mitigation. It would assist the examination if Applicants could provide, with the application documents, confirmation from NE whether any issues have been identified which would prevent the EPS licence being granted.
- 4.22 Generally, NE are unable to grant an EPS licence in respect of any development until all the necessary consents required have been secured in order to proceed. For NSIPs, NE will assess a draft licence application in order to ensure that all the relevant issues have been addressed. Within 30 working days of receipt, NE will either issue 'a letter of no impediment' stating that it is satisfied, insofar as it can make a judgement, that the proposals presented comply with the regulations or will issue a letter outlining why NE consider the proposals do not meet licensing requirements and what further information is required before a 'letter of no impediment' can be issued. The Applicant is responsible for ensuring draft licence applications are satisfactory for the purposes of informing formal Pre-application assessment by NE.
- 4.23 Ecological conditions on the site may change over time. It will be the Applicant's responsibility to ensure information is satisfactory for the purposes of informing the assessment of no detriment to the

maintenance of favourable conservation status (FCS) of the population of EPS affected by the proposals. Applicants are advised that current conservation status of populations may or may not be favourable. Demonstration of no detriment to favourable populations may require further survey and/or submission of revised short or long term mitigation or compensation proposals.

- 4.24 In England the focus concerns the provision of up to date survey information which is then made available to NE (along with any resulting amendments to the draft licence application). Applicants with projects in England (including activities undertaken landward of the mean low water mark) can find further information in Advice note eleven, Annex C<sup>6</sup>.

### **Other Regulatory Regimes**

- 4.25 The SoS recommends that the Applicant should state clearly what regulatory areas are addressed in the ES and that the Applicant should ensure that all relevant authorisations, licences, permits and consents that are necessary to enable operations to proceed are described in the ES. Also it should be clear that any likely significant effects of the Proposed Development which may be regulated by other statutory regimes have been properly taken into account in the ES.
- 4.26 It will not necessarily follow that the granting of consent under one regime will ensure consent under another regime. For those consents not capable of being included in an application for consent under the PA2008, the SoS will require a level of assurance or comfort from the relevant regulatory authorities that the proposal is acceptable and likely to be approved, before they make a recommendation or decision on an application. The Applicant is encouraged to make early contact with other regulators. Information from the Applicant about progress in obtaining other permits, licences or consents, including any confirmation that there is no obvious reason why these will not subsequently be granted, will be helpful in supporting an application for development consent to the SoS.

### **Water Framework Directive**

- 4.27 EU Directive 2000/60/EC ('the Water Framework Directive') establishes a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. Under the terms of the Directive, Member States are required to establish river basin districts and corresponding river

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<sup>6</sup> Advice Note eleven, Annex C – Natural England and the Planning Inspectorate available from: [http://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/10/PINS-Advice-Note-11\\_AnnexC\\_20150928.pdf](http://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/10/PINS-Advice-Note-11_AnnexC_20150928.pdf)

basin management plans outlining how the environmental objectives outlined in Article 4 of the Directive are to be met.

- 4.28 In determining an application for a DCO, the SoS must be satisfied that the Applicant has had regard to relevant river basin management plans and that the Proposed Development is compliant with the terms of the WFD and its daughter directives. In this respect, the Applicant's attention is drawn to Regulation 5(2)(l) of the APFP Regulations which requires an application for an NSIP to be accompanied by *'where applicable, a plan with accompanying information identifying.....(iii) water bodies in a river basin management plan, together with an assessment of any effects on such sites, features, habitats or bodies likely to be caused by the Proposed Development'*.
- 4.29 The SoS welcomes the Applicant's reference to the WFD at Paragraph 70 of the Scoping Report as well as relevant waterbodies that will need to be considered as part of the Proposed Development at Sections 2.15.1 (offshore) and 3.4.1.3 (onshore). The SoS also welcomes that Applicant's intention to undertake a WFD compliance assessment in evaluating whether the Proposed Development is likely to cause deterioration in the WFD status of any water bodies.
- 4.30 In particular, the WFD compliance assessment should, as a minimum, include:
- the risk of deterioration of any water body quality element to a lower status class;
  - support for measures to achieve 'good' status (or potential) for water bodies;
  - how the application does not hinder or preclude implementation of measures in the river basin management plan to improve a surface water body or groundwater (or propose acceptable alternatives to meet river basin management plan requirements); and
  - the risk of harming any protected area.

## **The Environmental Permitting Regulations and the Water Resources Act**

### **Environmental Permitting Regulations 2010**

- 4.31 The Environmental Permitting Regulations 2010 require operators of certain facilities, which could harm the environment or human health, to obtain permits from the EA. Environmental permits can combine several activities into one permit. There are standard permits supported by 'rules' for straightforward situations and bespoke permits for complex situations. For further information, please see

the Government's advice on determining the need for an environmental permit<sup>7</sup>.

4.32 The EA's environmental permits cover:

- industry regulation;
- waste management (waste treatment, recovery or disposal operations);
- discharges to surface water;
- groundwater activities; and
- radioactive substances activities.

4.33 Characteristics of environmental permits include:

- They are granted to operators (not to land).
- They can be revoked or varied by the EA.
- Operators are subject to tests of competence.
- Operators may apply to transfer environmental permits to another operator (subject to a test of competence). Conditions may be attached.

### **The Water Resources Act 1991**

4.34 Under the Water Resources Act 1991 (as amended), anyone who wishes to abstract more than 20m<sup>3</sup>/day of water from a surface source such as a river or stream or an underground source, such as an aquifer, will normally require an abstraction licence from the EA. For example, an abstraction licence may be required to abstract water for use in cooling at a power station. An impoundment licence is usually needed to impede the flow of water, such as in the creation of a reservoir or dam, or construction of a fish pass.

4.35 Abstraction licences and impoundment licences are commonly referred to as 'water resources licences'. They are required to ensure that there is no detrimental impact on existing abstractors or the environment. For further information, please see the EA's WR176 guidance form on applying for a full, transfer or impounding licence<sup>8</sup>:

4.36 Characteristics of water resources licences include:

- They are granted to licence holders (not to land).
- They can be revoked or varied.

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<sup>7</sup> Available from: <https://www.gov.uk/environmental-permit-check-if-you-need-one>

<sup>8</sup> Available from: <https://www.gov.uk/government/publications/wr176-applying-for-full-transfer-or-impoundment-licence-form-guidance>

- They can be transferred to another licence holder.
- In the case of abstraction licences, they are time limited.

### **Role of the Applicant**

- 4.37 It is the responsibility of Applicants to identify whether an environmental permit and / or water resources licence is required from the EA before an NSIP can be constructed or operated. Failure to obtain the appropriate consent(s) is an offence.
- 4.38 The EA allocates a limited amount of Pre-application advice for environmental permits and water resources licences free of charge. Further advice can be provided, but this will be subject to cost recovery.
- 4.39 The EA encourages Applicants to engage with them early in relation to the requirements of the application process. Where a Proposed Development is complex or novel, or requires a Habitats Regulations Assessment, Applicants are encouraged to “parallel track” their applications to the EA with their DCO applications to the Planning Inspectorate. Further information on the EA’s role in the infrastructure planning process is available in Annex D of the Planning Inspectorate’s Advice note eleven (working with public bodies in the infrastructure planning process)<sup>9</sup>
- 4.40 When considering the timetable to submit their applications, Applicants should bear in mind that the EA will not be in a position to provide a detailed view on the application until it issues its draft decision for public consultation (for sites of high public interest) or its final decision. Therefore the Applicant should ideally submit its application sufficiently early so that the EA is at this point in the determination by the time the DCO reaches Examination.
- 4.41 It is also in the interests of an Applicant to ensure that any specific requirements arising from their permit or licence are capable of being carried out under the works permitted by the DCO. Otherwise there is a risk that requirements could conflict with the works which have been authorised by the DCO (e.g. a stack of greater height than that authorised by the DCO could be required) and render the DCO impossible to implement.

### **Health Impact Assessment**

- 4.42 The SoS echoes the comments of Public Health England who welcome the Applicant’s proposed inclusion of a Health Impact Review (HIR) within the ES, which will review the health impact of onshore aspects of the Proposed Development.

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<sup>9</sup> Available from: <http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

- 4.43 The methodology for the HIA /HIR, if prepared, should be agreed with the relevant Statutory Consultees and take into account mitigation measures for acute risks.

### **Transboundary Impacts**

- 4.44 The Scoping Report has acknowledged the potential for transboundary impacts on another European Economic Area (EEA) State.
- 4.45 Regulation 24 of the EIA Regulations, inter alia, requires the SoS to publicise a DCO application if the SoS is of the view that the Proposed Development is likely to have significant effects on the environment of another EEA state and where relevant to consult with the EEA state affected.
- 4.46 The SoS considers that where Regulation 24 applies, this is likely to have implications for the Examination of a DCO application. In order to ensure the efficient and effective examination of applications within the statutory timetable under s98 of the PA2008, 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.
- 4.47 The ES will also need to address this matter in each topic area and summarise the position on transboundary effects of the Proposed Development, taking into account inter-relationships between any impacts in each topic area.
- 4.48 Whilst the SoS notes the Applicant's intention to scope out consideration of transboundary effects from certain topic areas throughout Sections 2 and 3 of the Scoping Report, the duty to notify and consult other EEA States is that of the SoS and is ongoing throughout the DCO process until the decision is made as to whether or not to grant development consent. Therefore, the SoS does not consider it appropriate to formally agree to scope out any transboundary considerations at this stage. However, in accordance with the process outlined in the Planning Inspectorate's Advice note twelve, the information provided by the Applicant in the Scoping Report will assist in the determining the potential for likely significant effects on the environment in other EEA States, and the process of screening for transboundary effects is undertaken when new relevant information becomes available (which can be at multiple points in time prior to the development consent decision).

## **APPENDIX 1 – PRESENTATION OF THE ENVIRONMENTAL STATEMENT**

A1.1 The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (SI 2264) (as amended) sets out the information which must be provided for an application for a Development Consent Order (DCO) for nationally significant infrastructure under the Planning Act 2008 (as amended) (PA2008). Where required, this includes an Environmental Statement (ES). Applicants may also provide any other documents considered necessary to support the application. Information which is not environmental information need not be replicated or included in the ES.

A1.2 An ES is described under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) 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 Regulations Regulation 2)*

A1.3 The purpose of an ES is to ensure that the environmental effects of a Proposed Development are fully considered, together with the economic or social benefits of the development, before the development consent application under the PA2008 is determined. The ES should be an aid to decision making.

A1.4 The Secretary of State (SoS) 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 Secretary of State recommends that the ES be concise with technical information placed in appendices.

### **ES Indicative Contents**

A1.5 The SoS emphasises that the ES should be a 'stand alone' document in line with best practice and case law. The EIA Regulations Schedule 4, Parts 1 and 2, set out the information for inclusion in environmental statements.

A1.6 Schedule 4 Part 1 of the EIA Regulations states this information includes:

*17. Description of the development, including in particular—*

- (a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;*
- (b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;*
- (c) an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc) resulting from the operation of the Proposed Development.*

*18. 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.*

*19. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.*

*20. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:*

- (a) the existence of the development;*
- (b) the use of natural resources;*
- (c) the emission of pollutants, the creation of nuisances and the elimination of waste,*

*and the description by the Applicant of the forecasting methods used to assess the effects on the environment.*

*21. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.*

*22. A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.*



*23. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the Applicant in compiling the required information.*

*(EIA Regulations Schedule 4 Part 1)*

The content of the ES must include as a minimum those matters set out in Schedule 4 Part 2 of the EIA Regulations. This includes the consideration of 'the main alternatives studied by the Applicant' which the SoS recommends could be addressed as a separate chapter in the ES. Part 2 is included below for reference:

*24. A description of the development comprising information on the site, design and size of the development*

*25. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects*

*26. The data required to identify and assess the main effects which the development is likely to have on the environment*

*27. 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, and*

*28. A non-technical summary of the information provided [under the four paragraphs of Schedule 4 part 2 above].*

*(EIA Regulations Schedule 4 Part 2)*

- A1.7 Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the SoS 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**

- A1.8 The SoS 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 SoS 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.

## **Scheme Proposals**

- A1.9 The scheme parameters will need to be clearly defined in the draft DCO and therefore in the accompanying ES which should support the

application as described. The SoS is not able to entertain material changes to a project once an application is submitted. The SoS draws the attention of the Applicant to the DCLG and the Planning Inspectorate's published advice on the preparation of a draft DCO and accompanying application documents.

## Flexibility

A1.10 The SoS acknowledges that the EIA process 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. However, at the time of the application for a DCO, any proposed scheme parameters should not be so wide ranging as to represent effectively different schemes.

A1.11 It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to assess robustly a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations.

A1.12 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 Applicant's attention is drawn to the Planning Inspectorate's Advice note nine 'Rochdale Envelope' which is available on the Planning Inspectorate's website.

A1.13 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. Where some flexibility is sought and the precise details are not known, the Applicant should assess the maximum potential adverse impacts the Proposed Development could have to ensure that the Proposed Development as it may be constructed has been properly assessed.

A1.14 The ES should be able to confirm that any changes to the Proposed 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.

## Scope

A1.15 The SoS 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 local authorities and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

### **Physical Scope**

A1.16 In general the SoS 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.

A1.17 The SoS recommends that the physical scope of the study areas should be identified for each of the environmental topics and should be sufficiently robust in order to undertake the assessment. This 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 extent of the study areas should be on the basis of recognised professional guidance and best practice, whenever this is available, and determined by establishing the physical extent of the likely impacts. 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.

### **Breadth of the Topic Area**

A1.18 The ES should explain the range of matters to be considered under each topic and this may respond partly to the type of project being considered. If the range considered is drawn narrowly then a justification for the approach should be provided.

### **Temporal Scope**

A1.19 The assessment should consider:

- Environmental impacts during construction works.
- Environmental impacts on completion/operation of the Proposed Development.
- Where appropriate, environmental impacts a suitable number of years after completion of the Proposed Development (for

example, in order to allow for traffic growth or maturing of any landscape proposals).

- Environmental impacts during decommissioning.

A1.20 In terms of decommissioning, the SoS 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, as well as to enable the decommissioning of the works to be taken into account, is to encourage early consideration as to how structures can be taken down. The purpose of this is to seek to minimise disruption, to re-use materials and to restore the site or put it to a suitable new use. The SoS encourages consideration of such matters in the ES.

A1.21 The SoS 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.

A1.22 The SoS recommends that throughout the ES a standard terminology for time periods should be defined, such that for example, 'short term' always refers to the same period of time.

## **Baseline**

A1.23 The SoS 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, whenever possible, be consistent between topics. The identification of a single baseline is to be welcomed in terms of the approach to the assessment, although it is recognised that this may not always be possible.

A1.24 The SoS recommends that the baseline environment should be clearly explained in the ES, including any dates of surveys, and care should be taken to ensure that all the baseline data remains relevant and up to date.

A1.25 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. The timing and scope of all surveys should be agreed with the relevant statutory bodies and appropriate consultees, wherever possible.

A1.26 The baseline situation and the Proposed Development should be described within the context of the site and any other proposals in the vicinity.

## **Identification of Impacts and Method Statement**

### **Legislation and Guidelines**

A1.27 In terms of the EIA methodology, the SoS 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.

A1.28 In terms of other regulatory regimes, the SoS 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 APFP Regulations.

A1.29 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**

A1.30 The EIA Regulations require the identification of the 'likely significant effects of the development on the environment' (Schedule 4 Part 1 Paragraph 20).

A1.31 As a matter of principle, the SoS applies the precautionary approach to follow the Court's reasoning in judging 'significant effects'. In other words 'likely to affect' will be taken as meaning that there is a probability or risk that the Proposed Development will have an effect, and not that a development will definitely have an effect.

A1.32 The SoS 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 SoS 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 SoS considers that this should also apply to the consideration of cumulative impacts and impact inter-relationships.

A1.33 The SoS recognises that the way in which each element of the environment may be affected by the Proposed Development can be approached in a number of ways. However it 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 topic areas. The SoS recommends that a common format should be applied where possible.

### **Inter-relationships between environmental factors**

A1.34 The inter-relationship between aspects of the environments likely to be significantly affected is a requirement of the EIA Regulations (see Schedule 4 Part 1 of the EIA Regulations). These occur where a

number of separate impacts, e.g. noise and air quality, affect a single receptor such as fauna.

A1.35 The SoS considers that the inter-relationships between factors must be assessed in order to address the environmental impacts of the Proposed Development 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. This is particularly important when considering impacts in terms of any permutations or parameters to the Proposed Development.

### **Cumulative Impacts**

A1.36 The potential cumulative impacts with other major developments will need to be identified, as required by the Directive. The significance of such impacts should be shown to have been assessed against the baseline position (which would include built and operational development). In assessing cumulative impacts, other major development should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

- Projects that are under construction.
- Permitted application(s) not yet implemented.
- Submitted application(s) not yet determined.
- All refusals subject to appeal procedures not yet determined.
- Projects on the National Infrastructure's programme of projects.
- 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.

A1.37 Details should be provided in the ES, including the types of development, location and key aspects that may affect the EIA and how these have been taken into account as part of the assessment will be crucial in this regard.

A1.38 The SoS recommends that offshore wind farms should also take account of any offshore licensed and consented activities in the area, for the purposes of assessing cumulative effects, through consultation with the relevant licensing/consenting bodies.

A1.39 For the purposes of identifying any cumulative effects with other developments in the area, Applicants should also consult consenting bodies in other EU states to assist in identifying those developments (see commentary on Transboundary Effects below).

### **Related Development**

A1.40 The ES should give equal prominence to any development which is related with the Proposed Development to ensure that all the impacts of the proposal are assessed.

A1.41 The SoS recommends that the Applicant should distinguish between the Proposed Development for which development consent will be sought and any other development. This distinction should be clear in the ES.

### **Alternatives**

A1.42 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).

A1.43 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.

A1.44 The SoS 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 Proposed Development and the sites chosen.

### **Mitigation Measures**

A1.45 Mitigation measures may fall into certain categories namely: avoid; reduce; compensate or enhance (see Schedule 4 Part 1 Paragraph 21); and should be identified as such in the specialist topics. Mitigation measures should not be developed in isolation as they may relate to more than one topic area. For each topic, the ES should set out any mitigation measures required to prevent, reduce and where possible offset any significant adverse effects, and to identify any residual effects with mitigation in place. Any proposed mitigation should be discussed and agreed with the relevant consultees.

A1.46 The effectiveness of mitigation should be apparent. Only mitigation measures which are a firm commitment and can be shown to be deliverable should be taken into account as part of the assessment.

A1.47 It would be helpful if the mitigation measures proposed could be cross referred to specific provisions and/or requirements proposed within the draft DCO. 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.

A1.48 The Secretary of State advises that it is considered best practice to outline in the ES, the structure of the environmental management and monitoring plan and safety procedures which will be adopted

during construction and operation and may be adopted during decommissioning.

### **Cross References and Interactions**

A1.49 The SoS 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 Proposed Development and how these impacts can be mitigated.

A1.50 As set out in EIA Regulations 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.

### **Consultation**

A1.51 The SoS recommends that ongoing consultation is maintained with relevant stakeholders and that any specific areas of agreement or disagreement regarding the content or approach to assessment should be documented. The SoS recommends that any changes to the scheme design in response to consultation should be addressed in the ES.

A1.52 Consultation with the local community should be carried out in accordance with the Statement of Community Consultation (SoCC) which will state how the Applicant intends to consult on the Preliminary Environmental Information (PEI). This PEI could include results of detailed surveys and recommended mitigation actions. Where effective consultation is carried out in accordance with s47 of the PA2008, 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 PEI. Attention is drawn to the duty upon Applicants under s50 of the PA2008 to have regard to the guidance on pre-application consultation.

### **Transboundary Effects**

A1.53 The SoS 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 SoS recommends consideration should be given to discharges to the air and water and to potential impacts on migratory species and to impacts on shipping and fishing areas.

A1.54 The Applicant's attention is also drawn to the Planning Inspectorate's Advice note twelve 'Development with significant transboundary



impacts consultation' which is available on the Planning Inspectorate's website<sup>10</sup>.

## Summary Tables

A1.55 The SoS recommends that in order to assist the decision making process, the Applicant may wish to consider the use of tables:

**Table X:** to identify and collate the residual impacts after mitigation on the basis of specialist topics, inter-relationships and cumulative impacts.

**Table XX:** to demonstrate how the assessment has taken account of this Opinion and other responses to consultation.

**Table XXX:** to set out the mitigation measures proposed, as well as assisting the reader, the SoS considers that this would also enable the Applicant to cross refer mitigation to specific provisions proposed to be included within the draft DCO.

**Table XXXX:** to cross reference where details in the HRA (where one is provided) such as descriptions of sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.

## Terminology and Glossary of Technical Terms

A1.56 The SoS 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.

## Presentation

A1.57 The ES should have all of its paragraphs numbered, as this makes referencing easier as well as accurate. Appendices must be clearly referenced, again with all paragraphs numbered. All figures and drawings, photographs and photomontages should be clearly referenced. Figures should clearly show the proposed site application boundary.

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<sup>10</sup> Available from: <http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

## **Confidential Information**

A1.58 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to information about the presence and locations of rare or sensitive species such as badgers, rare birds and plants where disturbance, damage, persecution or commercial exploitation may result from publication of the information. Where documents are intended to remain confidential the Applicant should provide these as separate paper and electronic documents with their confidential nature clearly indicated in the title, and watermarked as such on each page. The information should not be incorporated within other documents that are intended for publication or which the Planning Inspectorate would be required to disclose under the Environmental Information Regulations 2014.

## **Bibliography**

A1.59 A bibliography should be included in the ES. The author, date and publication title should be included for all references. All publications referred to within the technical reports should be included.

## **Non Technical Summary**

A1.60 The EIA Regulations require a Non Technical Summary (EIA Regulations 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.

## APPENDIX 2 – LIST OF CONSULTATION BODIES FORMALLY CONSULTED

Note: the Prescribed Consultees have been consulted in accordance with the Planning Inspectorate’s Advice note three ‘EIA Consultation and Notification’ (version 6, June 2015)<sup>11</sup>.

<b>SCHEDULE 1 DESCRIPTION</b>	<b>ORGANISATION</b>
The Health and Safety Executive	The Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Clinical Commissioning Group	Canterbury & Coastal Clinical Commissioning Group
	South Kent Coast Clinical Commissioning Group
	Thanet Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England
The relevant fire and rescue authority	Kent Fire and Rescue
The relevant police and crime commissioner	Kent Police and Crime Commissioner
The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council	Ramsgate Parish Council
	Cliffsend Parish Council
	Worth Parish Council
	Minster-in-Thanet Parish Council
	Ash Parish Council
	Sandwich Town Council
	Sholden Parish Council
The Environment Agency	The Environment Agency
The Joint Nature Conservation	Joint Nature Conservation

<sup>11</sup> Available from: <http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

<b>SCHEDULE 1 DESCRIPTION</b>	<b>ORGANISATION</b>
Committee	Committee
The Maritime and Coastguard Agency	The Maritime and Coastguard Agency
The Marine Management Organisation	The Marine Management Organisation
The Civil Aviation Authority	The Civil Aviation Authority
The Relevant Highways Authority	Kent County Council Highways Authority
The relevant strategic highways company	Highways England
The Coal Authority	The Coal Authority
The relevant internal drainage board	River Stour (Kent) Internal Drainage Board
Trinity House	Trinity House
Public Health England, an executive agency of the Department of Health	Public Health England
The Crown Estate Commissioners	The Crown Estate
The Secretary of State for Defence	Ministry of Defence

<b>RELEVANT STATUTORY UNDERTAKERS</b>	
The relevant Clinical Commissioning Group	Canterbury & Coastal Clinical Commissioning Group
	South Kent Coast Clinical Commissioning Group
	Thanet Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant NHS Foundation Trust	South East Coast Ambulance Service NHS Foundation Trust
Railways	Network Rail Infrastructure Ltd
	Highways England Historical Railways Estate
Dock and Harbour authority	Margate Harbour (Thanet District Council)

<b>RELEVANT STATUTORY UNDERTAKERS</b>	
	Broadstairs Harbour (Thanet District Council)
	Port of Ramsgate (Thanet District Council)
	The Port and Haven of Sandwich
	Port of London Authority
Pier	Deal Pier (Dover District Council)
Lighthouse	Trinity House
Civil Aviation Authority	Civil Aviation Authority
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route Safeguarding
Universal Service Provider	Royal Mail Group
The relevant Environment Agency	Environment Agency (Kent, South London & East Sussex)
The relevant water and sewage undertaker	Affinity Water
	Southern Water
The relevant public gas transporter	Energetics Gas Limited
	Energy Assets Pipelines Limited
	ES Pipelines Ltd
	ESP Connections Ltd
	ESP Networks Ltd
	ESP Pipelines Ltd
	Fulcrum Pipelines Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	National Grid Gas Distribution Limited
	Scotland Gas Networks Plc
Southern Gas Networks Plc	
Wales and West Utilities Ltd	
The relevant electricity	Richborough A Ltd

<b>RELEVANT STATUTORY UNDERTAKERS</b>	
generator with CPO Powers	Thanet Offshore Wind Ltd
The relevant electricity distributor with CPO Powers	Energetics Electricity Limited
	ESP Electricity Limited
	G2 Energy IDNO Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Peel Electricity Networks Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	South Eastern Power Networks Plc
	UK Power Networks Limited
	National Grid Electricity Transmission Plc
Thanet OFTO Limited	
The relevant electricity interconnector with CPO Powers	BritNed Development Limited
	National Grid Nemo Link Limited

<b>SECTION 43 CONSULTEES (FOR THE PURPOSES OF SECTION 42(B))</b>	
Local Authorities	Kent County Council
	Shepway District Council
	Medway Council
	Surrey County Council
	London Borough of Bromley
	London Borough of Bexley
	Thurrock Council
	Canterbury City Council
	Dover District Council
	Thanet District Council

<b>NON-STATUTORY CONSULTEES</b>
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Royal National Lifeboat Institution
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## **APPENDIX 3 – RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES**

List of bodies who replied by the Statutory Deadline:

Civil Aviation Authority
Dover District Council
Highways England
Historic England
Kent County Council
Marine Management Organisation
Medway Council
National Grid (National Grid Electricity Transmission plc, National Grid Gas plc and National Grid Gas Distribution Limited)
NATS En-Route Safeguarding
Natural England
Port of London Authority
Public Health England
Royal Mail Group
Thanet District Council
The Coal Authority
The Health and Safety Executive
The Maritime and Coastguard Agency
Trinity House
Worth Parish Council

**From:** [Windfarms](#)  
**To:** [Environmental Services](#)  
**Subject:** 20170131CAAResponseThanetExtensionOffshoreWindFarmEIAScopingEN010084  
**Date:** 31 January 2017 11:03:16  
**Attachments:** [image001.gif](#)  
[image002.jpg](#)

---

Dear Sir/Madam,

Having reviewed the Scoping Request provided, the appropriate aviation consultees (NATS (NERL), the MOD (DIO) and MCA) have been identified although the positions of each consultee regarding the proposed development should be established by consultation.

It is also recommended that Emergency Service Helicopter Support Units are consulted as they may operate in the area of concern and be affected by the introduction of tall obstacles; whilst this may have little effect offshore during operation, it may apply during and onshore construction. For example Police helicopters are permitted to operate down to 75 feet and will routinely follow main roads and motorways during their operations. Both the Police and Air Ambulance may need to land anywhere and will also have specifically designated landing sites. In England and Wales, police aviation is centrally co-ordinated by the National Police Air Service. They can be contacted via [npas.obstructions@npas.pnn.police.uk](mailto:npas.obstructions@npas.pnn.police.uk). In addition, for offshore developments, the Maritime and Coastguard Agency should be consulted.

In terms of charting, CAA requirements are below. Please note, maximum height is to the blade tips, not just the hub or nacelle:

**Structures with a maximum height of 300 ft. (91.4m) above ground level or higher:**

There is an international civil aviation requirement for all structures of 300 feet (91.4 metres) or more to be charted on aeronautical charts. Accordingly such structures should be reported to the Defence Geographic Centre (DGC) which maintains the UK's database of tall structures (the Digital Vertical Obstruction File) at least 10 weeks prior to the start of construction. The point of contact is Nigel Whittle (0208 818 2702, [mail to dvof@mod.uk](mailto:dvof@mod.uk)). The DGC will require the accurate location of the turbines/meteorological masts, accurate maximum heights, the lighting status of the turbines and / or meteorological masts and the estimated start / end dates for construction together with the estimate of when the turbines are scheduled to be removed. In addition, the developer should also provide the maximum height of any construction equipment required to build the turbines.

In order to ensure that aviation stakeholders are aware of the turbines and / or meteorological masts while aviation charts are in the process of being updated, developments should be notified through the means of a **Notice to Airmen** (NOTAM). To arrange an associated NOTAM, a developer should contact CAA Airspace Regulation ([AROps@caa.co.uk](mailto:AROps@caa.co.uk) / 0207 453 6599); providing the same information as required by the DGC at least 14 days prior to the start of construction.

**Structures with a maximum height below 300 ft. (91.4m) above ground level:**

On behalf of other non-regulatory aviation stakeholders, and in the interest of Aviation Safety, the CAA also requests that any feature/structure 70 ft (21.3m) in height, or greater, above ground level is also reported to the Defence Geographic Centre (DGC) to allow for the appropriate notification to the relevant aviation communities. It should be noted that NOTAMS would not routinely be required for structures under 300 ft (91.4m) unless specifically requested by an aviation

stakeholder.

**Lighting:**

Any structure must be lit in accordance with the Air Navigation Order (ANO) 2016 Article 223 (formally Article 220) and should be appropriately marked. although if an aviation stakeholder (including the MOD) made a request for lighting it is highly likely that the CAA would support such a request. Should the proposed maximum turbine heights increase, or turbine locations change, then previously consulted aviation stakeholders will need to be re-consulted to ensure that any impact assessments reflect such changes.

Should you have any further questions please feel free to contact me, details below.

Yours Faithfully,

*Ade*

**Adrian Stead**

Surveillance Policy  
Airspace, ATM & Aerodromes  
Civil Aviation Authority



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**From:** Environmental Services [mailto:environmentalservices@pins.gsi.gov.uk]  
**Sent:** 05 January 2017 16:08  
**To:** Airspace  
**Cc:** Windfarms  
**Subject:** EN010084 – Thanet Extension Offshore Wind Farm – EIA Scoping Notification and Consultation

Dear Sir/Madam

Please see the attached correspondence on the proposed Thanet Extension Offshore Wind Farm.

Please note the deadline for consultation responses is 2 February 2017 and is a statutory requirement that cannot be extended.

Kind regards,

Richard Kent  
Senior EIA and Land Rights Advisor  
Major Casework Directorate  
The Planning Inspectorate, 3D Temple Quay House, Temple Quay, Bristol BS1 6PN

Direct Line: 0303 444 5895

Helpline: 0303 444 5000

Email: [environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)

Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)

Web: [www.infrastructure.planninginspectorate.gov.uk](http://www.infrastructure.planninginspectorate.gov.uk) (National Infrastructure Planning)

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Contact: Fiona Runacre  
Direct line: 07769 646676  
E-mail: [Fiona.Runacre@dover.gov.uk](mailto:Fiona.Runacre@dover.gov.uk)  
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Our ref: DOV/17/00053  
Your ref: 170105\_EN010084-000022  
Date: 2<sup>nd</sup> February 2017

Sent by email only to  
[environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)

Dear Sir/Madam,

**Re: Reference EN010084 – Scoping Consultation for the Application by Vattenfall Wind Power Ltd for an Order Granting Development Consent for the Thanet Extension Offshore Wind Farm**

- 1.1 Dover District Council (DDC) wishes to make the following comments on the Environmental Impact Report - Document Reference: TEOW-PLA-DB-0009-Scoping Report and dated 13<sup>th</sup> December 2016, to inform the Scoping of the Thanet Extension Offshore Wind Farm (Thanet Extension) proposed by Vattenfall,
- 1.2 These comments relate primarily to the onshore aspects of the proposal which falls within the Dover District, primarily the landfall option 2 at Sandwich Bay and the onshore cable route option 2 from Sandwich Bay, (shown at **figure 1.2** of the Scoping Report). DDC are also interested in the identified Onshore Substation Area of Interest at Richborough, which although in the main falls outside of the jurisdiction of DDC, (with the exception of the access from the A256 and part of the south eastern corner of the Substation Area of Interest), is in close proximity to the District's boundary.
- 1.3 Specific references to the Vattenfall Scoping Report are shown in bold text for ease of document identification.

**2.0 Scope of the project**

- 2.1 Overall the scope of the project includes the technical chapters that DDC would expect to be 'scoped in' to the project. However, it is expected that the following should also be 'scoped in'. Further explanation for this is given under the relevant topic headings below:

- Cumulative landscape and visual effects of the onshore cable route option 2 and landfall option 2 during construction, (refer to paragraph 10.3); and
- The impacts on the setting of heritage assets during the onshore cable route option 2 during construction, (refer to paragraph 23.2).

2.2 The cumulative assessment is proposed as a separate part of the ES (**Para 211, part 5**). It would be useful to have cross references in the cumulative assessment to each relevant technical chapter in the offshore environment (**part 2**), onshore environment (**part 3**), and wider scheme aspects (**part 4**). The cumulative assessment should also consider 'inter-related' effects of the offshore and onshore elements as these will not proceed in isolation. It is expected that the offshore cumulative impacts will be assessed in combination with the onshore and wider scheme aspects, and vice versa, and this should be assessed in each relevant technical chapter.

2.3 There is reference throughout the Report to residential properties, and given that there are a number of residential receptors that are likely to be affected particularly during the construction phase of the proposal, this will need to be fully assessed. This should be undertaken in each relevant technical chapter - air quality, noise, vibration and traffic and transport, and it would be useful to have a summary of the potential impact on residential amenity as a subtopic in the onshore environment part of the ES.

2.4 The landfall option 2 for example would come ashore on land north of Cambridge Avenue and south of Shawdon Avenue on land between residential properties. The Report at **table 3.20** identifies the distance of residential receptors to the Onshore Area of Interest that could be affected by onshore noise during construction. It is not clear from this table and supporting text, why, based on the glossary description of the Onshore Area of interest, more properties are not included, that is all those being within the 1 km buffer – please refer to our comments below at paragraphs 3.3 and 3.4.

2.5 There is no reference to repowering in the Report. Whilst it may not be known at this stage if at the end the operational life of the existing TOWF it would be repowered with new turbines, this scenario should form part of the assessment, since the existing TOWF will have been operational for just over 20 years (based on the indicative project programme) when the Thanet Extension commences operation. This scenario should be assessed in the ES under each technical chapter. A logical place for this could perhaps be inclusion in the decommissioning stage of the project.

2.6 Pre-construction works referred to at **paras 138 and 139** states '*may include*'. This is too equivocal. Full details of pre-construction works should be fully detailed and assessed, as the works may have significant effects. This detail will also be useful at the drafting stage of the DCO requirements to ensure preciseness in what constitutes development, and the commencement of development, and assist the Relevant Authority for discharge of the requirements.

### 3.0 Onshore cable route option 2 and the wider project description

3.1 It is accepted that at this stage there are a number of parameters that have not yet been fixed, and the 'Rochdale' approach to such is accepted. The Report comments (**Section 1.3.2.6**) that '*the project design envelope therefore provides the maximum extent of the consent sought*'. On this matter, there are some details that need to be addressed in the ES as the Report does not clearly identify the maximum area of the consent sought.

- 3.2 The PINS pre-application telephone meeting notes [dated 4/10/2016] - Project update states that *'The Applicant has a preferred onshore cable route but will consult on two options to maintain flexibility and in order to gain feedback from Scoping consultation. The cable routes consulted upon will be 25m wide but with an additional buffer of 1km to allow the route to be adjusted post-Scoping to mitigate issues identified within the corridor. The Applicant was advised to be clear in the scoping report where the two landfall positions are located'*. The Scoping Report identifies the two landfall positions but there is less clarity on the extent of the Onshore Area of Interest, which includes the cable routes.
- 3.3 The scoping report does not appear to identify in plan form the extent of the Onshore Area of Interest in relation to the cable route and cable landfall at Sandwich Bay, which is referred to throughout the Report. The Area of Interest is described (**para 6**), and includes the Substation Area of Interest, and the latter is clearly identified on the figures provided. The glossary (**p xv**), also describes the extent of the Area of Interest with reference to a 1km buffer around the onshore cable route options and substation Area of Interest, which is stated to *'indicate the extent of survey coverage and allow for post-Scoping re-routing if required'*. This raises some concern. Hypothetically, if the cable route option was to be re-routed to the extremity of the 1km buffer, a further 1km survey coverage area would need to be secured. This scenario would appear to necessitate a 2km buffer for survey coverage, based on the details in the Report. Alternatively, the Onshore Area of Interest could be further narrowed as it is likely that at this stage there are locations where a cable route would not be an option based on the applicant's site selection criteria for the onshore cable route and landfall and existing land uses and other constraints.
- 3.4 Figures provided and descriptive text should differentiate between the Onshore Area of Interest and the 1km buffer shown for survey coverage, if there is a difference. The Onshore Area of Interest should be included in the key for all figures.
- 3.5 The land take for the Onshore Cable Route Options is unclear. It is described in the glossary (**p. xv**) as a *'25m corridor from each landfall to the onshore substation Area of Interest at Richborough within which onshore export cables would be laid'*. It would be useful to have inset plans included, that as a minimum, show typical sections along the route of the onshore cable option and at the landfall option that show the extent of the area that would be subject to construction works. For example, is the 25m corridor of equal width either side of the cable route, with 12.5m either side of the centre line of the route? Are there areas along the route where the proportion of the 25 m would be greater on one side of the centre line than the other?
- 3.6 Cable trenching options are provided (**para 115**). There is no detail of the separation required between each of the four trenches, should the one larger trench option not be suitable. This should be clearly explained and identified in plan form.
- 3.7 The 25m corridor width appears to be too restrictive given that the construction requirements. The jointing bays are described as being located at intervals between 500m to 1000m along the cable route length with up to 4 bays at each location, with each bay of concrete construction, being 15 m long x 6m wide and 2 m deep. (**para 119**). The size and amount of jointing bays required along the length of the route is of concern. It is assumed that there would be a degree of separation between the bays, otherwise it would appear that there would be no need for separate bays. Potentially the width of the jointing bays with no separation would be 24m, assuming the bays are laid side-by-side. Plans showing the jointing bay detail should be provided.

- 3.8 Cross bonded link boxes are referred to (**para 120**) but no description of the dimensions and type of construction and likely locations are provided. They are described as metal, concrete or of a composite material and are assumed to be permanent and visible at ground level during operation, which could be on land at any point along the cable route. Plans showing the bonded link boxes and their locations should be provided.
- 3.9 Landfall temporary construction compounds are likely to be 60m x 60m (**para 136**). It is assumed that there will be a need for temporary construction compounds at locations along the length of the cable route. Temporary mobilisation areas are proposed for welfare, parking and storage – and it is not clear if these are the same as the construction compounds referred to. Additional working areas at the crossing site are referred to, but no detail is given as to likely size, and purpose of such. (**para 121**). Temporary fencing is to be installed around the cable corridor, and it is assumed fencing will be erected around the compounds and welfare facilities too. This would no doubt increase the landtake of the cable route corridor in places. (**para 140**).
- 3.10 A working area for soil storage and excavator movement will also be needed and should be included in the corridor. Is any lighting, temporary or permanent required in the Onshore Area of Interest, and Onshore Substation Area of Interest? The ES Project description should provide these details together with scale plans of typical details if precise detail is not yet known, and the 25m corridor appropriately extended to reflect the necessary landtake.
- 3.11 It would be expected that the corridor include any temporary or permanent access roads required from existing highways, and include highways where work would be necessary to facilitate access along the cable route, and to the landfall site. No details of access requirements have been indicated in the Report.
- 3.12 The route crosses or follows the route of a number of public rights of way, national and regional trails. (**para 140**). The ES would have to address and mitigate this appropriately, where HDD cannot be used.
- 3.13 The stabilised backfill is described (**para 122**) but appears to be within the context of Department of Transport specifications. If the Sandwich Bay onshore option is pursued, a considerable length of the route will be off-road/track. Would the specifications be the same? There would be excess soil; how would this be disposed of/dispersed? Given the proximity of the ducts to the ground surface would there be localised impacts on the replaced soil structure (e.g. dryness) and habitat?
- 3.14 It is expected that the construction requirements of the onshore components of the project at the construction, maintenance and decommissioning (including repowering) stages are fully detailed in the project description. The Scoping report refers to a 'high-level description'. Given that the Rochdale Envelope approach is being taken, which DDC accept is necessary in this case, this section of the ES will need to ensure that all options, including 'the worse case scenario' is clearly identified. This will need extensive assessment if the Onshore Area of Interest is to remain as indicated at a distance of 1km from the indicated onshore cable route, from landfall to grid connection.

#### 4.0 Substation

- 4.1 The plans identify the Area of Interest for the Onshore Substation being an area of 8ha. Two potential designs for the substation are described, (**section 1.4.3.3**), both of which would raise landscape and visual impact concerns to DDC. EN-1 para 4.5.3 refers to good design particularly with regard to substations where there may be more



opportunity to influence the design and siting compared to the energy infrastructure siting and use of it.

- 4.2 Comments at **para 913** are noted in respect of the outline landscape strategy for the substation. Any landscape strategy would need to take into account the consented proposals for the other projects at the former power station site, and the Richborough Connection DCO (RCDCO) currently awaiting decision. Consideration should be given to the timing of any identified mitigation landscape works, the mechanism for securing landscape works, (which could potentially be offsite), and whether these could be implemented at the early stages of construction to allow for proposals to become established.
- 4.3 TOWF has two export cables that come ashore at Pegwell Bay and terminate at an existing sub station at the former Richborough Power Station. Has the possibility of upgrading the existing electricity infrastructure been considered? Could the existing substation be removed, if a new substation is required on the identified Substation Area of Interest? DDC would expect this to be detailed in the Alternatives considered, with reasons given as to the feasibility of the options.
- 4.4 Reference is made at **para 177** to the Nemo link and the National Grid Infrastructure being studied, after which the siting of the substation infrastructure will be determined. The substation Area of Interest at **figure 1.2** seems more extensive than the area shown on the extant planning permission for the NEMO Interconnector land use plan Figure 5.1, (planning application reference DOV/13/00759, and subsequent reserved matters application), and would appear in part to overlap the site area for the Nemo Interconnector and substation approvals.
- 4.5 It is noted that the Onshore Cable Route selection will take place post Scoping (**para 112**) and a single route option is expected to be presented in the Preliminary Environmental Information report (PEIR). The PEIR is proposed to be submitted Q3 2017 and further engagement with Vattenfall on this matter would be welcomed ahead of the submission.

## **5.0 Comments on option 1 cable route**

- 5.1 The route across Pegwell Bay is unlikely to run within the Dover DC boundary, but has potential to adversely affect the ecology and biodiversity of Sandwich Bay and Pegwell Bay NNR (Dover DC having interest here as member of the NNR management group). (**para 116**). The overall working area needs to be considered in terms of construction and decommissioning disturbance. Additionally, is there likely to be operational cable heating which could affect biodiversity?

## **6.0 Landfall option 2**

- 6.1 More information is needed regarding '*the gap*' between the two golf links, given the various designations along the coast (Ramsar, SAC, SPA, SSSI). (**para 117**). The proposed route would also encounter these designated areas again at New Downs Farm and at the River Stour crossing north of Back Sand Point.
- 6.2 Sandwich Bay has a shingle shoreline and the construction impacts of the landfall need to be addressed. (**para 134**).
- 6.3 Reference is made to one temporary construction compound at the landfall site (**para 136 bullet point 1**). Is one compound enough given the length of the southern route option if this is taken? The location of all temporary construction compounds needs to be identified.

6.4 Reference is made to closures at the beach. **(para 136 bullet point4 )** The beach at Sandwich Bay is not owned by DDC, and may be in private ownership. The first part of the cable route also extends through a private estate at Sandwich Bay before following the route of a public highway, before again traversing land in private ownership. It would be useful if the ES includes a plan showing the different land owners along the cable corridor. It would be useful if the plan could show the mean high tide, mean low tide and intertidal area. The administrative boundaries for Dover and Thanet District Councils should also be shown.

## 7.0 Grid connection

7.1 The Report identifies that only the expected location of the grid connection point and a high level overview of the infrastructure required is known. **(para 176)**. The PINS meeting note dated 17/08/2016 refers to '*an application for a 400kv connection at the soon to be installed Grid Supply point at Richborough Power substation having been submitted to National Grid*'. The Scoping Report also refers to this. **(See the executive summary)**. Planning permission has been granted for the Nemo Interconnector and 400kv substation at Richborough, (subject of planning application reference DOV/13/00759, and pursuant reserved matters applications). However, consent has not yet been granted for the Richborough Connection DCO (RCDCO) which will provide the new transmission infrastructure between Richborough and the existing National Grid high voltage transmission network. The ES should therefore address the following:

- What is the capacity of the existing transmission network at Richborough and can it accommodate the infrastructure requirements for the Thanet Extension in the event that the Richborough Connection DCO (RCDCO) is not approved? Or is the proposed connection dependent on the RCDCO being approved and implemented?
- Is the Thanet Extension dependent on the Nemo interconnector and 400kv substation being completed?
- Can the existing TOWF substation infrastructure at Richborough be upgraded to accommodate the connection?
- What would be required to provide new transmission infrastructure alternatives to that proposed by the RCDCO should it not proceed?

7.2 The ES should address these scenarios. A consideration under the 'Assessment of Alternatives' may be an appropriate place for this, and where necessary, an assessment in relevant technical chapters.

## 8.0 Site selection process

8.1 The constraints to the Wind Farm and consideration of seascape, landscape and visual, together with ornithological data review is noted. **(paras 166-171)**.

8.2 Reference is made to a grid connection application and further onshore cable routing work having been undertaken, where the preferred option for offshore routing was to follow an existing TOWF route and make landfall at Pegwell Bay. **(para 173)**. The physical constraints regarding landfall at Pegwell Bay are noted, together with the option for landfall at Sandwich Bay. This indicates that to date there have been decisions made on the site selection for landfall and cable routing. It would be expected that the ES would address alternative sites for landfall too. **(paras 172-175)**.

- 8.3 Sandwich Road is cited as a constraint to cabling routeing from Pegwell Bay while crossing the River Stour is a constraint to the southern route. Is the proposed route through Richborough Port the only option for the southern route, once the Stour is crossed? **(para 175)**.
- 8.4 It is noted that site selection is ongoing within the Onshore Area of Interest **(Executive Summary)**. The ES should include details of the grid connection application together with details of the correlation of the grid connection application to the project, particularly the preferred landfall routes and the cable routes. Details of the further onshore cable work that was carried out should also be included. This section should clearly set out the site selection criteria (for e.g landowner constraints, access requirements, technical requirements, environmental considerations). The ES should include information about main alternatives considered and sites considered, with an indication of the main reasons for the applicants choice and their suitability or not, in respect of both the onshore and offshore elements of the project and explain the interrelationship of the site selection criteria for both onshore and offshore requirements.

## **9.0 Seascape and landscape character**

- 9.1 Depending on the nature of the coast, seascape may need to consider areas and features inland. **Para 555** is therefore considered to be weak.
- 9.2 If landscape deals principally with land to the high water mark and seascape deals principally seaward of the low water mark, it would appear that the transitional area, the intertidal zone, may be undervalued. Yet this can be one of the more characterful features of any sea/landscape. **(para 556)**.
- 9.3 It is commonplace in EIA that LVIA work relies on published landscape character assessments. It should also be noted, however, that in the accepted best practice – Guidelines to Landscape and Visual Impact 3<sup>rd</sup> Ed (Landscape Institute) – the necessity to undertake bespoke landscape character assessment if published assessments are insufficient is given. The applicant's approach should remain open to doing such, if necessary to inform the EIA.
- 9.4 The ES should also identify where there will be any loss of landscape features as a result of landfall at Sandwich Bay beach and the 7 km cable route from Sandwich Bay, and whether the landscape will be subject to reinstatement and/ or restorative works, and what these works will comprise. An outline landscape strategy should also be prepared for the landfall sites and cable route options, as is proposed for the onshore substation site.
- 9.5 Incidentally, Sandwich is described as a village in the Landscape Designations, **(para 898)**. It should be noted that Sandwich is a town.

## **10.0 Visual receptors and views**

- 10.1 There will be a significant change in the vertical scale as a result of the increased height of the turbines. **(para 571 and para 50 bullet point 4)**. The PINS pre-application meeting note dated 17/08/2016 refers to the new turbines having a greater capacity than the existing and that the turbines would therefore be taller and spaced further apart. The ES should include details of the height of the existing turbines, as this significant project detail is not readily evident in the project description.
- 10.2 It is noted that only the offshore SLVIA has been appended to the Scoping Report, and it is assumed that a separate SLVIA will be prepared for the onshore area, as set out

in the draft outline of the structure of the technical chapters of the ES. Viewpoints will need to be agreed with DDC to represent the impacts from the onshore elements. **Table 3.17** lists some viewpoints for the LVIA for the onshore substation. It is not only the Onshore Substation Area of Interest for which viewpoints should be prepared. There is potential for significant landscape and visual effects, during construction of the cable route and landfall site at Sandwich Bay, for which more detail is required as set out in the project description, before viewpoints can be agreed. Notwithstanding this, a principal receptor in the southern option is the England Coast Path that the proposal will cut across in at least two locations. (**para 900**). Persons engaged in recreational activities on the River Stour, for e.g boat trips are also a principal visual receptor. (**para 901**).

- 10.3 It is not agreed that the cumulative landscape and visual impacts of the landfall option 2 and cable route option 2 should be scoped out. (**Table 3.18**). Given the lack of detail of specific construction requirements, and the yet to be determined cable route within the Onshore Area of Interest, it has not been demonstrated that the construction of these onshore elements would be '*relatively small scale*', (**para 910**), and the cumulative impacts of these should be scoped in.

#### *Appendix 1 – SVLIA appendix*

- 10.4 Local landscape character assessments are usually limited by local authority boundaries, which may not accurately reflect wider landscape character. It is recommended that the applicant recognise this, and, if necessary, consider a bespoke character assessment if that would add to understanding the potential effects of the proposal. If a Thanet LCA is not available, then the need for a bespoke assessment is more certain. The Kent LCA is useful, in that local authority boundaries are straddled, but many changes have come about since 2004 and the last paragraph in 'The Wantsum and Lower Stour Marshes' section may need updating. (**para 15**). Please also refer to comments at paragraph 9.2 above in respect of this point and **para 5** of the appendix.
- 10.5 The Sandwich Bay/Pegwell Bay SLA no longer exists as a designation (SLAs were dispensed with at the time of the deletion of the South East Plan, 2009). (**para 25**).
- 10.6 The list of key walking routes omits the England Coast Path. (**para 38**).
- 10.7 In respect of viewpoints, no agreement with Dover District Council has been reached regarding viewpoint locations. (**para 41**). Given the presence of offshore sand banks, e.g. The Brake and The Goodwins, which at low tide result in changes in the local seascape, the timing of the SLVIA is relevant for views from the southwest. The TOWF has already subsumed some views.
- 10.8 **Table A.1** identifies viewpoints. The Dover viewpoints have not been consulted on. For preference a coastal viewpoint further north than Sandwich Bay Estate on the England Coast Path would have been a helpful addition for completeness.

#### **11.0 Receptor Sensitivity**

- 11.1 Where the sensitivity of a protected biological receptor is based on its tolerance/recoverability, there should be scientific justification for such. (**para 190**).

#### **12.0 Offshore designated sites and conservation importance**

12.1 In respect of Pinnipeds (**paras 347 and 358**), Harbour Seals are known to haul out on the River Stour Estuary and Grey Seal has been recorded at Sandwich Town Quay. (Seal Survey of the River Stour below Stonar Cut in Kent, Bramley Associates, report for Dover DC, 2012). This report also states:

*“Anecdotal records from boat skippers indicate that over 70 seals were recorded as hauling out on the river banks near Pegwell Bay in 2011; while records held by Sandwich Bay Bird Observatory show over 110 common seals as having been recorded hauled out on at least one occasion in that year. These figures are significant and would make the lower reaches of the River Stour one of the largest haul out areas, outside of Norfolk, for common seals in England”.*

12.2 Seals are also known to haul out on the Goodwin Sands.

### **13.0 Habitat Regulations Assessment (HRA)**

13.1 Reference to HRA is noted (**para 396**) but it is understood that PINS undertake the HRA screening, and that the applicant supply PINS with the information so that PINS may undertake it, and not as stated.

### **14.0 Onshore Ecology**

14.1 Reference to ‘English Nature’ is out-of-date, now ‘Natural England’. Further biological records should be sought from the Kent and Medway Biological Records Centre. (**para 772 bullet point 2**).

### **15.0 Designated sites**

15.1 With reference to the Thanet Coast and Sandwich Bay SPA, **Table 3.11** is incorrect. The qualifying features of the Thanet Coast and Sandwich Bay SPA are:

- A140 Pluvialis apricaria; European golden plover (Non-breeding)
- A169 Arenaria interpres; Ruddy turnstone (Non-breeding)
- A195 Sterna albifrons; Little tern (Breeding)

Of these, golden plover are known to use inland fields at high tide and an assessment of their possible use of fields on the southern route need evaluation.

15.2 The correct Ramsar site is: Thanet Coast and Sandwich Bay, not Broadland. (**para 823**).

15.3 Reference is made to Pegwell and Sandwich Bay NNR, whereas it is thought the intended reference is Prince’s Beachland LNR. (**para 832**).

### **16.0 Tourism and recreation**

16.1 Main attractions in the area are identified in **para 1014**. Sandwich Bay where the landfall option 2 is proposed should also be included here. In the Dover District, Richborough Fort and Amphitheatre is a main tourist and visitor attraction, described by English Heritage as ‘perhaps the most symbolically important of all Roman sites in Britain, witnessing both the beginning and almost the end of Roman rule here’. This should be included in **section 4.3.1.2**. It is noted that both of these locations are referred to at **para 40**. The town of Sandwich itself is also a popular tourist destination, with boat trips on the river from the town to the Richborough Fort being

one of the visitor attractions. The recreational use of the river should also be included in this part of the assessment.

16.2 On a minor note, recreational activities at Pegwell Bay include Kite-surfing, rather than surfing. (**para 1046**).

## 17.0 Cumulative Assessment - other projects

17.1 DDC note that during the EIA, a screening process will be undertaken, and would welcome the opportunity to identify projects or plans that have the potential to have a cumulative impact with the Thanet Extension. (**para 664**). In light of our comments at paragraphs 3.3 and 3.4 with regard to more clarity on the Onshore Area of Interest, this would be more appropriate at a later stage.

17.2 The Report does identify the developments closest to the Substation Area of Interest within the Dover District, and DDC can confirm that these would need to be assessed as part of the cumulative assessment for all stages of the project:

- Nemo Interconnector and substation at the former power station  
Hybrid planning application reference DOV/13/00759, and pursuant reserved matters application reference DOV/16/00109.
- Peaking Plant at the former power station  
Planning application reference DOV/12/01017
- 5MW Solar farm on land to the west of the power station  
Planning application reference DOV/13/00794
- Richborough Connection DCO – NSIP, decision expected later this year.

## 18.0 Hours of construction and phasing

18.1 Details of the timing of project programme should be included in the ES. **Table 1.1** provides an indicative project programme. It would be useful if the ES includes a more detailed programme of works, including pre-construction works, preferably including a gaant style chart, with the offshore and onshore elements of the project clearly shown, in addition to descriptive text of the project works.

18.2 There is reference to typical hours of construction being 7am – 7pm Monday to Friday and 7am – 1pm Saturdays but this is only detailed for the substation construction. (**para 147**). It is not clear whether these are the general proposed hours for all onshore construction including landfall cable, onshore cable and substation construction, construction of temporary compounds and access road, etc. Details of hours of construction for each element of the project should be set out, together with hours for deliveries.

## 19.0 Ground conditions and contamination

19.1 The identified risks to human health for construction workers during the construction and decommissioning phases are noted. (**sections 3.2.2.1, 3.2.2.3 and 3.2.2.4**).

19.2 The embedded mitigation at **para 682 and 683** is identified as likely to include:

- Avoidance of impact through site selection (e.g. avoidance of areas with contamination risk and sensitive receptors);

- Avoidance of impact through engineering techniques (e.g. HDD at sensitive points);
- Development and compliance of a Code of Construction Practice (CoCP).

These are noted and agreed.

19.3 Operational impacts are referred to in **para 678**. It is agreed that it is reasonable to scope this aspect out from further consideration within the EIA.

19.4 DDC are in agreement with the approach to assessment and data gathering in **paras 684-687** and look forward to finalising and agreeing on this with the applicant at the earliest possible opportunity, particularly once the chosen landfall site has been finalised.

## 20.0 Air Quality

20.1 Whilst the report has identified AQMAs in the Thanet district, in terms of receptors **para 693** considers areas predominately in Thanet but also including some areas within Dover. These areas are agreed but DDC would also recommend including the one residential property at Stonar Cottage, Ramsgate Road, Sandwich, Kent, CT13 9NW.

20.2 Potential impacts during construction, cumulative impacts and decommissioning are referred to in **3.3.2.1, 3.3.2.3 and 3.3.2.4** of the report. Mitigation to address these is given in **3.3.3** which include undertaking works in accordance with BPM and developing an Air Quality Management Plan as part of the Code of Construction Practice. The approach to assessment and data gathering is given in **3.3.4**. DDC accept the factors and methodology described and would be happy to liaise with the applicant on these matters.

20.3 With regard to potential operational impacts as referred to in **3.3.2.2**, it is suggested these are likely to be negligible and will be scoped out from further consideration. DDC are in agreement with this.

## 21.0 Onshore Noise & Vibration

21.1 DDC are in agreement with the comments made in **3.10** but would suggest the residential property at Stonar Cottage, Ramsgate Road, Sandwich, Kent, CT13 9NW is included in the list of noise receptors referred to in **para 929**.. Liaison with the applicant to agree matters detailed at **paras 948 and 949** to progress the EIA in respect of the noise assessment is welcomed.

21.2 DDC look forward to liaising with the applicant on assessment and data gathering for use in the proposed Code of Construction Practice and other mitigation measures.

## 22.0 Land Use

22.1 It would be useful for a plan to be included in the ES showing land uses, some of which are described in **section 3.5.1.2**, in addition to descriptive text, which can then be cross referenced. **Figure 3.5** shows the main land use types, but this is at a broad brush level. It is noted that there is no reference to the tourism/leisure uses within this section, namely the two golf courses over which part of the onshore cable route 2 would pass, and the Sandwich Bay beach, at the landfall location and cable route. These should be scoped in and assessed in the potential impacts during construction, **section 3.5.2.1 and table 3.6**.

- 22.2 It is not clear from the Report whether there would be any change to land uses during operation as a result the works required for the four transition pits or the cross bonded link boxes. Will there be a need for any changes at ground level to provide access for maintenance?
- 22.3 Reference is made to the potential permanent loss of ALC Grade 2 (**para 754**) to the north of Richborough power station for the substation footprint approx. It would be useful for a site plan of this 8ha area to be provided at a scale of 1:200. The plan should also show the existing and consented land uses and development on and immediately adjoining this site to aid assessment and discussion of the land uses. This would need to be clearly cross referenced to the onshore cumulative technical chapter.

### 23.0 Onshore archaeology and heritage

- 23.1 Reference to listed buildings and conservation areas within the Onshore Area of Interest is made at **paras 856 and 857**. The report refers to figure 1.2 as showing the Onshore Area of Interest. As previous comments at paragraph 3.3 state, there is some clarification needed with regard to the extent of the Onshore Area of Interest, which would affect the assessment for this technical chapter.
- 23.2 It is noted that impacts to the setting of onshore heritage assets from the offshore wind farm be scoped in (**para 533**), including from the construction at the landfall site, and offshore cables close to the coast. The impacts on the setting of heritage assets during the onshore cable construction should also be assessed, given the proximity to the Conservation Area. **Figure 3.9** (drawing numbered PB5894-SCO-3-30) is intended to show Designated Heritage Areas within the Onshore Scoping Area. Whilst showing Listed Buildings it does not show Conservation Areas. The eastern edge of the Sandwich Walled Town Conservation Area falls within the 1000m buffer as the buffer skirts around the northern edge of the Conservation Area. It appears that Conservation Areas and Listed Buildings within the Thanet District have also been omitted. (for e.g Pegwell Conservation Area).
- 23.3 The area over which the cable route option 2 from landfall at Sandwich Bay would traverse is rich in archaeology and there are numerous Areas of Archaeological Potential within the Onshore Area of Interest. DDC would defer to Kent County Councils Archaeologist for further comments on this. Reference is made to crossing the River Stour, using HDD, crossing beneath the river, (**para 117**), which would also have the potential to impact on the Archaeological interest of the area.
- 23.4 The impact of the project on the setting of the Richborough Fort and Ampitheatre, a scheduled ancient monument should also be assessed. Although identified as falling outside of the 1 km buffer around the corridor, depending on the final route of the cable from landfall to grid connection point, this buffer may need to be extended, as commented at paragraph 3.3 above.

### 24.0 Traffic and transport

- 24.1 DDC would defer to Kent County Council as Highway Authority for detailed comments. It is noted in the Report that part of the cable route option 2, would fall on land that is part of a private estate. It is assumed that there has been contact made by the applicants with the Sandwich Bay Estate.
- 24.2 On a general note, traffic movements during construction at the landfall site at Sandwich Bay are referred to, with brief details of the traffic routing from the A256 through Sandwich towards Guilford Road. (**paras 960 and 961**). Daily traffic demand



may be significant and include HGV and Abnormal loads, and delays and diversions to road users may be significant when installing cabling in the highway between landfall sites and the substation. There will need to be close liaison between the Highway Authority and owners of private road(s) to ensure safe, effective operation of the immediate and highway network. This is a technical area where a land ownership plan would be useful.

## **25.0 Policy and legislative context**

25.1 This section takes a hierarchical approach to policy which is accepted. Local policy is referred to (**para 747**). At a national level the National Planning Policy Framework and Planning Practice Policy Guidance should also be included, as a relevant consideration. For DDC relevant development plan documents should include:

- Dover District Core Strategy – adopted February 2010
- Dover District Land Allocations Local Plan – adopted January 2015
- Note: The Sandwich Neighbourhood Area was designated in July 2013, and there is an adopted Neighbourhood Plan area. There is no Neighbourhood Development Plan. This position should be checked throughout the project preparation stages.

We trust that these comments will be taken into account in the Scoping Opinion to be prepared by PINS and thank you for the opportunity of being able to comment. Should you have any further queries, please do not hesitate to contact the case office, Fiona Runacre.

Yours faithfully

For Mike Ebbs

**Head of Regeneration & Development**

CEMHD Policy - Land Use Planning  
NSIP Consultations  
Building 2.2, Redgrave Court  
Merton Road, Bootle  
Merseyside, L20 7HS

Your ref: EN010084  
Our ref: 4.2.1.5730

HSE email: [NSIP.applications@hse.gov.uk](mailto:NSIP.applications@hse.gov.uk)

FAO Richard Kent  
The Planning Inspectorate  
Temple Quay House  
Temple Quay,  
Bristol  
BS1 6PN

Dear Mr Kent

26 January 2017

**PROPOSED THANET EXTENSION OFFSHORE WIND FARM (the project)  
PROPOSAL BY VATTENFALL WIND POWER LTD (the applicant)  
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (as amended) – Regulations 8 and 9**

Thank you for your letter of 5<sup>th</sup> January 2017 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

**HSE's land use planning advice**

Will the proposed development fall within any of HSE's consultation distances?

The NSIP is composed of offshore facilities, onshore cable routes and an onshore connection to the National Grid. This response deals only with the onshore elements of the NSIP.

The onshore connection to the National Grid is not within the consultation distance of any major hazard site or pipeline.

The Onshore Cable Route Option 1 does not pass through the consultation zones of any major hazard site or pipeline.

The Onshore Cable Route Option 2 does not pass through the consultation zones of any major hazard site or pipeline but it does pass close to the consultation zones of major accident site #4600 Augean Treatment Ltd, Great Stonar, Sandwich, Kent. However, the proposed route appears to be separated from the Augean Treatment site by the river Stour so there is likely to be little interaction between the two.

Would Hazardous Substances Consent be needed?

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 2015.

Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

Further information on HSC should be sought from the relevant Hazardous Substances Authority.

Explosives sites

HSE has no comment to make in this regard, as there are no licensed explosive sites in the vicinity.

**Electrical Safety**

No comment, from a planning perspective.

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively any hard copy correspondence should be sent to:

Mr Dave Adams (MHPD)  
NSIP Consultations  
2.2 Redgrave Court  
Merton Road  
Bootle, Merseyside  
L20 7HS

Yours sincerely,



Dave Adams  
CEMHD4 Policy

**From:** [Dave.Adams2@hse.gov.uk](mailto:Dave.Adams2@hse.gov.uk) on behalf of [NSIP.Applications@hse.gov.uk](mailto:NSIP.Applications@hse.gov.uk)  
**To:** [Environmental Services](#)  
**Subject:** NSIP - Proposed Thanet Extension Offshore Wind Farm – EIA Consultation, HSE response  
**Date:** 26 January 2017 14:55:16  
**Attachments:** [image003.png](#)  
[NSIP - Proposed Thanet Extension Offshore Wind Farm - EIA Consultation, HSE PDF Response\(3\).PDF](#)

---

Dear Mr. Kent,  
HSE does not comment on EIA Scoping Reports but the information attached is likely to be useful to the applicant.

Kind regards,

Dave Adams

**Dave.MHPD.Adams**

**CEMHD4 Policy, Chemicals, Explosives & Microbiological Hazards Division, Health and Safety Executive.**

**Desk 76, 2.2, Redgrave Court, Merton Road, Bootle, Merseyside L20 7HS**

**020 3028 3408 [dave.mhpd.adams@hse.gov.uk](mailto:dave.mhpd.adams@hse.gov.uk)**

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[2]

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---

**From:** Environmental Services [<mailto:environmentalservices@pins.gsi.gov.uk>]

**Sent:** 05 January 2017 15:56

**Subject:** TRIM: EN010084 – Thanet Extension Offshore Wind Farm – EIA Scoping Notification and Consultation

Dear Sir/Madam

Please see the attached correspondence on the proposed Thanet Extension Offshore Wind Farm.

Please note the deadline for consultation responses is 2 February 2017 and is a statutory requirement that cannot be extended.

Kind regards,

Richard Kent

Senior EIA and Land Rights Advisor

Major Casework Directorate

The Planning Inspectorate, 3D Temple Quay House, Temple Quay, Bristol BS1 6PN

Direct Line: 0303 444 5895

Helpline: 0303 444 5000

Email: [environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)

Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)

Web: [www.infrastructure.planninginspectorate.gov.uk](http://www.infrastructure.planninginspectorate.gov.uk) (National Infrastructure Planning)

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Your ref: EN010084  
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FAO Richard Kent  
The Planning Inspectorate  
Temple Quay House  
Temple Quay,  
Bristol  
BS1 6PN

Dear Mr Kent

26 January 2017

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PROPOSAL BY VATTENFALL WIND POWER LTD (the applicant)  
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (as amended) – Regulations 8 and 9**

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Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively any hard copy correspondence should be sent to:

Mr Dave Adams (MHPD)  
NSIP Consultations  
2.2 Redgrave Court  
Merton Road  
Bootle, Merseyside  
L20 7HS

Yours sincerely,



Dave Adams  
CEMHD4 Policy

**From:** [Bown, Kevin](#)  
**To:** [Environmental Services](#)  
**Cc:** [Planning SE; growthandplanning; "transportplanning@Dft.Gsi.Gov.Uk"](#)  
**Subject:** FAO Case Officer Richard Kent: Highways England response re 170105\_EN010084-000022 Thanet Extension Offshore Windfarm  
**Date:** 09 January 2017 17:45:23

---

Dear Mr Kent

I am writing in response to the request for advice dated 5 January relating to the above described and located proposed development, to be forwarded no later than 2 February 2017

Highways England has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the strategic road network (SRN). The SRN is a critical national asset and as such Highways England works to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Highways England have no comment on whether an EIA is required; but if it is (or is produced voluntarily), it should be compatible and consistent with the Transport Assessment and also contain information on all transport related effects including noise, vibration and air quality.

In this part of Kent the SRN comprises M2/A2/A249 and A20/M20. The A256 is part of the Kent County Council local network.

We consider the operation of the proposed development is unlikely to give rise to any material impacts on the SRN. However, the construction phase may do. Therefore, while the focus of the proposed works is the A256, we would wish to fully understand the implications for the SRN in terms of the level, location, form and duration of impacts; for example the junctions between M2J7 and A299 at Brenley Corner and A256 and A2 at Dover.

Any TA should also take account of the fact that the former Manston Airfield, at the northern end of the A256, currently forms part of the multi-agency response (Operation Stack: led by Kent Police/ Highways England/ Kent County Council) to any severe disruptions to cross channel freight movement, in that it can be used as a short-term holding area for Dover bound freight if the port is unable to accommodate it. The A299 forms part of the route to Manston and the A256 the route from Manston to Dover docks. Any disruption to freight fluidity caused by either construction traffic or works affecting flows on the A256 would have to be carefully assessed and potentially mitigated.

We would therefore wish to work with the applicant's transport advisors with regards the production of an appropriate, robust Transport Assessment to cover both the impacts and any necessary mitigation required as a result of the construction and future use of the site.

The Transport Assessment should be undertaken in accordance with

- DfT Circular 02/2013 *The Strategic Road Network and the Delivery of Sustainable Development* (September 2013)



- HE publication: *Planning for the future – A guide to working with Highways England on planning matters* (Sept 2015)

We would also recommend that paragraph 15 of the *Guidance for Travel plans, transport assessments and statements in decision-taking* (DCLG March 2014) is followed when completing the Transport Assessment.

I hope the above comments are useful. Should you have any questions or comments then please do not hesitate to contact me to discuss the proposals further, or any aspect related to the SRN.

Regards

**Kevin Bown, Spatial Planning Manager**

Highways England | Bridge House | 1 Walnut Tree Close | Guildford | GU1 4LZ

**Tel:** +44 (0) 300 470 1046

**Web:** <http://www.highways.gov.uk>

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1 Walnut Tree Close, Guildford, Surrey GU1 4LZ

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Historic England

Mr Richard Kent  
Senior EIA and Land Rights Advisor  
Major Casework Directorate  
The Planning Inspectorate,  
3D Temple Quay House,  
Temple Quay,  
Bristol  
BS1 6PN

Our ref: PA00464797  
Your ref: EN010084  
Telephone: 07876397819

2 February 2017

Dear Mr Kent,

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9.**

**Thanet Extension Offshore Wind Farm Environmental Impact Assessment Report to Inform Scoping, Document Reference: TEOW-PLA-DB-0009-Scoping Report Date: 13 December 2016.**

**PINS REF: 170105\_EN010084-000022**

Thank you for consulting Historic England on 5<sup>th</sup> January 2017 on the Environmental Impact Assessment Scoping Report for the Thanet Extension Offshore Wind Farm.

**Summary**

The Historic Buildings and Monuments Commission for England (Historic England) is the Government's adviser on the Historic Environment, with particular responsibility for advising on highly-graded designated heritage assets. The National Heritage Act (2002) made Historic England responsible also for marine archaeology in the English area of the



Historic England, Eastgate Court, 195-205 High Street, Guildford GU1 3EH  
Telephone 01483 25 2020 [HistoricEngland.org.uk](http://HistoricEngland.org.uk)

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UK Territorial Sea. This letter provides Historic England's advice on the EIA Report to Inform Scoping in relation to both these areas of our expertise.

## **Historic England Advice**

We consider that this project has the potential to impact upon the historic environment in a number of ways. The impacts are likely to be both direct, which would result in permanent physical changes to the historic environment, and indirect, through changes to localised environment and the setting of heritage assets. We are also aware that impacts would vary throughout the life of the project.

All aspects of the historic environment are valued, however the particular remit of Historic England in relation to this project would be the impact upon the intertidal and fully marine historic environment (such as ship, boat and aircraft wrecks and important palaeolandscape features) and the terrestrial historic environment in regard to the highly graded designated heritage assets (scheduled monuments, grade I and II\* listed buildings, registered park and gardens and conservation areas). Above the Mean High Water mark, the undesignated terrestrial archaeology would more properly be the responsibility of Kent County Council (KCC), and we recommend the applicant consults with KCC at the earliest opportunity. Similarly, the conservation officers in the various local planning authorities would need to be consulted regarding impacts upon the settings of listed building and parks and gardens, including those listed at grade II, as well as conservation areas and other undesignated heritage assets within their remit.

We therefore offer the following comments on the Environmental Impact Assessment Scoping Opinion for the Thanet Extension Offshore Wind Farm. Our advice is provided separately for the marine and terrestrial environment and this is set out in two sections below.

### *Section 1: The Marine Historic Environment – Offshore*

It is understood that the proposed Thanet Extension wind farm area would be located approximately 8 km offshore (at its closest point), comprising areas on all sides of the Thanet Offshore Wind Farm (TOWF). Specifically the proposed project would seek to generate a capacity of up to 340MW, including a maximum of 34 wind turbines with a maximum tip height of 210m, across a regular row plan aligned consistently to the existing wind turbines of TOWF, and covering an area approximately 70km<sup>2</sup> across a range of water depths from 13 to 43m.

At this stage the turbine, offshore substation(s) and offshore accommodation platform(s) foundation designs are undecided, but could comprise mono-piles, suction bucket jacket foundations, piled jacket foundations, mono suction buckets, gravity base structures and floating foundations.



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The Applicant has also identified a necessary maximum number four export cables, with two optional landfall locations at either Pegwell Bay or Sandwich Bay.

In paragraph 213, the following questions are suggested for consideration:

*Q1. Please tell us about further data sources that could be reviewed as part of the site characterisation for each topic?*

We note that from Table 2.1 'Available and planned site-specific hydrodynamics and geomorphology datasets' that a geophysical and geotechnical survey of the Area proposed for Thanet Extension and Offshore Export Cable Corridor is planned for 2016/2017. Given we are now in 2017, we would request that any remaining surveys incorporate archaeological expertise, so that the survey data acquired is to a specification to maximise the potential to inform the assessment exercise within the Environmental Statement (ES), as aligned with paragraph 2.6.141 of National Policy Statement for Renewable Energy Infrastructure EN-3. This is especially relevant for geotechnical survey work, as the provision of adequate levels of information for the Palaeogeographic assessment and deposit model is essential, in order to understand the significance of the recorded deposits with respect to their past landscape position, and thereby establish a coherent and comprehensive understanding of the stratigraphy of the development area. Furthermore, in the absence of a marine plan for this area we request that primary reference is made to the UK Marine Policy Statement regarding cultural heritage and seascape.

We do however further acknowledge from paragraph 627 that prior to construction a detailed geophysical survey and investigation will take place for UXO. As is industry standard we would expect, through the production and agreement of an Offshore Archaeological Written Scheme of Investigation (WSI) - as referenced in paragraph 540 - that this planned survey should also include advice and outline delivery of archaeological objectives for seabed and sub-seabed anomalies. For example, such a provision of archaeological advice will be crucial given the export cables' proposed route is in close proximity to the Goodwin Sands Area and specifically Brake Sand.

Additionally we note that the archaeological information used to inform section 2.11.1 'Baseline' was taken from the TOWF ES. As such the section reflects now outdated, and limited, account of what archaeological remains exist within the wider region and localised area. This is best exemplified through the clear omission of any reference to 20<sup>th</sup> century global conflicts and the associated remains that may be encountered by this proposed development. We therefore expect a comprehensive archaeological assessment included within the ES, to determine possible impacts accurately.

Furthermore, below is a list of policy, guidance and desk based sources that should be included and referred to (as a minimum) during the application process:



Historic England, Eastgate Court, 195-205 High Street, Guildford GU1 3EH  
Telephone 01483 25 2020 [HistoricEngland.org.uk](http://HistoricEngland.org.uk)

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- Department of Energy and Climate Change (DECC), 2011. Overarching National Policy Statement for Energy (EN-1).
- DECC, 2011. National Policy Statement for Renewable Energy Infrastructure (EN-3)
- English Heritage, 2005. *Wind Energy and the Historic Environment*, [Online], Available: <https://historicengland.org.uk/images-books/publications/wind-energy-and-the-historic-environment/>
- English Heritage, 2012. *Designation Selection Guide: Ships and Boat: Prehistory to Present*, [Online], Available: <https://www.english-heritage.org.uk/publications/dsg-ships-boats/>
- Gribble, J. and Leather, S. for EMU Ltd. 2011. *Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector*. published by COWRIE Ltd (project reference GEOARCH-09).
- The Crown Estate, 2014. *Protocol for Archaeological Discoveries: Offshore Renewables Projects*. Published by Wessex Archaeology, Salisbury, on behalf of The Crown Estate. Geophysics guidance.
- Plets, R., Dix, J., Bates, R. 2013. *Marine Geophysics Data Acquisition, Processing and Interpretation*. Historic England Guidance at URL: <https://content.historicengland.org.uk/images-books/publications/marine-geophysics-data-acquisition-processing-interpretation/MGDAPAI-guidance-notes.pdf/>
- To inform the WSI and strategic work: Ransley, J. and Sturt, F. (eds.) 2013 *People and the Sea: A Maritime Archaeological Research Agenda for England*. Council for British Archaeology & *Identifying and Protecting Palaeolithic Remains for planning authorities and developers* (English Heritage).
- With regard to preservation potential in the proposed area (given range of seabed likely to be encountered) based on a review of sediment type: Gregory D., 2006. *Mapping Navigational Hazards as Areas of Maritime Archaeological Potential: The effects of sediment type on the preservation of archaeological materials*. Unpublished Report.
- Thematic strategic desk-based assessment projects – such as *Aircraft Crash Sites at Sea* (ALSF 5223, Wessex Archaeology 2008), *England's Shipping* (ALSF 3323 / 3878, Wessex Archaeology 2007), *Enhancing our Understanding: Mapping Navigational Hazards as areas of Maritime Archaeological Potential* (ALSF 3917, Bournemouth University 2007), *Early Ships and Boats* (English Heritage 6440, Wessex Archaeology 2011e) and *Assessing Boats and Ships 1860 - 1950* (ALSF 5693 Wessex Archaeology 2011a-d).
- Records of WWII Air/Sea Rescue.

Q2. Tell us about any other relevant potential impacts for each topic?

We note the types of impacts detailed include direct and indirect, indirect disturbance of setting and cumulative, and the necessary measures proposed through embedded (avoidance and micro-siting) and additional mitigation.



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Whilst we note reference to a project archaeological WSI is included, with specific attention to The Crown Estate (2010) *Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects* guidance document, and we accept the statement that the WSI will “clarify the methodologies to address unavoidable impacts associated with the worst case scenario (project design envelope)”, we would also recommend however that the Applicant is made aware that this document should function in clearer and broader terms.

By way of explanation, an agreed WSI will set out when, how and why (additional) archaeological mitigation measures recommended in the ES are to be implemented through detailed and direct scheme specific method statements.

Therefore it should include a strategy for monitoring the effects over all phases of the development, and as outlined within paragraph 2.6.142 of National Policy Statement for Renewable Energy Infrastructure EN-3, through the assessment work, include the “identification of any beneficial effects on the historic marine environment, for example through improved access or the contribution to new knowledge that arises from investigation”, principally through the use of national, regional and local research frameworks.

Furthermore as a final point, specific reference should be made to a Reporting Protocol for Archaeological Discoveries e.g. as demonstrated by The Crown Estate (2014) *Protocol for Archaeological Discoveries: Offshore Renewables Projects*, published by Wessex Archaeology (Salisbury), on behalf of The Crown Estate.

*Q3. Do you agree with the potential impacts that have been scoped out for each topic? If not, please provide details.*

We consider that the impacts determined to have been scoped out from the ES assessment exercise, with regard to direct and indirect physical disturbance during the proposed wind farm’s operation are acceptable, as summarised in Table 2.22 and outlined in more detailed explanation within section 2.11.2.2 ‘Potential impacts during operation’.

*Q4. Have the relevant potential cumulative impacts been identified? If not, please provide details*

Within section 2.11.2.4 ‘Potential cumulative impacts’ and specifically paragraph 541, we note that potential cumulative impacts exist where the collective heritage value of many individual assets may be impacted, through “multiple impacts upon similar assets”. Furthermore we acknowledge the statement that “there is potential for multiple developments to affect the larger-scale archaeological features such as palaeolandscapes and to affect the setting of heritage assets and historic landscapes/seascapes”. Similarly, there is often a connection between the seabed area and the site of some First and Second World War shipping casualties. Therefore given the need to include extensive seabed



coverage using geophysical survey techniques and other more prescriptive methods it is possible to illuminate special features within a wider battlefield context and setting. Consequently it is also the opinion of Historic England that the setting within the offshore element of this particular topic of Offshore Archaeology and Cultural Heritage is progressed to EIA for additional consideration.

*Q5. Have the relevant potential transboundary impacts been identified? If not, please provide details*

The specific reference in section 2.11.2.5 'Transboundary impact assessment' to cultural heritage associated with wrecks (vessel or aircraft) of non-British, European nationality provides a limited consideration of this factor which must be developed with a sound methodological approach to determine the nature and substance of any transboundary impacts as relevant to this proposed project.

Furthermore Table 2.28 'Summary of offshore cumulative and transboundary impacts' is inconsistent to the approach being proposed in this section and subsequent Table 6.1 Summary of potential offshore environment impacts.

*Q6. Do you agree that the proposed approach to assessing each impact is appropriate? If not, please provide details.*

We are content with the approach outlined within 1.6 'EIA methodology' and as summarised within Table 1.5 'Significance of an impact resulting from each combination of receptor sensitivity and the magnitude of the effect upon it'.

*Q7. Is there any further guidance relating to each topic that we should be aware of? If so, please provide details.*

As detailed under Question 1.

## *Section 2: Onshore Archaeology and Cultural Heritage, and Visual Impact Assessments*

The Onshore Archaeology and Cultural Heritage section (3.8) of the Report to Inform Scoping defines an 'Onshore Scoping Area' as its basis for considering possible impacts on these interests. This scoping area is in our view deficient in only allowing for impacts on heritage assets associated with the onshore elements of the proposal (i.e. the onshore cabling and substation). We agree that the effects of these onshore elements on cultural heritage and archaeology need to be assessed, particularly in relation to archaeological impacts of any trenching required for the cabling as well as groundworks associated with the substation. We also think that any impacts of the proposed substation on heritage assets needs to be considered where their settings would be affected by the substation.



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Correspondence or information which you send us may therefore become publicly available.



We agree with Table 3.17 that the view of the proposed substation from Richborough Castle is one of the key viewpoints in this regard, but because this is a scheduled ancient monument we think this should form part of the onshore scoping area (Fig 3.9) for the Archaeology and Cultural Heritage chapter, and not just be included in the Seascape, Landscape and Visual Impact Assessment (SLVIA). Most importantly, we think the Archaeology and Cultural Heritage chapter needs to account for possible impacts on the significance of onshore assets from development that is offshore but which is still within their settings (i.e. as a result of the turbines themselves).

There are many heritage assets, both designated and undesignated, around Kent's coast which have a relationship with the sea. There are also some that were built inland, but which are tall enough or placed on high ground to create a visual relationship with the sea. Many of these assets were deliberately designed to relate to the sea, for example to allow for panoramas of it, for its perceived health benefits, or to offer a defence against invasion. Turbines placed in the seascape visible from these assets might therefore potentially affect their significance, typically as a result of the visual change they bring, but often also for functional reasons, such as where the seascape illustrates the field of fire of a defensive structure. Some heritage assets, such as lighthouses, harbours, forts and set-pieces of townscape, were designed to be visible from the sea. In these cases their significance may to an extent be bound up in their continuing presence on the approach to land. The effects of the proposed development on each of these possible aspects of heritage significance need to be scoped in to the Archaeology and Cultural Heritage chapter. We acknowledge that because there is an existing windfarm in this location, this analysis will need to consider only the additional effects of the new and taller turbines.

The possibility of visual impacts on heritage assets as a result of the turbines themselves is only acknowledged in relation to SLVIA matters in Appendix 1, and only there in relation to views. Paragraph 41 of Appendix 1 says that agreement of viewpoint locations to be used in the SLVIA has been reached. Although Historic England has already seen a list of these proposed viewpoints, which is copied at Table A, it has not been agreed by us as a definitive list for assessing impacts on onshore heritage assets. Whilst these viewpoints may be perfectly appropriate for assessing seascape and landscape matters, we suggest a different methodology for identifying where the impacts on heritage assets need to be modelled.

We suggest that the starting point for assessing impacts on the significance derived from the settings of onshore archaeology and cultural heritage should be the zone of theoretical visibility (ZTV). The heritage assets within that ZTV should be identified in a long list. That long list should then be narrowed down according to the nature of the assets' significance (e.g. do they have a visual or functional relationship with the sea?) and the extent to which that significance is likely to be affected by the turbines. Because the turbine blades are around twice the height on the existing ones, assets that are inland may be more affected than they are by the current array. However, their significance may be less dependent on their visual connection with the sea than those on the coastline. These





identified heritage assets, whether designated or not, and whether listed, scheduled, registered or designated as conservation areas and of all grades, need then to be identified in a shortlist and mapped in the Archaeology and Cultural Heritage Chapter. We would be happy to agree in conjunction with the relevant LPAs and the applicant's heritage consultants this shortlist of assets before impacts on them are considered in detail, for example with in-depth analysis and verified views. All of the above needs to be contained in the Archaeology and Cultural Heritage chapter. The final shortlist of affected assets is likely to include all those identified for detailed consideration under previous applications for the Thanet offshore windfarm, but is likely to include some additional ones too because of the additional number and height of the turbines.

As explained above, we defer to KCC to advise on undesignated archaeology in the Mean High Water mark, and on undesignated terrestrial archaeology. We also defer to the LPAs as your principal advisors on grade II listed buildings and grade II registered parks and gardens.

### **Recommendation**

We recommend that the various additional matters of both scope and detail described in this letter need to be incorporated into an EIA for this scheme. We have already commenced pre-application discussions with the applicant and continue to be available to discuss any of the issues raised in this letter in more detail as part of those ongoing discussions.

Yours sincerely



Tom Foxall  
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Historic England, Eastgate Court, 195-205 High Street, Guildford GU1 3EH  
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Please note that Historic England operates an access to information policy.

Correspondence or information which you send us may therefore become publicly available.





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## Environment, Planning & Enforcement

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### BY EMAIL ONLY

01 February 2017

Dear Mr Kent,

### Re: Application by Vattenfall Wind Power Limited for a Development Consent Order for the Thanet Extension Offshore Wind Farm

Thank you for your letter dated 5 January 2017 providing Kent County Council (KCC) with the opportunity to inform the Secretary of State on the information to be provided in the Environmental Statement (ES) relating to the proposed extension of the existing Thanet Offshore Wind Farm.

The County Council has reviewed the Scoping Report (December 2016) submitted by the applicant and for ease of reference, provides a commentary structured under the chapter headings used in the report.

#### 1.2 Need for the Project

KCC considers that the proposed development will support the development of renewable energy and will help to reduce carbon dioxide emissions, thereby contributing to meeting targets set out in the EU Renewables Directive and the UK Climate Change Act (2009).

In addition, the proposal will be a national source of clean energy and will in turn increase energy security and help support a transition towards a low carbon economy. The applicant's commitment to ensuring that the proposed development assists local businesses to enter and prosper in the renewable energy and green employment sectors is welcomed. The proposed extension will also provide opportunities to secure the local supply chain and UK export market, as well as generate other employment opportunities.

#### 2.5 – 2.7 Benthic and Intertidal Ecology/ Fish and Shellfish Ecology/ Marine Mammal Ecology

The assessment of the potential impacts on marine ecology (including marine mammals, sea birds, fish, benthic communities and intertidal communities) is

thorough and the proposed mitigation and compensation is satisfactory. The views of Natural England and the Pegwell Bay National Nature Reserve Steering Group will be important (particularly in relation to cable laying within designated offshore areas) in determining whether the current proposals are acceptable, or if further measures should be incorporated into scheme design.

Surveys concerning the wind farm area and cable route indicated the presence of *S. spinulosa*, potentially in reef forming aggregations. Such reefs are a habitat of principal importance and are identified in the UK Biodiversity Action Plan (March 2011) which sets out the following related targets:

- *Maintain the extent and distribution of existing S. spinulosa reefs in the UK*
- *Maintain the quality of existing S. spinulosa reefs in the UK*

The applicant has proposed a further pre-construction survey of *S. spinulosa* and the micro-siting of wind farm structures and cable routes to avoid the reef like aggregations. This undertaking will contribute to priority habitat objectives and minimise impacts on this species/ habitat.

The following fish species of principal importance have been identified: Cod; Sole; and Herring. The County Council is satisfied with the conclusions that impacts to these species will be localised and temporary. Therefore, detailed mitigation is not deemed necessary.

It is recognised that the applicant has also proposed the creation of a marine mammal mitigation plan in full consultation with key stakeholders to mitigate any impacts to any cetacea. The preparation of this document along with proposed noise modelling should ensure that there is minimal disturbance to these species.

Furthermore, it is advised that consideration is given to any mitigation measures implemented during the construction of the existing wind farm project.

## 2.8 Offshore Ornithology

The survey work has been undertaken in line with good practice and the assessment of the impacts appears sound. Additionally, the proposed further surveys are adequate and will ensure that the mitigation is based on appropriate information.

With regard to the proposed working methods and modelled impacts, the proposed development will have a limited impact on seabirds. However, it is not clear whether the potential impacts have been accurately assessed, and if any significant impacts do arise if they can be adequately mitigated.

## 2.11 Offshore Archaeology

The County Council considers that the Thanet Extension Offshore Wind Farm area is rich in maritime features including wrecks and archaeological deposits and features which could be impacted by the proposed works. The ES should be based on a thorough review of up-to-date information from both desktop sources and geophysical survey works. The baseline data set out in the Scoping Report is derived from the 2005 desk based assessment produced for the initial wind farm development and should therefore be updated using further data from survey works associated with other developments in the area.

With regard to paragraph 524, the anchorage of the Kent Downs and the wrecks of Goodwin Sands are of international significance. The County Council recommends that consideration is given to the Dover District Heritage Strategy (2013) which sets out an understanding of the significance of maritime features and wrecks in the proposed development area.

Whilst paragraph 525 makes reference to the importance of the Wantsum Sea Channel, it should be noted that this area and nearby coastline was the scene of the following most notable events in the early history of England: the invasions of Caesar and Claudius and the emergence of the major port of entry at Richborough. In addition, Ebbsfleet is traditionally the landing place of the Augustinian mission returning Christianity to England, as well as the purported arrival of the Saxons through the tradition of Hengist and Horsa. The Richborough Port was later developed in the First World War to supply the Western Front. In light of this, the County Council recommends that reference is made to the significance of Sandwich as a medieval Cinque Port.

KCC supports the approach to using site-specific geophysical and geotechnical evidence, as well as desk-based data to avoid seabed archaeology and features. The County Council also concurs that the assessment should include a modelling of the effects of indirect physical disturbance through sediment moving or scour. Further engagement with the applicant to ensure the appropriate mitigation of the potential direct impacts on unknown remains would be welcomed.

With regard to the impact of the proposed development on heritage setting, the extended wind farm will be visible from a wide range of heritage receptors on the Thanet and Dover coast. Therefore, it is recommended that the visual impact of the proposed development on the designated heritage assets is assessed.

Furthermore, the approach to assessment and data gathering as detailed in section 2.11.4 is supported.

## 2.12 Offshore Seascape, Landscape and Visual Impact Assessment

The County Council welcomes the consideration given to seascape and landscape and looks forward to commenting on the Seascape and Landscape Visual Impact Assessment (SLVIA) when submitted.

The establishment of larger turbines further inshore may have a significant visual impact and the proposal to reference policy guidelines and existing Land/Seascape Assessments for use in the SLVIA is supported. Further consultation with the Marine Management Organisation is recommended regarding strategic level seascape work commissioned by the MMO concerning the South Marine Plan extension area.

Reference should be made to KCC's *Seascape Character Assessment for the Dover Strait*<sup>1</sup> (2015) in relation to Seascape Character Area descriptions and corresponding Seascape Character Types. This study concerns both marine and coastal aspects and should be applied for assessing the character impact for any onshore substations. In addition, further clarification is sought regarding how this part of the proposed development is going to be considered generally and within the SLVIA.

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<sup>1</sup> KCC's 'Seascape Character Assessment for the Dover Strait' (2015) can be accessed via [this link](#).

### 3.6 Onshore Ecology

No ecological survey data has been collected for Option 2 (Sandwich Bay landfall option), and it is therefore advised that this information is submitted with the full ES, as well as a full assessment of the two viable landfall options.

Full details of all ecological survey work undertaken must be included as technical appendices to the ES to ensure that an appropriate level of scrutiny can be applied, in accordance with the British Standard Biodiversity: Code of Practice for Planning and Development (BS 42020: 2013).

With regard to mitigation, the measures proposed are welcomed and the on-site supervision by a suitably qualified and experienced ecologist is highly recommended.

It is expected that all recommended surveys (and any others deemed necessary to ensure that all potential ecological impacts are adequately addressed) are undertaken across all potentially suitable habitats and outcomes are used to inform the conclusions of the ES. This document must be based on up-to-date surveys including updated phase 1 and phase 2 habitat surveys, where necessary.

The ES must demonstrate accordance with the 'mitigation hierarchy', ensuring that the approach to development will first try to avoid the identified potential ecological impacts, then minimise, and as a last resort compensate, for any remaining ecological impacts.

Furthermore, the County Council welcomes the inclusion of an Ecological Management Plan. In addition to any mitigation measures, the proposed development should provide ecological enhancement measures such that net gains for biodiversity are secured.

### 3.8 Onshore Archaeology and Cultural Heritage

It is noted that the baseline data obtained to support the Scoping Report has been partly based on the Kent Historic Environment Record (HER). This dataset is incomplete and should not be used for planning purposes.

The historical background set out in paragraphs 852 and 853 is correct and the County Council can confirm that the Ebbsfleet area is one of high archaeological potential with rich remains dated from prehistoric times to the modern day. However, there is no evidence of a port at Ebbsfleet and the background information is limited to Option 1 (Pegwell Bay landfall option).

With regard to paragraph 859, there is a Pleistocene/ Palaeolithic exposure at Pegwell Bay where faunal remains have been revealed. There is Palaeolithic archaeology in the Thanet district associated with the Brickearth deposit that emerges at Pegwell. A land surface with artefacts was also recorded at the Kent International Business Park in Manston.

Paragraphs 861 and 862 describe the potential impact of the proposed development on prehistoric archaeology as low due to the depth of overlying alluvium. Whilst this may be the case in places, there is potential for less shallow buried archaeology. It should be noted that there are features of historic significance such as the Deal Spit

and the reclaimed former Lydden Valley that may be crossed by the cable route associated with Option 2 (Sandwich Bay landfall option).

The Dover District Heritage Strategy (2013) highlights the coastal processes and reclamation features in the Lydden Valley and Wantsum Sea Channel and should be used as a source of a reference for the baseline and assessment. In addition, work on the recently constructed East Kent Access Road by Oxford Wessex Archaeology provides a substantial additional source of data for the area.

It is considered that archaeology would be affected by the proposed trenching of the onshore cable associated with Option 2. This may include archaeology on the Deal Spit, as well as features concerning the reclamation of the marshland. It is recommended that further detailing of the existing impact claimed in paragraph 867 is detailed in the desk study. In addition, the desk study should also consider the impact of construction compounds and other ancillary areas that may be needed for the construction works.

The County Council welcomes the staged approach as set out in paragraphs 875 to 877 that would be agreed with KCC and Historic England, where appropriate.

With regard to the proposals concerning the Landscape and Visual Impact Assessment for onshore works and facilities, impact is likely to occur from the proposed receiving substation at Richborough. The Roman Port and fort at Richborough is likely to be the principal heritage asset affected from the location of Option 2, given its elevated position which has direct lines of sight towards the Thanet district over the Wantsum Sea Channel.

The Channel itself is a significant heritage asset and the impact on its setting, and that of other significant features including the Abbott's Wall, should be considered.

Furthermore, work on the East Kent Access Road and a programme of research at Ebbsfleet Hill and Wetherlees has identified an enclosure that although undesignated, may be of equivalent national importance. Therefore, it is recommended that the visual effects of the substation construction on the setting of this heritage asset are considered.

### 3.11 Traffic and Transport

The County Council – as Local Highway Authority – confirms that the preparation and submission of a detailed transport Scoping note is required and advises that early engagement is undertaken.

In addition, with regard to the proposed landfall options, KCC considers that the access for construction traffic through Sandwich associated with Option 2 is likely to be more problematic than Option 1.

## 5. Consultation

KCC notes that the selection process concerning both landfall and onshore cable route options (Option 1: Pegwell Bay and Option 2: Sandwich Bay) will be held post Scoping and welcomes the opportunity for further engagement as the development proposal advances.

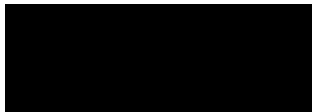
As a statutory consultee, the County Council also looks forward to being invited to comment on further documentation provided with the application for a Development Consent Order (such as the Preliminary Environmental Information Report and Consultation Report) as part of the formal application process. Additionally, the County Council would welcome early engagement regarding the preparation of a Statement of Common Ground.

With regard to paragraph 1077, KCC has been identified as a potential member of the Thanet Extension Offshore Wind Farm Steering Group to ensure the delivery of the project, in accordance with its timescales. Further discussion with the applicant on this matter would be welcomed.

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If you require further information or clarification on any matter in this letter then please do not hesitate to contact me.

Yours sincerely,

A black rectangular redaction box covering the signature area.

**Katie Stewart**  
Director for Environment, Planning and Enforcement



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Your reference:  
170105\_EN010084-000022  
Our reference: DCO/2016/00001

**[By email only]**

2 February 2017

Dear Mr Kent,

## **RE: THANET EXTENSION OFFSHORE WIND FARM- PRE- SCOPING REQUEST UNDER THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009.**

Thank you for your letter dated 05 January 2017, notifying the Marine Management Organisation (the “MMO”) of the opportunity to comment on the Thanet Extension Offshore Wind Farm scoping request.

### **The MMO’s role in Nationally Significant Infrastructure Projects**

The MMO was established by the Marine and Coastal Access Act 2009 (the “2009 Act”) to make a contribution to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas.

The responsibilities of the MMO include the licensing of construction works, deposits and removals in English inshore and offshore waters and for Welsh and Northern Ireland offshore waters by way of a marine licence<sup>1</sup>. Inshore waters include any area which is submerged at mean high water spring (“MHWS”) tide. They also include the waters of every estuary, river or channel where the tide flows at MHWS tide. Waters in areas which are closed permanently or intermittently by a lock or other artificial means against the regular action of the tide are included, where seawater flows into or out from the area.

In the case of Nationally Significant Infrastructure Projects (“NSIPs”), the 2008 Act enables Development Consent Order’s (“DCO”) for projects which affect the marine environment to include provisions which deem marine licences<sup>2</sup>.

<sup>1</sup> Under Part 4 of the 2009 Act

<sup>2</sup> Section 149A of the 2008 Act





As a prescribed consultee under the 2008 Act, the MMO advises developers during pre-application on those aspects of a project that may have an impact on the marine area or those who use it. In addition to considering the impacts of any construction, deposit or removal within the marine area, this also includes assessing any risks to human health, other legitimate uses of the sea and any potential impacts on the marine environment from terrestrial works.

Where a marine licence is deemed within a DCO, the MMO is the delivery body responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. As such, the MMO has a keen interest in ensuring that provisions drafted in a deemed marine licence (“dML”) enable the MMO to fulfil these obligations.

Further information on licensable activities can be found on the MMO’s website<sup>3</sup>. Further information on the interaction between the Planning Inspectorate and the MMO can be found in our joint advice note<sup>4</sup>.

### **Thanet Extension Offshore Wind Farm**

Thanet Extension Offshore Windfarm (TEOWF) is a proposed offshore wind farm (OWF) that is likely to consist of up to 34 wind turbine generators. It is proposed that TEOWF will be located approximately 8km off the south east coast of Kent and in close proximity to the operational Thanet Offshore Wind Farm (TOWF). TEOWF is proposed to have a generation capacity of up to 340MW and will include all associated offshore and onshore infrastructure. The TEOWF array area is approximately 70 square kilometres (km<sup>2</sup>) and is located approximately 8km from the coast at the Isle of Thanet. The red line boundary will extend slightly closer to shore to allow additional vessel room during construction.

Electricity generated will be transported to the shore by offshore export cables installed within the proposed Thanet Extension Offshore Export Cable Corridor (TEOECC). A grid connection agreement is expected to be in place in 2017, prior to submission of the application for Development Consent Order (DCO). There are currently 2 landfall options, Pegwell Bay landfall and Sandwich Bay landfall.

The MMO has reviewed the consultation documents received 05 January 2017 and sets out our initial comments below. In providing these comments, the MMO has sought the views of our technical advisors at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the MMO Coastal Office (South Eastern Area).

The MMO reserves the right to make further comments on the Project throughout the pre-application process and may modify its present advice or opinion in view of any additional information that may come to our attention.

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<sup>3</sup> <https://www.gov.uk/planning-development/marine-licences>

<sup>4</sup> <http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/04/Advice-note-11-v2.pdf>

## 1. General comments

- 1.1. The MMO agrees with the topics outlined in the scoping report and in addition recommends that the following aspects are considered further during the Environmental Impact Assessment (EIA) process and included in any resulting Environmental Statement (ES).

## 2. Nature Conservation

### Marine Conservation Zones (MCZ)/Recommended Marine Conservation Zones (rMCZ)

- 2.1. The proposed Thanet Extension Offshore Wind Farm (TEOWF) is located within the vicinity of the following designated sites;
- Thanet Coast Marine Conservation Zone (MCZ)
  - Goodwin Sands Recommended Marine Conservation Zone (rMCZ).

The MMO defer to Natural England as the Statutory Nature Conservation Body (SNCB) on the suitability of the scope of the assessment with regards to the above sites.

### Nature Conservation Sites and European Protected Sites

- 2.2. The proposed Thanet Extension Offshore Wind Farm (TEOWF) is located within the vicinity of the following designated sites;
- Thanet Coast Special Area of Conservation (SAC);
  - Sandwich Bay Special Area of Conservation (SAC);
  - Margate and Long Sands Site of Community Importance (SCI);
  - Southern North Sea possible Special Area of Conservation (pSAC);
  - Outer Thames Estuary Special Protection Area (SPA);
  - Outer Thames Estuary potential Special Protection Area (pSPA);
  - Thanet Coast and Sandwich Bay Special Protection Area (SPA)
  - Thanet Coast and Sandwich Bay Ramsar;
  - Thanet Coast Site of Special Scientific Interest (SSSI);
  - Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI);
  - Sandwich and Pegwell Bay National Nature Reserve (NNR).

The MMO defer to Natural England as the Statutory Nature Conservation Body (SNCB) on the suitability of the scope of the assessment with regards to the above sites.

### **3. Coastal Processes**

#### General Comments

- 3.1. The MMO considers that the scoping assessment approach; data gathering for coastal processes issues; and the scope of the proposed assessment are appropriate. Appropriate mitigation has been identified for this stage of the development process.
- 3.2. It is not clear what the term 'expert based empirical and conceptual assessment methods' implies and further definition should be provided in the assessment method. The applicant should ensure their chosen methods are sufficiently robust as is detailed in paragraph 241, which indicates that this will be done in line with appropriate guidance).
- 3.3. Table 2.2, Page 54 – The tidal velocity data appears to have been overwritten by direction data. This should be addressed in future reports.
- 3.4. Paragraph 221 - Having included a description of significant surge events in the southern North Sea, it would be helpful briefly explain why this is not relevant to the TEOF, as then stated. The text currently implies that it has been scoped out because of their infrequency, whereas scoping out of this should be decided on physical grounds i.e. that surge events would not affect the impacts of any of the processes included in the EIA.
- 3.5. Paragraph 228 – reference Walker and Judd (2010) is not listed at the end of the document.

### **4. Benthic Ecology**

#### General Comments

- 4.1. The MMO considers that the approach used for the scoping assessment and data gathering is appropriate. However, the MMO does not agree with all the topics that have been scoped out of requiring further assessment.
- 4.2. Further assessment of impacts on epifauna need to be considered in Section 2.5, as it has not been considered in either Section 2.5 or 2.6.
- 4.3. Paragraph 272 states that planned locations for the 2016 survey are shown in Figure 2.3, however the locations are not shown. This should be addressed in future reports.
- 4.4. Paragraph 273 mentions bedrock outcrop but this is not shown on Figure 2.3. This should be displayed on the figure. This should be addressed in future reports.
- 4.5. Figure 2.3 doesn't show the cable corridor as suggested in paragraph 275. This should be addressed in future reports.

- 4.6. The statement in paragraph 302 that there no evidence of significant changes of seabed beyond the vicinity of the structures themselves is incorrect. Studies undertaken in Belgian waters have shown changes in benthic communities up to 50m from the turbine scour protection. This should be addressed in future reports.
- 4.7. Beam trawl surveys for epifauna and juvenile fish should be located away from known areas of *Sabellaria spinulosa* reef.

#### Sediment Contamination

- 4.8. Sediment contaminants have been scoped out based on the evidence from 4 stations (2 intertidal and 2 offshore) taken for the TOWF in 2005. The MMO recommends that due to the age of the data and the uncertainty regarding the comparability of the samples with the wider TEOWF area that further sediment contaminant analyses is undertaken.
- 4.9. In addition the MMO considers that an assessment of sediment contaminants at the Pegwell Bay landfall site needs to be undertaken due to the presence of the disused hover port.
- 4.10. The report notes that as sediment samples are being collected for ecological assessment, further analyses for sediment quality may be undertaken. Sediment samples used for analyses of metals, PAH's and PCB's need to be collected separately from the faunal sample and with appropriate gear (i.e. Day grab or Shipek grab). If samples are collected incorrectly they may be unusable for contaminant analyses.

#### Under Water Noise

- 4.11. The potential impacts of underwater noise and vibration on benthic species during construction are proposed to be scoped out of further assessment on the basis that any impact is likely to be localised and temporary. Although there are relatively few studies of the impact of underwater noise on benthic species, the studies conducted thus far have revealed a range of negative effects from noise which demonstrate there is a clear potential for significant impact (Wale et al., 2013a, 2013b, Solan et al., 2016). MMO therefore recommends that the impacts of construction noise and vibration on benthic species are scoped into the assessment.

## **5. Fish and Shellfish Ecology and Fisheries**

#### Fish Ecology

- 5.1. The MMO considers that the most relevant impacts to fish ecology have been scoped into the EIA process and that data gathering sources appear to be appropriate.
- 5.2. Datasets should be updated for the EIA, to ensure the most recent, available data are included. For example the MMO landings statistics for 2015 report "UK Sea Fisheries Statistic 2015" is available.

- 5.3. The report correctly identifies that TEOF and the TEOEC are within or near spawning grounds for several protected (UK BAP) species including sole, herring, whiting, plaice and seabass. The proposed development is also within recognised spawning areas for cod, sandeels, sprat and lemon sole, and in proximity of nursery grounds for thornback ray, sole, sandeels, seabass, and mackerel and broad nursery grounds for additional species including, tope shark, sprat and lemon sole (Coull et al, 1998; Ellis et al, 2012).
- 5.4. Thornback ray were the most abundant elasmobranch species recorded in the 2007 and 2008 TOWF pre-construction monitoring surveys. Given the national importance of North Sea stocks of sole and thornback ray as well as the spring-spawning blackwater herring stock, MMO recommend that they are also considered within the EIA.
- 5.5. The MMO considers loss of (or changes to) habitat during construction and decommissioning, should not be scoped out at this stage as there is likely to be disturbance to the habitat during both construction and decommissioning causing potential habitat modification and changes. The scoping report states the loss of area would be small in a regional context area, however this may impact on larval and planktonic stages of any localised sandeel population. Given that the installation of wind turbine generators may potentially increase the levels of suspended sediment and sediment deposition, which may have an adverse effect on fish resources, we would recommend that the EIA should assess these potential effects on fish.
- 5.6. If onsite dredge and disposal activities are to be undertaken, the MMO would expect the potential effects of dredging and disposal to be included. Increased suspended sediment could potentially have an impact on fish eggs, larvae, juvenile and adult fish. This should therefore be considered in the EIA.
- 5.7. Fishing regulations have now been implemented to protect juvenile stocks of seabass (Kent and Essex IFCA, 2014). Seabass have also been placed under special protection measures to drastically reduce catches of this species. The new protection measures include the waters in and around Sussex, Kent and Essex (Marine Management Organisation, 2016). Therefore, the MMO recommend that the EIA considers seabass in the context of the current special measures in place.
- 5.8. The scoping report indicates that fish aggregation during construction and decommissioning will be scoped out. This is appropriate given that any fish aggregating effects will only occur during operation.
- 5.9. Paragraph 330 states that the wind farm infrastructure will create new habitats; however this would be a modification of the existing habitat rather than constituting 'new' habitat. This should be addressed in future reports.

#### Commercial Fisheries

- 5.10. Sole is ecologically important and the most valuable species targeted by local, UK and non-UK vessels around the proposed Wind Farm Area and Offshore Export Cable Corridor, generating £2.6 million between 2010 and 2014. The EIA should

ensure information is gathered on available landings data and assess the potential impact to the fishery.

- 5.11. Commercial fishing activity occurs in the proposed wind farm area operating from the local ports of Margate, Broadstairs, Ramsgate, Whitstable Deal, Queensborough Dover and Folkestone. The MMO agrees with the impacts scoped in to be considered in the EIA, but also recommends the possible implications of displacing fishing pressure to other areas outside of the exclusion zones be scoped in.
- 5.12. Small boats can fish for most of the year using fixed and drift nets for sole, cod, seabass and mullet, longlines for cod and occasionally for seabass and handlines for seabass, with larger boats trawling for sole, sprat, herring and thornback ray (Walmsley and Pawson, 2007). MMO recommend that Kent and Essex Inshore Fisheries Conservation Authority (IFCA) are consulted for their up to date localised knowledge of fishing practices in the vicinity of the proposed wind farm.
- 5.13. A large number of pleasure craft and anglers operate out of these areas as well as a wide number of other users of the sea. Due to the position of the proposed extension, there is a possibility that it could impact these fishing operations.

#### Under Water Noise

- 5.14. The scoping report states the proposed TEOWF area itself is not considered to be an important spawning ground or nursery area for commercially important fish species (e.g. herring), as those which spawn within the proposed Wind Farm Area and proposed Offshore Export Cable Corridor also spawn widely within the surrounding coastal waters of the southern North Sea. The TOWF considered the potential impacts on the Thames herring sub-stock, but given that the TEOWF surrounds the existing windfarm there is potential for underwater piling noise to extend to the Herne bay spawning ground (Wood, 1981). The noise could therefore extend to both the Thames substock, (spring-spawning February to April) and Southern North Sea substock (spawns end November to January). We therefore recommend that the underwater noise assessment considers the potential effects on these two herring stocks.
- 5.15. Sources of data to determine if herring are spawning in or within impact zones of the proposed development include:
  - the International Herring Larval Survey (IHLS) data; and
  - the recently published Regional Herring Habitat Assessment [available from <http://www.marine-aggregate-rea.info/documents>] produced by the aggregate industry which incorporates, regional sediment data sets, VMS data, IHLS and aggregate industry data to assess the suitability of the habitat to support herring spawning.
- 5.16. No details of the noise modelling have been given at this stage, although the report indicates it is likely that modelling will be undertaken utilising site-specific physical parameters (geology and bathymetry) and project specific detail. This is recommended and the MMO encourages early engagement with the MMO to ensure the modelling is appropriate.

## Electromagnetic Field (EMF)

- 5.17. The potential impacts of EMF during construction, operation and decommissioning have been scoped out. The MMO acknowledge that the Cable Burial Assessment has not yet been carried out, however given that research into the possible interactions between marine fauna and anthropogenic EMF are inconclusive, the MMO requires that cables are buried to minimum of 1.5 metres where possible, based on National Policy Statement EN3 (Department of Energy & Climate Change, 2011). Should cable burial be limited due to the local seabed geology (or other receptors in the area) then it is recommended that the possible effects of EMF on electrosensitive fish remain scoped in.

## Shellfish

- 5.18. The commercial shellfish species, *Homarus gammarus*, *Pecten maximus*, *Cancer pagurus*, *Buccinum undatum* and *Ostrea edulis* are all listed as being of commercial importance in the region. Cockles are also of commercial importance locally; including in the proposed cable corridor at Pegwell Bay and should be included in the EIA.

## **6. Marine Mammals**

### General Comments

- 6.1. Potential impacts upon European Sites with marine mammals as a qualifying feature will be assessed within the Habitats Regulations Assessment (HRA). The MMO defers to Natural England as the SNCB on the appropriateness of survey and abundance data sources used to underpin the assessment.
- 6.2. MMO considers changes to water quality that could result in a prey and barrier effects are scoped into the assessment of impact on marine mammals as insufficient evidence is presented in the scoping document as to why these impacts are scoped out.

### Underwater Noise

- 6.3. The scoping report has identified the potential impacts of underwater noise on marine mammals during construction. The MMO notes that piling noise is of the greatest concern, although it will also be appropriate to consider other sources of noise such as vessel noise, seabed preparation, rock dumping and cable installation.
- 6.4. The MMO notes that the potential impacts of underwater noise and vibration on marine mammals during the operational phase will be scoped out of the EIA. The MMO suggests that operational noise should remain scoped in as insufficient evidence is presented in the scoping document as to why these impacts should be scoped out.
- 6.5. The potential acoustic impact on marine species on marine mammals can mitigated by reducing the amount of noise emitted at the source. For pile driving, there are

noise reduction technologies available, such as big bubble curtains and acoustic barriers that are integrated into the piling rig (e.g. IHC Noise Mitigation System). Such source mitigation should be considered as a primary means of reducing the potential acoustic impact of pile driving operations.

## 7. Navigation

### General Comments

- 7.1. The MMO defer to the Maritime Coastguard Agency (MCA) and Trinity House on the suitability of the scope of the assessment with regards to navigation of vessels.

## 8. Other Users of the Sea

### General Comments

- 8.1. The MMO agrees with the approach and data sources outlined by the applicant regarding other sea users. We would expect due consideration of all sea user issues raised during the consultation process to be considered as part of the EIA process.

## 9. Dredging

### General Comments

- 9.1. The report acknowledges the need to potentially dredge and dispose of drill arising's from the preparation and installation of foundations or the clearance of sand waves under construction activities. The report however does not note the assessment required to consider potential impacts from the proposed dredge and disposal. This should be addressed explicitly in the final project design if this activity is to be undertaken. The scoping report should discuss the possible dredging and disposal methods, the disposal locations and whether local data is already available or will need to be collected.
- 9.2. Seabed preparation, dredging and disposal of material arising from the installation of infrastructure are licensable activities and disposals are only permissible within designated disposal sites. Should on-site disposal be required, a new disposal site must be characterised. A sign-posted characterisation report or EIA report chapter should include as a minimum.
  - The need for the new disposal site;
  - The dredged material characteristics;
  - The disposal site characteristics;
  - The assessment of potential effects; and
  - The reasons for the site selection.
- 9.3. If dredge disposal is required, a disposal method should be provided including the estimated volume of material to be disposed of. This must be provided in order to make an assessment of the proposed activity and to allow the proposed volumes to be included on any Development Consent Order.



- 9.4. The applicant has proposed to scope out of the impacts from the 'Release of contaminated sediments' during the construction, operation and decommissioning. The MMO notes that data sources from sediment contamination are available from the Thanet extension area obtained in 2016. However, as this data is not currently available for review the MMO is unable to advise whether it is appropriate to scope out the potential for release of contaminated sediments. Further contaminant testing of sediments, particularly if dredging is required, may be needed. The MMO can provide further comment on this issue once more detail on disposal activities is provided.

## **10. Water Quality**

### General Comments

- 10.1. The MMO considers that the 'changes to water quality' during construction, operation and decommissioning, which include the potential re-suspension of contaminants and spillages, should remain scoped in to the EIA process. The MMO recommends that the 2016 sediment contaminant data is presented to allow a determination to be made on whether these impacts can be scoped out at a later stage of the pre-application process.
- 10.2. The MMO notes that preventative measures against pollution by spillage cannot be considered 'mitigation' of an accidental spill. The MMO requests a discussion on the potential impact of accidental spillage of contaminants in the EIA including what (if any) post incident mitigation could be achieved.

## **11. Cumulative Impacts**

### General Comments

- 11.1. It is appropriate that consideration is given to cumulative impacts from noise particularly for fish and marine mammals at all stages of the wind farm.
- 11.2. The MMO welcomes that potential transboundary impacts will be assessed as part of the cumulative impacts assessment and where possible the applicant will liaise with developers in other Member States to obtain up to date project information.
- 11.3. The MMO notes that cumulative impacts upon prey species will be considered further in the EIA, but this is only proposed for construction noise however and not operational noise. The MMO recommends that potential impacts of underwater noise during the operational noise are also scoped into the EIA.

## **12. Conclusion**

### General Comments

- 12.1. The topics highlighted in this scoping opinion should be assessed during the EIA process and the outcome of these assessments should be documented in the EIA

report in support of the deemed marine licence application and the planning application(s). This statement, however, should not necessarily be seen as a definitive list of all EIA (and HRA) requirements. Given the scale and program of these planned works, other work may prove necessary.

If you require any further information please do not hesitate to contact me using the details provided below.

Yours Sincerely,

*Margaret Tierney*

Margaret Tierney

Margaret Tierney

Marine Licensing Case Officer

D +44 (0)2080 265360

E [margaret.tierney@marinemanagement.org.uk](mailto:margaret.tierney@marinemanagement.org.uk)

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Maritime &  
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Agency

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E-mail: [nick.salter@mcga.gov.uk](mailto:nick.salter@mcga.gov.uk)

Your ref: 170105\_EN010084-000022  
Our ref:

16 January 2017

Dear Sir/Madam,

**Scoping Consultation for the Proposed Thanet Extension Offshore Wind Farm under the Planning Act 2008 (as amended) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended)**

The MCA has reviewed the scoping report provided by Vattenfall Wind Power Ltd for the Thanet Extension Offshore Wind Farm as detailed in your letter of 5<sup>th</sup> January 2017 and would comment as follows:

The development area carries a significant amount of through traffic to three major ports and attention needs to be paid to routing, particularly in heavy weather ensuring shipping can continue to make safe passage without significant large scale deviations. We are very concerned over the available sea room it leaves along the south western edge, for instance the distance between the Elbow cardinal mark and turbines will be reduced by approximately a half. We also have concerns on the impacts this will have on the safety of both commercial vessels and pilot boats during pilotage operations in the NE Spit and Tongue pilot boarding areas. It is difficult to see at this stage how the potential mitigating and monitoring measures in MGN 543 would be able to reduce the risks to navigational safety to ALARP. The traffic study and associated Navigational Risk Assessment will need to focus on these concerns.

Particular attention should be paid to cabling routes and where appropriate 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. If cable protection are required e.g. rock bags, concrete mattresses, the MCA would be willing to accept a 5% reduction in surrounding depths referenced to Chart Datum. This will be particularly relevant where depths are decreasing towards shore and potential impacts on navigable water increase.



HM Coastguard



INVESTORS  
IN PEOPLE | Silver

Any application for safety zones will need to be carefully assessed and additionally supported by experience from the development and construction stages.

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). Attention should be paid to the level of radar surveillance, AIS and shore-based VHF radio coverage and give due consideration for appropriate mitigation such as radar, AIS receivers and in-field, Marine Band VHF radio communications aerial(s) (VHF voice with Digital Selective Calling (DSC)) that can cover the entire wind farm sites and their surrounding areas.

MGN 543 Annex 2 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. Failure to report the survey or conduct it to Order 1a might invalidate the Navigational Risk Assessment if it was deemed not fit for purpose.

Yours faithfully,

A black rectangular redaction box covers the signature area. Above the box, there is a faint, handwritten signature in blue ink that appears to read "Nick Salter".

Nick Salter  
Offshore Renewables Advisor  
Navigation Safety Branch

## **Decision Notice**

MC/17/0052



Mr R Kent  
Secretary of State  
3D Eagle Wing  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

Planning Service  
Physical & Cultural Regeneration  
Regeneration, Culture, Environment &  
Transformation  
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Telephone: 01634 331700  
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Minicom: 01634 331300

Applicant's Name Helen Jameson

### **TOWN & COUNTRY PLANNING ACT 1990**

### **Town & Country Planning (Development Management Procedure) (England) Order 2015**

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Location: THANET OFFSHORE WIND FARM

Proposal: Consultation under regulation 8(6) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) for the Thanet Extension Offshore Wind Farm

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I refer to your letter of consultation regarding the above and would inform you that the Council **RAISES NO OBJECTION** to it.

**Your attention is drawn to the following informative(s):-**

Signed

A solid black rectangular box used to redact the signature of the official.

David Harris  
Head of Planning  
Date of Notice 27 January, 2017





Sent electronically to:

[environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)

Nick Dexter  
DCO Liaison Officer  
Land & Business Support

Nicholas.dexter@nationalgrid.com  
Tel: +44 (0)7917 791925

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

2<sup>nd</sup> February 2017

Dear Sir/Madam,

## **Ref: EN010084 – Thanet Extension Offshore Wind Farm – EIA Scoping Notification and Consultation**

I refer to your letter dated 5<sup>th</sup> January 2017 in relation to the Thanet Extension Offshore Wind Farm EIA Scoping Notification and Consultation. Having reviewed the Scoping Report, I would like to make the following comments:

### **National Grid assets**

There is currently no existing National Grid apparatus affected by the proposed development.

### **Richborough Connection Project (RCP)**

An application for development consent for the RCP was made on 14 January 2016. One of the new energy sources to be connected by National Grid is the Nemo Link®. This is the High Voltage Direct Current (HVDC) electricity interconnector project of approximately 1,000MW (1GW) capacity, this will connect the UK and Belgium. This project will allow the transmission of electricity between the UK and Belgium via a subsea cable and requires a connection to the National Grid high voltage National Electricity Transmission System (NETS) in the Richborough area where it makes landfall (comes out of the sea onto the land).

There is currently no National Grid high voltage transmission network in the Richborough area. Therefore, in order to provide a transmission connection, new transmission infrastructure is required between Richborough and the existing National Grid high voltage transmission network. To connect Nemo Link to National Grid's high voltage transmission system, the RCP proposes a new high voltage 400kV electricity connection between Richborough and Canterbury North 400kV Substation in Kent.

### **Comments on the Scoping Report**

#### **Cumulative effects**

The proposed development may be constructed and will operate concurrently with the RCP, which would connect to a new 400kV substation in the proposed development's 'onshore substation area of interest' at the former Richborough Power Station. The former Richborough Power Station, now known as the Richborough Energy Park, is the same site

where the RCP will connect to its substation. The Richborough Energy Park and the proposals for the National Grid Interconnector and peaking plant are identified as a proposed project in the Scoping Report. However, the RCP is not specifically mentioned in the majority of Cumulative Effects section for the onshore topic areas. The construction and operation of the RCP should be considered as part of the proposed development's cumulative effect in all relevant chapters.

**Where the promoter intends to interfere, acquire or impact on any of National Grid's land, rights, apparatus or interests, protective provisions will be required in a form acceptable to it to be included within the DCO.**

National Grid requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following: [box.landandacquisitions@nationalgrid.com](mailto:box.landandacquisitions@nationalgrid.com) as well as by post to the following address:

The Company Secretary  
1-3 The Strand  
London  
WC2N 5EH

The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity or gas customer services.

Yours Faithfully



**Nick Dexter.**

**From:** [ALLEN, Sarah J](#) on behalf of [NATS Safeguarding](#)  
**To:** [Environmental Services](#)  
**Subject:** Proposed Windfarm: Thanet Offshore Extension (Our Ref: SG24158)  
**Date:** 09 January 2017 10:28:16

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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 NATS (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 NATS 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

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If you are not the intended recipient, please notify our Help Desk at Email [Information.Solutions@nats.co.uk](mailto:Information.Solutions@nats.co.uk) immediately. You should not copy or use this email or attachment(s) for any purpose nor disclose their contents to any other person.

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Date: 02 February 2017  
Our ref: 205191  
Your ref: 170105\_EN010084-000022



Richard Kent  
The Planning Inspectorate  
3/18 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol

Cromwell House  
15 Andover Road  
Winchester  
Hampshire

BS1 6PN

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## **BY EMAIL ONLY**

Dear Mr Kent,

### **INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations) PROPOSED THANET EXTENSION OFFSHORE WINDFARM (the project) PROPOSAL BY VATENFALL WINDPOWER LIMITED (the Applicant)**

Thank you for requesting our advice on the Thanet Extension Environmental Impact Assessment Scoping Report. The following constitutes Natural England's formal statutory response.

#### **Background**

It is important to note that many of the issues pertinent to this application are likely to be similar to those raised in relation to the Thanet Offshore Wind Farm Environmental Impact Assessments (EIA) and Environmental Statements (ES). We therefore strongly advise that in assessing the environmental impacts of the proposed project, due consideration is given to both lessons learnt from the project and Statutory Nature Conservation Body (SNCB) advice that has been and is currently being provided in relation to these developments and associated environmental impacts.

#### **General Approach to EIA**

It is relevant at this point to clarify the aims of EIA, in order to frame our advice on how it should be undertaken appropriately. EIA is a statutory process which should highlight the potential positive and negative impacts of a project, and identify how effects can be prevented, offset or reduced through mitigation, enabling the regulator to make a decision on whether to consent.

In respect of offshore wind farm development, it is important to highlight the much larger scale and geographic spread of newer developments compared to earlier rounds of development. Therefore, while lessons are being learned from Rounds 1 and 2 sites, there is the potential for a different range and/or a greater level of impacts to arise from Round 3 development particularly in relation to cumulative impacts. Consequently, considering the levels of uncertainty that this introduces to the EIA process we advise that the EIA is undertaken in the context of risk management. We identify the need to consider what level of confidence in the data it will be realistically possible to achieve, and how this will be presented to enable conclusions to be reached. The applicant should, therefore, be able to communicate in their ES, the confidence in their predictions on potential impacts.

## **Pre-Application Consultation**

Natural England recognises the importance of the pre-application stage of the PINS consenting regime and as such seek to make this process as effective as possible. We are pleased to note that the Applicant has begun an Evidence Plan process and has engaged Natural England at both the Steering Group and Topic Group level.

In summary, we recognise the time constraints that the developer is under places pressure on the pre-application process, however, insufficient time to deal with key environmental concerns prior to submission of the application poses a risk to the development and we encourage the developer to engage with us to address them.

## **Scoping Opinion**

We recognise that it is a statutory requirement for developers to undertake consultation on a Scoping Report. On review of the report submitted by the Applicant, we note that the information and detail provided is limited and is focussed on the high-level of aims of the EIA. We would welcome further information pertaining to the specific survey methodologies to be adopted for assessment of impacts on each receptor and for a preliminary assessment of key potential impacts associated with the development and in-combination with other plans/projects We anticipate discussing this level of detail during the preparation of Evidence Plans for the projects.

## **Section 42: Preliminary Environmental Information (PEI)**

It is the view of Natural England that the most appropriate form for a PEI to adopt is that of a draft Environmental Statement (ES). This would reassure Natural England and other key stakeholders, that the Applicant's approach to EIA is appropriate and to allow time for areas of concern to be raised and resolved prior to submission of the final ES to PINS It is, therefore, sensible to maximise the opportunities in pre-application for open and constructive dialogue, to reduce the risk of an application being rejected by PINS. It is also our experience that if too many issues are left unresolved at application then this causes increased pressure for all involved during the Examination process. As such we would expect emphasis on effective pre-application engagement between the developer and Natural England and the PEI to present sufficient detail such that an assessment of the Applicant's approach to EIA can be identified.

## **Habitats Regulations Assessment (HRA)**

In accordance with the 2010 Habitats Regulations (as amended) 61(2) anyone applying for development consent for an NSIP must provide the competent authority with such information as may reasonably be required "for the purposes of the assessment" or "to enable them to determine whether an appropriate assessment is required". The SNCBs advise that this information should therefore be provided and appraised as part of the EIA process.

## **Further Liaison and Advice**

The Thanet Extension lies in close proximity to other offshore windfarms. As such, we strongly advise that EIA assessments must provide a robust in-combination assessment of impacts. In addition to this, the further development of offshore wind farms presents an opportunity to learn from previous development and to further refine survey and monitoring methods to ensure that the practicality and effectiveness of methods employed means that key data gaps are addressed. There is, therefore, a role for consenting authorities, developers and consultees to increase the understanding of the effects of offshore wind farms as well as securing best practice in further developments.

## **Part 1:**

### **1.4 Project Description**

104: Natural England advise that where possible foundation design should be selected to minimise the need for additional scour protection. Lessons should be learnt from the existing Thanet development and other offshore windfarms and used to avoid the use of scour protection where possible or inform a realistic assessment of amount of scour protection needed in these conditions if necessary and there are no other alternatives. Where needed, thought should be given to using scour protection that is removable on decommissioning and works most naturally or provides least change to the substrate in the area.

151: We recommend that for maintenance to be permitted as part of DCO/ DML the Environmental Statement (ES) should clearly outline the expected worst case scenario for maintenance in terms of number of visits, duration of works and relevant environmental impacts from remedial works such as turbine repair/ painting/ washing/ component replacement, cable repair.

### **1.5 Site Selection and Outline Assessment of Alternatives**

We note from paragraph 175 that the Pegwell Bay option (Option 1) appears to be the onshore cable route generally preferred by the applicant at this early stage in that it is shorter and would avoid the need for cable crossing offshore. However, later in the paragraph it appears that both onshore route options are still very much on the table at this stage and the Scoping Report recognises that “Further engineering study and Scoping consultation is required to determine the significance of constraints to each route before a final route selection is made.”

Given that both proposed cable routes have the potential for direct and indirect impacts on designated nature conservation sites Natural England is concerned to note from paragraph 789 in Section 3.6 Onshore Ecology that no ecological survey data has been collected to date for the Sandwich Bay option (Option 2). Unless the applicant has been gathering data since the Scoping Report was completed in December 2016 we suggest that this could make it difficult to provide a robust and objective assessment of the two onshore cable route options with regards to ecological constraints. In particular the potential need to gather survey data on over-wintering birds may be problematic as we understand that the applicant wishes to submit a DCO application within a very tight timeframe. We would be happy to start working with the applicant as soon as possible to address this issue.

### **1.6 EIA Methodology**

#### *Assessment of impacts 185 - 194 Defining Magnitude of Impact and Sensitivity of Receptor*

It is proposed to assess impacts associated with the construction, operation and decommissioning of Thanet Extension by identifying the sensitivity of each receptor and the magnitude of each effect and combining both metrics together through a matrix analysis to determine impact significance. Effect magnitude will be defined via the extent, duration, frequency and change relative to the baseline, and receptor sensitivity will be determined through the adaptability/tolerance, recoverability and value/importance of each receptor.

We advise that the ES should include a clear description of how each of the categories for extent, duration and frequency are defined and similarly for the sensitivity categories of vulnerability, recoverability and value. The ES should also include a description of how the various combinations of frequency, duration, extent and reversibility of effects have been combined to reach the final prediction of effect magnitude. Similarly, a discussion should be included as to how the various combinations of receptor sensitivity, probability of interaction and magnitude of effect have been combined to reach the final determination of impact significance both alone and in combination with other plans and projects.

The magnitude and sensitivity scores which contribute to the final impact assessment should be

presented for each of the receptors included in the assessment. This should be supported by appropriate references to scientific literature. Where conclusions are based on expert judgements this should be clearly described and discussed in the text. This would add confidence in the validity of the determinations and any subjective decisions or professional judgements based on experience that are made by the applicant are transparent and clear.

Furthermore, we highlight the importance and difficulty of establishing the uncertainty associated with data. The level of uncertainty/confidence associated with each significance assessment should be discussed based on the nature of evidence used and how this evidence was used to determine impact significance.

There might be effects or receptors for which the proposed assessment approach may not be suitable. This should be assessed on an effect/receptor basis. Where a different approach is chosen this should be clearly justified and the approach fully explained within the application.

### *Evaluation of Significance*

Within the ES, impacts should be quantified, where reasonable to do so, and discussed alongside qualitative information to present the most accurate conclusion of risk to that particular receptor. In some cases, impacts are likely to have more quantified estimates and it is advised that this detail is incorporated into the application, with reference to any studies or expert judgements undertaken. Again, it is important that there is detailed presentation of the uncertainty associated with any quantitative estimates to establish confidence in conclusions drawn.

### *Cumulative Impacts*

We welcome the Applicant's intention to agree the approach to cumulative impact assessment (CIA) with consultees. This will form an important component in assessing the true potential impacts of the development of the projects.

## **Part 2: OFFSHORE**

### **2.2 Marine Geology, Oceanography and Physical Processes**

217: We note the difficulties that were encountered installing cables in chalk at the existing Thanet OWF site and in areas of mobile sandwaves at many other offshore windfarm sites. We advise that a full review of lessons learnt should be used to inform a realistic worst case assessment in the ES of achievable burial depths, and associated methodology including required sandwave clearance and need for cable and scour protection.

225: Natural England note that there have been significant chalk plumes have been visible and persistent from cable installation at Rampion OWF and that the potential for similar effects at this project should be considered.

228: Natural England advise that there are more recent papers than the Walker and Judd (2010) paper cited that look at the effects of windfarm at shelf sea levels, these should be considered. For example, Cazenave *et al.*(2016) Unstructured grid modelling of offshore wind farm impacts on seasonally stratified shelf seas Progress in Oceanography 145 25–41. Expert based assessment implies there will be no further data collection or modelling. If this is the case, we advise that the existing data presented must be the most applicable and up to date.

229: The assessment needs to acknowledge the use of rock protection on the export cable route and the potential for berms to interrupt natural processes.

230: Whilst we acknowledge that the extent of scour was less than predicted in the ES at Thanet offshore windfarm, it should be noted that the amount of cable protection required far exceeded predictions in the ES due to an inability to sufficiently bury the cables.

232: We advise that the ES should address the issue of persistent sediment plumes seen in aerial photographs and satellite images at Thanet OWF. The cause and any associated impacts on the biological environment should be presented.

### **2.3 Marine Water and sediment Quality**

255: Natural England is of the opinion that sediment contaminants should be assessed at the landfill site of Pegwell Bay due to the disused hoverport.

256: We acknowledge that spillage of contaminants has to comply with MARPOL convention and best practice will be adhered to. Furthermore, we understand that robust assessments will be provided in the construction methodology plan and the marine pollution contingency plan. Natural England is of the opinion that further assessment is required to consider grout and other small spills that regularly occur at windfarms.

258: Natural England would like to see further consideration of suspended sediments in relation to the persistent plumes as stated in point 232 above.

259: Natural England is requests further information regarding release of contaminated sediments, we note that the benthic habitat is variable and further demonstration is required across the site rather than the four sites presented.

260: Please see our response for point 256.

### **2.4 Offshore Air Quality**

269 – Natural England is content for offshore air pollution to be scoped out of the assessment.

### **2.5 Benthic and Intertidal Ecology**

290: We do not agree that *'Areas affected by jack-up operations and cable installation would be relatively small and seabed recovery is expected quickly following cessation of installation activities given tolerance and recoverability of the communities present'*. Both jack up legs and cable installation techniques have been shown to leave persistent scars in the seabed for many years in some sediment types.

294: Natural England recommend that Underwater noise and vibration should be scoped into the during construction assessment. Available evidence illustrates potential for significant impacts.

296: The export cable transits through two Marine Conservation Zones (MCZ), Thanet Coast MCZ and Goodwin Sands rMCZ and should be assessed accordingly. Whilst we acknowledge that Goodwin Sands rMCZ is not currently for material consideration, it would be wise to future proof the application in case it is put forward for designation prior to the extension being constructed.

297: Natural England is of the opinion that maintenance and operation impacts need to be considered as an additional impact to those from construction. An assessment of the amount of potential maintenance work likely to be required across the lifetime of the project should be presented in the Environmental Statement. This should also include likely maintenance requirements associated with all inter-array and export cable works. Such an assessment should be informed by experiences at other constructed wind farm developments. The assessment needs to be linked to the associated potential environmental impact as a result of a need for increased protection or stabilisation material.



300: Natural England is satisfied with the decision to scope out the need for an EIA on the impact of underwater noise generated on the operation of wind turbine generators (WGT) on benthic habitats.

301: Natural England advise that the footprint of any scour and cable protection needs to be included in the 'loss of habitat' assessment and acknowledge the difficulty of cable installation at Thanet OWF and the associated remedial works that became necessary.

304: Natural England are content to scope out of the EIA impacts of Electro Magnetic Fields (EMF) on benthos.

Table 2.8: Natural England wish to see 'loss of habitat' during the construction period scoped into the EIA. 'Colonisation of Foundations' should also be scoped into the assessment at both construction and decommissioning levels, including assessment of non-native species.

310: We welcome the commitment to micro-site around Annex 1 *Sabellaria spinulosa* reefs.

311: We recommend known areas of *Sabellaria spinulosa* reefs should be avoided in beam trawl surveys

## **2.6 Fish and Shellfish Ecology**

Natural England supports The Marine Management Organisation and Centre for Environment, Fisheries and Aquaculture Science assessment for Fish and Shellfish Ecology.

## **2.7 Marine Mammal Ecology**

Natural England suggest SCANS III data should also be used if the timeline allows.

We recommend that detonation of unexploded ordnance (UXO) is included in the EIA. Whilst Natural England appreciate it can be difficult to quantify, some assumptions based on experience should be made in terms of the assessment of noise impacts to marine mammals.

Natural England note that the project lies, in part, in the Southern North Sea pSAC for harbour porpoise. It is located in the portion of the pSAC with a higher density of harbour porpoise during the winter season. However, Natural England is of the opinion that with appropriate mitigation in place, impacts to the winter portion of the site may be reduced to acceptable levels and as such should be thoroughly assessed in the EIA and HRA.

Natural England suggest the new NOAA thresholds for injury and disturbance to marine mammals are also considered in any assessment of underwater noise impacts to marine mammals. Whilst the SNCBs have yet to fully digest the new thresholds, Natural England would expect the SNCBs to have formed a judgement on the NOAA thresholds by the time the EIA is undertaken.

Natural England considers changes to water quality, operational noise, operational impacts to prey and barrier effects are scoped into the assessment of impact on marine mammals as insufficient evidence is presented in the scoping document as to why these impacts should be scoped out from further assessment and a pathway for impact remains.

## **2.8 Offshore Ornithology**

### *Baseline data collection.*

We note the proposal to submit the DCO application based on a single year of baseline data, pending further discussion in 2017, and note that the applicant's rationale for only collecting 12 months is based on the assumption that existence of other historical surveys can be used to consider the single year of survey is representative. However, we have not seen any plan of how the applicant will use the

different historic data sources, or what action would be taken if this were found to be possible. We further note that the digital aerial surveys commenced in March 2016, meaning that 12 months would end in February 2017. Given that one of the key receptors is red throated diver and peak numbers can occur in March, but the applicant proposes surveys end in February 2017 it is a concern that there is not even one full season for red throated diver of digital aerial surveys proposed to be collected

Natural England continues to advise that two years of baseline survey data (covering two complete “bird seasons” for each key species and season) are a minimum requirement for characterising the baseline. Having less than two years of data will increase the uncertainty around the offshore ornithology impact assessment and will increase the risk for the Applicant that Natural England will not be able to reach firm conclusions regarding the impact assessment.

#### *Historical data*

Natural England acknowledges that there are a number of other sources of existing data for the wider Outer Thames estuary, and specifically the pre- and post- construction surveys for Thanet OWF. However, as requested previously, if the intention is to use these data sets to inform the baseline (thereby negating the need for 2 years of new survey data) there needs to be a clear description as to how these data are to be incorporated. While we acknowledge there is significant survey data, there are a number of considerations in using this data, such as how to account for different survey platforms, survey periods, survey areas, OWF construction/operation status, and recognising that those surveys do not cover the full area covering the proposed extension and buffer. The requirement to collect a minimum of two years survey data is an attempt to capture the inter-annual variation in densities and distribution demonstrated by most marine bird species. The use of existing data to supplement new survey data limited to one year would need to examine this aspect. Once a clear strategy has been outlined, we would welcome further engagement with the Applicant regarding use of the existing evidence to inform the baseline. However, we advise that either a strategy detailing how the existing data will be used is presented now, or the digital aerial surveys continue until at least two full years have been collected. If it subsequently discovered that it is not possible to use the historic data (which is a different survey platform and covers a different area) there is a risk that there is not adequate information to properly characterise the site

#### *Survey period*

We strongly suggest that the preliminary data collection period, prior to further discussion with NE, is extended beyond February 2017 to include March and April 2017 to ensure that one continuous ‘non-breeding’ season is covered. If surveys stop in February there will be less than one complete non-breeding season, which would further add to the uncertainty in the data and would represent a considerable risk.

#### *In summary*

Natural England continues to recommend that two years of survey data are collected to inform the environmental impact assessment. If the applicant intends to submit with less than this, we suggest that data collection continues until April 2017 and that a clear strategy outlining how the existing historical data will be used to inform the baseline is produced and agreed before surveys cease. Alternatively, a full two years of digital aerial survey data covering the proposed extension area and buffer would ensure that the site is adequately characterised.

#### *The study area*

As noted the proximity to the Outer Thames SPA means that one of the key sensitive species is Red Throated Diver.

Recent evidence from constructed wind farms is suggesting that RTDs may be displaced greater

distances than previously thought (e.g. Petersen et al 2014). The current survey area of wind farm plus 4km buffer is considered sufficient for the purpose of baseline characterisation because although the maximum range of displacement can be as high as 13km (Petersen et. al 2014) Natural England believes that the assumption of 100% displacement out to 4km amounts to the appropriate level of precaution. Although there is evidence that displacement exceeds 4km, there is also some evidence of a gradient of displacement effects, and therefore an assessment using no gradient to 4km is considered appropriate as a worst case scenario. However as our understanding of RTDs sensitivity to OWFs increases, the requirements for pre and post construction monitoring may change.

### *CRM and flight height*

Natural England's view is that it is important to reflect the variability and uncertainty around the various input parameters used for collision risk assessment. This includes variability around densities of birds at the project site, flight heights, flight speeds, avoidance rates and turbine rotor speed. Band (2012) recommends that uncertainty around these need to be reflected in the outputs, but the model does not provide a mechanism to statistically model the combined effects of uncertainty across a range of input parameters. A recent update to the Band (2012) model by Masden (2015) has included a simulation approach that allows the incorporation of variability and uncertainty in the collision modelling outputs, producing average collision estimates with associated confidence intervals. Natural England considers that being able to quantify the uncertainty and variability around the collision estimates is important therefore we recommend that the Applicant considers using Masden (2015) to calculate the risk of collision for seabirds present in the project area. As this is a newer version of the Band model, Natural England would welcome further discussions with the Applicant regarding the appropriate data and input parameters to use with the collision risk model.

The BTO report (Thaxter et. al., 2015) which compared the various methods of estimating flight height rated digital aerial, telemetry and radar as the most suitable methods, with some other techniques such as laser rangefinders offering supplementary value. Given the issues around the ability of boat based observers to accurately estimate flight height, we advise that digital aerial survey is the method offering the most reliable means of obtaining accurate flight height data.

We would also welcome the inclusion of any flight height data produced from the ORJIP Bird Collision Avoidance study, using both radar and laser range finders. While the final report is not due until later this year, we understand that the flight height data has already been processed and could be made available. This may represent the best available evidence for this development.

### *Seasons*

Furness (2015) is appropriate to inform the non-breeding seasons for seabirds, however we would caution that there is likely to be over-lap between seasons, and that local evidence sources may also be informative. Furthermore, due to the Furness (2015) work focussing on the non-breeding period, it is not the most suitable reference text to inform breeding seasons, instead it is preferable to rely on local data sources from breeding colonies and from baseline survey data.

### *Disturbance and displacement*

We would recommend reference to the joint SNCB guidance note on displacement (JNCC, 2017) and references therein to assess both sensitivity to displacement and the impact of that displacement, the note can be found here: <http://jncc.defra.gov.uk/page-4274>. The sensitivity reference texts can be used for both construction and operational displacement (we note that Garthe & Huppopp 2004 has been superseded by more up to date reference texts on sensitivity to disturbance/displacement, for example Furness et al., (2013); Bradbury et al., (2014) and Wade et al., (2016).

Furthermore, due to the proximity of the development site to the Outer Thames Estuary SPA we

highlight the need to specifically consider the conservation objectives of this site in regards disturbance and displacement. See link to high level conservation objectives <http://publications.naturalengland.org.uk/publication/4927106139029504> . As stated above, recent evidence suggests that red throated divers may exhibit displacement from offshore wind farms at distances greater than 4km (e.g. Petersen et al 2014). This would mean that birds both outside and within the Outer Thames Estuary SPA may be displaced by the proposed development.

## **2.15 Offshore Designated Sites Summary**

2.15.4: Natural England advise that this assessment should also include Special Protection Areas (SPA) that will be affected in-combination, not just those directly impacted.

650: The export cable corridor passes through Thanet Coast and Sandwich Bay SPA and Ramsar sites and requires assessment.

652: Thanet Coast Site of Special Scientific Interest (SSSI) requires an assessment that includes the export cable corridor.

656: Thanet Coast Marine Conservation Zone (MCZ) requires an assessment of the impacts of the export cable which passes through the MCZ.

657: Goodwin Sands rMCZ is not currently given material consideration in the licensing application process, its status may change if it is put forward for designation prior to the proposed works commencing. The export cable route goes through the northern aspect of the site and therefore requires due consideration.

## **Part 3: Onshore**

### **1.5 Site Selection and Outline Assessment of Alternatives**

We note from paragraph 175 that the Pegwell Bay option (Option 1) appears to be the onshore cable route generally preferred by the applicant at this early stage in that it is shorter and would avoid the need for cable crossing offshore. However, later in the paragraph it appears that both onshore route options are still very much on the table at this stage and the Scoping Report recognises that “Further engineering study and Scoping consultation is required to determine the significance of constraints to each route before a final route selection is made.”

Given that both proposed cable routes have the potential for direct and indirect impacts on designated nature conservation sites Natural England is concerned to note from paragraph 789 in Section 3.6 Onshore Ecology that no ecological survey data has been collected to date for the Sandwich Bay option (Option 2). Unless the applicant has been gathering data since the Scoping Report was completed in December 2016 we suggest that this could make it difficult to provide a robust and objective assessment of the two onshore cable route options with regards to ecological constraints. In particular the potential need to gather survey data on over-wintering birds may be problematic as we understand that the applicant wishes to submit a DCO application within a very tight timeframe. We would be happy to start working with the applicant as soon as possible to address this issue.

Please see our comments under Section 3.6 with regards to the siting of the onshore substation.

### **3.2 Ground Conditions and Contamination**

Given the extremely close proximity of parts of both proposed cable routes and the Substation Area of Interest to designated nature conservation sites we would advise that this section in the Environmental Statement is cross referenced with the sections on Onshore Ecology and Onshore Ornithology and considers the potential for the mobilisation of contaminants to impact on sensitive ecological receptors.

### 3.3 Air Quality

Natural England welcomes the recognition in this chapter that there is the potential for air quality impacts on the natural environment as well as on human health.

We would advise that for designated nature conservation sites the zone within which ecological receptors sensitive to dust are assessed is extended from 50m to 200m (paragraph 692).

We can confirm that when assessing the air quality impacts from construction traffic on designated nature conservation sites sensitive to such impacts a distance of 200m from relevant roads is appropriate. We would consider relevant roads to be those which meet one or more of the criteria set out in Volume 11, Section 3 of the Design Manual for Roads and Bridges (DMRB) guidance which include roads where:

- Daily traffic flows will change by 1,000 annual average daily traffic (AADT) or more.
- HGV flows will change by 200 AADT or more.

Furthermore, when assessing the potential air quality impacts of construction traffic on sensitive ecological receptors we would advise that both critical levels and critical loads of all relevant nitrifying and acidifying compounds are assessed. We would encourage the applicant to make use of data available from the UK Air Pollution Information System (APIS) which provides a searchable database and information on pollutants and their impacts on habitats and species, including critical loads for designated sites (<http://www.apis.ac.uk/>)

We would be happy to work with the applicant to further refine their approach to assessment and data gathering on this topic as at present we note that this section of the Scoping Report (3.3.4) contains no specific references to air pollution impacts on the natural environment.

### 3.4 Water Resources and Flood Risk

We note that there is no cross reference here to the Onshore Ecology section. Given that an overlap exists between key surface water bodies and designated nature conservation sites and that this section acknowledges the risk during construction of contaminated water or sediment laden runoff entering surface water features we would advise the applicant address this when preparing the ES so that all relevant chapters are cross referenced.

### 3.5 Land Use

Natural England would like to provide some corrections with regards to the applicant's comments in this section in relation to Agricultural Land Classification (ALC). Firstly, although we hold a considerable amount of relevant information, ALC is not a Natural England system as is incorrectly stated in paragraph 740. The ALC system has been in place since 1966 and is used by Natural England and other bodies to give advice to planning authorities, developers and the public if development is proposed on agricultural land or other greenfield sites that could potentially grow crops.

The ALC system classifies land into five grades, with Grade 3 subdivided into Subgrades 3a and 3b. The best and most versatile (BMV) land is defined as Grades 1, 2 and 3a by policy guidance (see Annex 2 of the National Planning Policy Framework).

At present this section of the report makes no assessment of the potential impacts of the proposal on BMV land. Figure 3.5 does not subdivide Grade 3 land and appears to have been based on the Provisional Series of ALC maps which were designed at a 1:250,000 scale to provide general strategic guidance on land quality to planners. These maps are not sufficiently accurate for use in assessment of individual fields or development sites and any enlargement of them could be misleading. Further useful background information can be found in Natural England's Technical Information Note 049 - [\*Agricultural Land Classification: protecting the best and most versatile agricultural land\*](#)

An initial search of our records has not found any recent, detailed soil survey work which would be of use to the applicant. Of particular significance will be the direct loss of land under the substation (up to 8ha as per paragraph 754). We would therefore recommend that the applicant undertakes their own agricultural land classification and soil survey of the land to be affected by the proposal. This should normally be at a detailed level e.g. one auger boring per hectare (or more detailed for a small site), supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource i.e. 1.2 metres.

The Environmental Statement should provide details of how any adverse impacts on soils can be minimised. Further guidance is contained in the [Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites](#)

### **3.6 Onshore Ecology**

We can confirm that paragraph 776 correctly lists those designated sites with the potential to be impacted by the onshore elements of the proposed works. Natural England's Conservation Objectives for the Thanet Coast and Sandwich Bay Special Protection Area (SPA) and the Sandwich Bay Special Area of Conservation (SAC) can be found here: <http://publications.naturalengland.org.uk/category/6528471664689152> while details of the Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI), including a list of the notified features, can be viewed here: <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1001128&SiteName=Sandwich&countyCode=&responsiblePerson=>

Please note that Natural England's onshore ecology advice going forwards will be focused on the potential impacts on nationally and internationally designated sites. We are unlikely to make significant comments on other statutory designated sites (such as Prince's Beachland Local Nature Reserve), non-statutory designated sites, UK Habitats of Principal Importance (where these do not fall within a designated site) or protected, notable and invasive species (except where these require a licence, are found within a designated site and are a notified feature or have the potential to impact on a designated site). However, we would strongly encourage the applicant to work with other relevant environmental stakeholders such as the RSPB, Kent Wildlife Trust and County Ecologist to ensure that all potential impacts are addressed and if possible that the project results in a net gain for biodiversity.

We would suggest that in Table 3.8 the Thanet Coast and Sandwich Bay SPA and Ramsar sites are listed separately (as they are in Section 3.7) as there is some variation in their qualifying features. We further note that golden plover and little tern have been missed off the list of qualifying features for the Thanet Coast and Sandwich Bay SPA. Under JNCC review these features were recommended for de-designation, however this review is yet to be ratified, therefore these two species remain features of the SPA and the potential for impacts on them as a result of the proposed activity should be assessed.

Sub-sections 3.6.2.1 to 3.6.2.3 deal with the potential impacts of the project during construction, operation and decommissioning. We would like to see more comprehensive coverage in these sections of all potential impacts, such as air and water quality, which may require cross reference with other chapters of the ES.

With regards to protected species, at this early stage Natural England would refer the applicant to our Standing Advice on protected species which gives up to date guidance on best practice survey methodology: <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications>

As the project progresses our focus will be around European Protected Species (EPS) and we would encourage the applicant to seek guidance from us if they are planning to diverge from the best practice methods for surveys and mitigation measures set out in the Standing Advice.

We note with some concern that the most significant, permanent impact of the onshore elements of the proposal is the potential loss of part of Unit 11 of the Sandwich Bay to Hacklinge Marshes SSSI. Direct

loss of a SSSI is a very serious issue and we would advise the applicant to make every effort to avoid this in their siting of the substation. Any future DCO application which still requires loss of the SSSI to accommodate the substation will need to be supported by an extremely robust assessment of alternatives along with extensive survey work within the SSSI. This is an area of the proposal where Natural England would like to have significant engagement with the applicant as the project progresses with the aim of finding a mutually acceptable solution.

We are pleased to see that paragraph 803 acknowledges the potential need for repairs to buried cables once the project is operational as we are aware that this has certainly been the case for the onshore cabling from the existing wind farm.

Linked to our earlier comments about sub-sections 3.6.2.1 to 3.6.2.3 we are not convinced that Table 3.9 currently provides a comprehensive summary of the impacts potentially arising from the proposal on all relevant onshore ecological receptors. For example, it is hard to see where a potential pollution incident affecting an un-designated but important habitat would fit in.

The sub-sections covering mitigation and the approach to assessment and data gathering currently make no reference to pre and post construction monitoring of important habitats such as saltmarsh and mudflats although it is clear from paragraph 783 that this has taken place with respect to the original TOWF. We would like to re-emphasise the importance of monitoring those habitats which are also designated site interest features to inform the EIA and HRA.

### **3.7 Onshore Ornithology**

In line with our comments on the previous section the applicant should be aware that Natural England will focus its advice on the ornithology impacts of the onshore elements of the proposal on bird species that are notified features of nationally and internationally designated nature conservation sites. We would encourage the applicant to seek advice from other environmental stakeholders on how best to address potential impacts to other Schedule 1 species or Birds of Conservation Concern.

Please see our comments in the previous section with regards to the current, correct interest features of the Thanet Coast and Sandwich Bay SPA. With regards to the Sandwich Bay to Hacklinge Marshes SSSI we would query why this is given a more general description in paragraphs 824 to 827 rather than clearly listing those bird species which are notified features of the SSSI as has been done for the SPA and Ramsar sites? A full list of the notified features can be found by following the link given in the previous section.

Within the sub-section outlining the likely elements of embedded mitigation it should be noted that where timing of works to avoid sensitive periods is proposed that the majority of bird species which are designated site interest features are notified for their presence during the non-breeding season (i.e. they are over-wintering or passage species). Natural England would strongly encourage the applicant to organise the timing of works so as to avoid impacts to such species.

### **3.9 Onshore Landscape and Visual Impact Assessment**

Natural England welcomes the applicant's intention to use Landscape Character Assessment (LCA) as in our view it provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.

We further support the proposed use of the publication *Guidelines for Landscape and Visual Impact Assessment*, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition) as the methodology set out here is almost universally used for landscape and visual impact assessment.

However, we would respectfully decline the applicant's invitation in paragraph 917 to involve us in further consultation on the LVIA methodology. This is because when responding to development

consultations Natural England generally provides detailed advice only on those proposals likely to have a significant adverse impact on nationally designated landscapes such as National Parks and Areas of Outstanding Natural Beauty, none of which are close enough here for this to be the case.

### **3.10 Onshore Noise and Vibration**

We are pleased to see recognition in this section of the potential for noise and vibration to affect sensitive ecological receptors; however we do have some queries about the information set out here.

We agree that offshore construction noise from pile-driving should be scoped in but would query why this doesn't appear to follow through into either paragraph 946 (the spatial scope of the construction noise assessment) or paragraph 948 (the tasks required to progress the EIA)? We would also like some clarity around the justification for the 400m distance from the cable routes given in paragraph 946.

Natural England wishes to make sure that all potential noise impacts on sensitive ecological receptors will be covered and we would be happy to work with the applicant to agree the noise assessment methodology and criteria to ensure it is fit for purpose with regards to ecological receptors.

### **3.13 Onshore Inter-relationships**

Natural England is generally satisfied with the summary of onshore inter-relationships in Table 3.26 insofar as they are relevant to our remit. The only point we would query is whether or not it would be appropriate to make a link between Ground Conditions and Contamination and Onshore Ornithology as the table already provides a link with Onshore Ecology. It seems possible that a contamination or pollution incident could affect bird species as well as other ecological receptors, particularly in terms of affecting their sources of food.

### **3.14 Cumulative Impacts Summary**

We would query why in the respective onshore cumulative impacts sections there is no reference to the onshore elements of the Belgian Interconnector project (NEMO Link) as there is in a number of the offshore sections. Given that NEMO Link will result in cables crossing the designated nature conservation sites and the building of a converter station nearby our view is that the potential for cumulative impacts exists.

For any queries relating to the content of this letter please contact me using the details provided below.

Yours sincerely



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Our Reference: P&E/Environ/EN3/HP01

2 February 2017

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Dear Mr Kent

PLANNING ACT 2008 (AS AMENDED)  
APPLICATION BY VATTENFALL WIND POWER LIMITED FOR AN ORDER GRANTING  
DEVELOPMENT CONSENT FOR THE THANET EXTENSION OFFSHORE WIND FARM

Thank you for providing the Port of London Authority (PLA) an opportunity to review the Environmental Impact Assessment Scoping Report submitted by Vattenfall Wind Power Ltd in respect to an application for development consent for the Thanet Extension Off-shore Wind Farm.

For information, the Port of London Authority is the statutory port and harbour authority for the tidal River Thames between Teddington and the Thames Estuary. Its statutory functions include responsibility for conservancy, hydrographic surveying, dredging, navigation and controlling vessel movements. Its consent is required for the carrying out of all works and dredging in the river. The PLA's functions also include for promotion of the use of the river as an important transport corridor for the movement of freight and passengers.

The proposed scheme is likely to consist of 34 wind turbine generators (maximum hub height of 125m, with maximum rotor diameter of up to 180m) off-shore. The proposed project would have a generation capacity of up to 340mw and produce enough energy to power over 229,000 homes in the UK. Electricity generated would be transported to the shore by off-shore export cables installed within the proposed 'Thanet off-shore export cable corridor'. The project would require on-shore infrastructure, including landfall and transition pits; underground cables and an on-shore substation. Grid connection would be linked to the former Richborough Power Station (although agreement for this is not yet in place).

It is anticipated that the layout of the wind turbine generators would be regular in plan (i.e. set in rows) and aligned northwest – southeast of the existing wind turbines.

From what we have seen of the scheme, we have reservations about it in relation to its potential impact on the safety of maritime operations in one of the busiest parts of UK coastal waters. The proposed extension would result in a significant reduction in space for



safe navigation, impact on the boarding of pilots for vessels inbound and outbound, and may lengthen the shipping routes for large vessels operating on tight schedules to supply the UK market. Given the strategic significance of the Port of London - the UK's second biggest port - for the economy of London, the South East and beyond, it is imperative that further detailed work is done to assess these impacts before any decision is made to proceed. The assessment of navigational impacts to date by the scheme proponents has been superficial and wholly inadequate.

Key aspects of the EIA have been identified within the scoping submission and include: seascape, landscape, visual impact, shipping and navigation, ornithology, commercial fisheries and marine and coastal designated sites. Following a review of the submitted scoping report, it is considered that many of these matters are relevant to the PLA, and our comments are as follows: -

### **1) Navigational Risk and Shipping**

We would expect to see a full navigational risk assessment in order to establish the level of risk associated with the impacts identified, and which are summarised in table 2.21 (p131 of the Scoping Report). The scoping report makes very limited reference to pilot boarding operations. The impacts on the safety of pilot boarding and landing operations in the area need to be fully assessed within the navigational risk assessment.

The existing windfarm has already resulted in the relocation of boarding and landing operations for vessels to the River Thames and River Medway. This has resulted in Estuary Services Limited (ESL) having to invest in bigger pilot vessels to cope with the longer transit times. An extension to the windfarm is likely to push the boarding and landing area further out from the shore, causing a further impact on boarding and landing operations, and consequently on PLA pilot operations. As well as the increased navigational risk, which should be identified in the Navigational Risk Assessment, there is also a risk to the business for ESL and consequently to the PLA, Medway Ports and all commercial shipping using the North East Spit boarding and landing areas.

The scoping report makes reference to the potential interference with marine navigational equipment (particularly radar communications), but only for vessels. The potential impact on PLA equipment also needs to be assessed within the navigational risk assessment, as we need to ensure that London Vessel Traffic Services (VTS) is able to maintain a full traffic image at all times. This has been a relevant and well understood issue with all other comparable wind farm developments in the Thames Estuary.

Whilst some consideration has been given, the PLA expect the Scoping Report to refer to the impact of the development on existing shipping routes both into and out of the Thames Estuary. From the PLA's perspective, if vessels are diverted as a result of the development it has the potential to increase our costs. Whilst this is very much a commercial issue, it will still be an impact of the scheme (on the PLA) and one that must be assessed.

### **2) Coastal Processes**

A significant extension to the windfarm is planned and while previous surveys of the wind farm have shown minimal impacts on coastal processes the edge of the proposed extension is now only 2.5km from the South Falls. Although the sand bank has exhibited stability over time, it is subject to routine survey by the MCA due to its significance for shipping entering and leaving the Thames Estuary. This and other critical areas must be considered in the assessment of coastal processes.

### 3) Environmental Factors

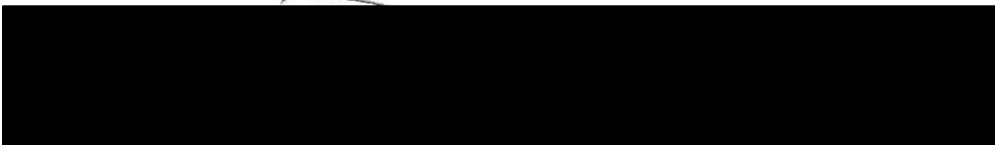
The scoping report appears to be broadly appropriate, and only two observations come to light: -

- The presented sediment samples are quite old and mobile sediment may be very different now as a result of changes in environmental factors. These must be updated.
- It is recommended that air emissions from the construction plant as well as the vessels should also be included in the construction and maintenance assessment.

The PLA must agree the parameters of these elements of the EIA prior to commencement, and prior to the final submission of the Environmental Statement in support of the forthcoming application for development consent for the Thanet Extension Off-shore Wind Farm.

If you require any further information, please contact me.

Yours sincerely



PP HELENA PAYNE BA(Hons), MA, MRTPI  
SENIOR PLANNING OFFICER



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Your Ref: 170105\_EN010084-000022

Our Ref: 29669

2<sup>nd</sup> February 2017

Dear Richard,

**Re: Scoping Consultation  
Application for an Order Granting Development Consent for the proposed  
Thanet Extension Offshore Wind Farm**

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Our response focuses on health protection issues relating to chemicals and radiation. Advice offered by PHE is impartial and independent.

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. When operational, windfarms should not produce emissions, pollutants, or waste products. However, there is potential for impacts to arise during the construction and decommissioning phases from the transport of material and equipment (e.g. accidental leaks, spills, and releases) or from movement of material off-site, if not properly managed (e.g. associated with contaminated land or dredged sediment). PHE would expect the applicant to adhere to best practice guidance during these phases and ensure that potential impacts are assessed and minimised.

We welcome the promoter's proposal to include a Health Impact Review (HIR) within the ES, which will review the health impact of onshore aspects of the project that will be presented in other chapters (i.e. air quality, waste, contaminated land etc.). In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. Any assessments undertaken to inform the ES should be proportionate to the potential impacts of the proposal, therefore we accept that, in some circumstances particular assessments may not be relevant to an application, or that an assessment may be adequately completed using a qualitative rather than quantitative methodology. In cases where this

decision is made the promoters should fully explain and justify their rationale in the submitted documentation.

PHE 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.

The attached appendix outlines generic areas that should be addressed by all promoters when preparing ES for inclusion with an NSIP submission. We are happy to assist and discuss proposals further in the light of this advice.

Yours sincerely,

Environmental Public Health Scientist

[nsipconsultations@phe.gov.uk](mailto:nsipconsultations@phe.gov.uk)

*Please mark any correspondence for the attention of National Infrastructure Planning Administration.*

## **Appendix: PHE recommendations regarding the scoping document**

### **General approach**

The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA<sup>1</sup>. It is important 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.

It is not PHE's role to undertake these assessments on behalf of promoters as this would conflict with PHE's role as an impartial and independent body.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES<sup>2</sup>.

The following text covers a range of issues that PHE would expect to be addressed by the promoter. However this list is not exhaustive and the onus is on the promoter to ensure that the relevant public health issues are identified and addressed. PHE's advice and recommendations carry no statutory weight and constitute non-binding guidance.

### **Receptors**

The ES should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land. Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

### **Impacts arising from construction and decommissioning**

Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe

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<sup>1</sup> Environmental Impact Assessment: A guide to good practice and procedures - A consultation paper; 2006; Department for Communities and Local Government. Available from: <http://webarchive.nationalarchives.gov.uk/20100410180038/http://communities.gov.uk/planningandbuilding/planning/sustainability/environmental/environmentalimpactassessment/>

<sup>2</sup> DCLG guidance, 1999 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf>

monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.

### **Emissions to air and water**

Significant impacts are unlikely to arise from installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters. However, PHE has a number of comments regarding emissions in order that the EIA provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these:

- should include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary
- should encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment
- should consider the construction, operational, and decommissioning phases
- should consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts
- should fully account for fugitive emissions
- should include appropriate estimates of background levels
- should identify cumulative and incremental impacts (i.e. assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e. rail, sea, and air)
- should include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data



- should compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels)
  - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1
  - This should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion
- should identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

Whilst screening of impacts using qualitative methodologies is common practice (e.g. for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure.

#### *Additional points specific to emissions to air*

When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these:

- should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)
- should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions)
- should include modelling taking into account local topography

#### *Additional points specific to emissions to water*

When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:

- should include assessment of potential impacts on human health and not focus solely on ecological impacts
- should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)
- should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc) alongside assessment of potential exposure via drinking water

## **Land quality**

We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.

Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed<sup>3</sup> and the potential impact on nearby receptors and control and mitigation measures should be outlined.

Relevant areas outlined in the Government's Good Practice Guide for EIA include:

- effects associated with ground contamination that may already exist
- effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination
- impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.

## **Waste**

The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).

For wastes arising from the installation the EIA should consider:

- the implications and wider environmental and public health impacts of different waste disposal options

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<sup>3</sup> Following the approach outlined in the section above dealing with emissions to air and water i.e. comparing predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as Soil Guideline Values)

- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

## **Other aspects**

Within the EIA PHE would expect to see information about how the promoter would respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

The EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the these Regulations.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report<sup>4</sup>, jointly published by Liverpool John Moores University and the HPA, examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: "Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible." PHE supports the inclusion of this information within EIAs as good practice.

## **Electromagnetic fields (EMF) [include for installations with associated substations and/or power lines]**

This statement is intended to support planning proposals involving electrical installations such as substations and connecting underground cables or overhead lines. PHE advice on the health effects of power frequency electric and magnetic fields is available in the following link:

<https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields>

There is a potential health impact associated with the electric and magnetic fields around substations, and power lines and cables. The field strength tends to reduce with distance from such equipment.

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<sup>4</sup> Available from: <http://www.cph.org.uk/wp-content/uploads/2012/08/health-risk-perception-and-environmental-problems--summary-report.pdf>

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

## **Policy Measures for the Electricity Industry**

The Department of Energy and Climate Change has published a voluntary code of practice which sets out key principles for complying with the ICNIRP guidelines:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf)

Companion codes of practice dealing with optimum phasing of high voltage power lines and aspects of the guidelines that relate to indirect effects are also available:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf)

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/224766/powerlines\\_vcop\\_microshocks.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf)

## **Exposure Guidelines**

PHE recommends the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP). Formal advice to this effect was published by one of PHE's predecessor organisations (NRPB) in 2004 based on an accompanying comprehensive review of the scientific evidence:-

<http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/>

Updates to the ICNIRP guidelines for static fields have been issued in 2009 and for low frequency fields in 2010. However, Government policy is that the ICNIRP guidelines are implemented in line with the terms of the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):

[http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/PublicHealth/HealthProtection/DH\\_4089500](http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/PublicHealth/HealthProtection/DH_4089500)

## **Static magnetic fields**

For static magnetic fields, the ICNIRP guidelines published in 2009 recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council Recommendation. 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.

### **Power frequency electric and magnetic fields**

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 published in 1998 give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively  $5 \text{ kV m}^{-1}$  (kilovolts per metre) and  $100 \text{ }\mu\text{T}$  (microtesla). The reference level for magnetic fields changes to  $200 \text{ }\mu\text{T}$  in the revised (ICNIRP 2010) guidelines because of new basic restrictions based on induced electric fields inside the body, rather than induced current density. 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.

### **Long term effects**

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)**

SAGE was set up to explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government:

<http://www.emfs.info/policy/sage/>

SAGE issued its First Interim Assessment in 2007, making several recommendations concerning high voltage power lines. Government supported the implantation of low cost options such as optimal phasing to reduce exposure; however it did not support the option of creating corridors around power lines on health grounds, which was considered to be a disproportionate measure given the evidence base on the potential long term health risks arising from exposure. The Government response to SAGE's First Interim Assessment is available here:

[http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_107124](http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124)

The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages (see first link above).

**Liaison with other stakeholders, comments should be sought from:**

- the local authority for matters relating to noise, odour, vermin and dust nuisance
- the local authority regarding any site investigation and subsequent construction (and remediation) proposals to ensure that the site could not be determined as 'contaminated land' under Part 2A of the Environmental Protection Act
- the local authority regarding any impacts on existing or proposed Air Quality Management Areas
- the Food Standards Agency for matters relating to the impact on human health of pollutants deposited on land used for growing food/ crops
- the Environment Agency for matters relating to flood risk and releases with the potential to impact on surface and groundwaters
- the Environment Agency for matters relating to waste characterisation and acceptance
- the Clinical Commissioning Groups, NHS commissioning Boards and Local Planning Authority for matters relating to wider public health

## Annex 1

### Human health risk assessment (chemical pollutants)

The points below are cross-cutting and should be considered when undertaking a human health risk assessment:

- The promoter should consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- Where available, the most recent United Kingdom standards for the appropriate media (e.g. air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used
- When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account
- When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach<sup>5</sup> is used

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<sup>5</sup> Benford D et al. 2010. Application of the margin of exposure approach to substances in food that are genotoxic and carcinogenic. Food Chem Toxicol 48 Suppl 1: S2-24



## **Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

### **Application by Vattenfall Wind Power Limited for an Order Granting Development Consent for the Thanet Extension Offshore Wind Farm**

#### **Royal Mail Group Limited comments on information to be provided in applicant's Environmental Statement**

##### **Introduction**

Reference the letter from PINS to Royal Mail dated 5 January 2017 requesting Royal Mail's comments on information that should be provided in Vattenfall Wind Power Limited's Environmental Statement.

Royal Mail's consultants BNP Paribas Real Estate have reviewed the applicant's Scoping Report dated 13 December 2016 as prepared by Royal Haskoning DHV.

##### **Royal Mail-relevant information**

Royal Mail is responsible for providing efficient mail sorting and delivery nationally. As the Universal Service Provider under the Postal Services Act 2011, Royal Mail has a statutory duty to deliver mail to every residential and business address in the country as well as collecting mail from all Post Offices and post boxes six days a week.

Royal Mail's postal sorting and delivery operations rely heavily on road communications. Royal Mail's ability to provide efficient mail collection, sorting and delivery to the public is sensitive to changes in the capacity of the highway network.

Royal Mail is a major road user nationally. Disruption to the highway network and traffic delays can have direct consequences on Royal Mail's operations, its ability to meet the Universal Service Obligation and to comply with the regulatory regime for postal services, thereby presenting a significant risk to Royal Mail's business.

Royal Mail has operational facilities in Sandwich (Sandwich Delivery Office, King Street Sandwich CT13 9AA) and Ramsgate (Ramsgate Delivery Office, Winfrid Road, Ramsgate, CT11 7RA) as well as numerous other operational facilities throughout Kent.

In exercising its statutory duties Royal Mail's vehicles use, on a daily basis, all of the main roads that will be affected by additional traffic arising from the construction of the proposed Thanet Extension Offshore Wind Farm.

Royal Mail therefore wishes to ensure the protection of its future ability to provide an efficient mail sorting and delivery service to the public in accordance with its statutory obligations which may be adversely affected by the construction of this proposed scheme.





## **Royal Mail's comments on information that should be provided in Vattenfall Wind Power Limited's Environmental Statement**

It is noted from section 3.11.2 of the Scoping Report (which addresses Traffic and Transport) that:

- ***“Daily traffic demand may be significant with a large component being HGV deliveries and also the potential requirement for abnormal loads to consider; and***
- ***Delays and diversions to highway users as a result of road works during the cable installation may be significant.”***

Paragraph 969 of the Scoping Report flags the risk of:

***“Increasing traffic congestion impacting upon commuters and seasonal tourist traffic with associated effects including:***

- ***o Driver delay;”***

Royal Mail notes paragraphs 975 and 976 of the Scoping Report which confirm that:

***“Onshore cumulative impacts will be considered as part of the EIA process. Projects that may act cumulatively with Thanet Extension will be identified during consultation and following a review of available information. These projects will then be included in the CIA and therefore are scoped into the assessment.***

***The assessment would consider the potential for significant cumulative impacts to arise as a result of the construction and decommissioning of Thanet Extension in the context of other developments that are consented or at application stage.”***

Royal Mail's key concern relates to the risk of cumulative traffic impact arising from the impact of the construction traffic from this proposed scheme alongside the additional traffic that will result from the construction / operation of other Nationally Significant Infrastructure Projects (eg Richborough Connection and Manston Airport) and major developments in the area.

Generally, the applicant's headline scope for the Traffic and Transport section of the Environmental Statement looks adequate to Royal Mail. However, Royal Mail has the following specific comments / requests:

1. The scoping report helpfully identifies the need to assess cumulative traffic effects arising from other major developments in the area, but it does not specify what these developments are. Royal Mail considers that very careful attention should be given to the potential for cumulative traffic impact during the construction phase and requests that the list of projects that may act cumulatively should be consulted upon and agreed with all major road users, including Royal Mail.
2. Royal Mail requests that the Traffic and Transportation section of the Environmental Statement includes information on the needs of major road users (including Royal Mail) and acknowledges the requirement to ensure that major road users are not disrupted though full consultation at the appropriate time in the DCO and development process.

Royal Mail is able to supply the applicant with information on its road usage / trips if required.



Should PINS or Vattenfall Wind Power Limited have any queries in relation to the above then in the first instance please contact Jennifer Douglas ([jennifer.douglas@royalmail.com](mailto:jennifer.douglas@royalmail.com)) of Royal Mail's Legal Services Team or Daniel Parry-Jones ([daniel.parry-jones@bnpparibas.com](mailto:daniel.parry-jones@bnpparibas.com)) of BNP Paribas Real Estate.

DRAFT

Date: 2 February 2017  
Your Ref: 170105\_EN010084-000022  
Direct Dial: 01843 577140  
E.mail: iain.livingstone@thanet.gov.uk



Mr Richard Kent  
3D Eagle Wing  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN

Dear Mr Kent,

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

**Application by Vattenfall Wind Power Limited for an Order Granting Development Consent for the Thanet Extension Offshore Wind Farm**

Thank you for your consulting Thanet District Council on the Scoping Report for the proposed Development Consent Order for the Thanet Extension Offshore Wind Farm.

Thanet District Council welcomes the opportunity to provide comments at an early stage in the project. We will not outline the scope of issues as outlined in the scoping report, but we will comment on the adequacy of the proposed assessment of the environmental effects within the scoping report.

**Scoping Report**

*Overall approach to Environmental Statement Scoping*

The proposed temporal scale of the ES includes construction, operation and decommissioning of the proposed development and is considered comprehensive and in accordance with best practice.

With regard to the decommissioning stage, it is acknowledged that the further into the future any assessment is made, the less reliance that may be placed on the outcome. However, there are a number of occasions within the topic specific chapters whereby in reference to the decommissioning phase the following statement or similar is made:

“No decision has been made regarding the final decommissioning policy for the substation, as it is recognised that industry best practice, rules and legislation change over time. The decommissioning methodology cannot be finalised until immediately prior to decommissioning; but would be in line with relevant policy at that time.”

Whilst this is accepted, it is recommended that the effects are considered on the basis of current best practice and scientific understanding with recommended mitigation such as a decommissioning method statement to be provided before commencement of decommissioning works etc. This will then allow the determining

authority to secure future safeguards for the decommissioning of the development through condition/or legal agreement to be discharged prior to decommissioning. Decommissioning should not be permitted without prior consent and safeguard in place.

### *Climate Change*

Sub section 19 of Part 1 of Schedule 4 of the EIA Regs states that an ES must include: "A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors (underlining added)."

The Scoping Report does not make reference to climate change in terms of the quantification of the carbon savings achieved taking into account the carbon footprint of the manufacture, construction and decommissioning of the wind farm extension. The true nature of the carbon saving nature of the project is identifiable through a Life Cycle Analysis of the project. Whether this falls within the remit of the EIA or elsewhere is arguable but the Council is advised to request its inclusion either as a standalone report or part of the EIA to ascertain the exact beneficial effect on CO2 emissions from the project such that it can inform the planning balance when considering any adverse effects of the development.

Ideally, climate change risks, and adaptation needs, should also be incorporated into a project as early as possible, including in the environmental impact assessment (EIA) process, so the most cost-effective means for ensuring a development's resilience to climate change is factored in before construction starts.

The existing EIA directive (2011/92/EU) on which the EIA Regs were transposed is non-descriptive on climate change effects except by reference to 'climatic factors' as identified above.

The 2014 EIA directive (2014/52/EU), which is to be transposed into UK law on May 17th 2017, is however much clearer on the issue. Part 5(f) of the amended Schedule 44 states an ES must include a description of the likely significant effects of the development resulting from:

f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change (underlying added).

Whilst it is acknowledged that the application for a scoping opinion prior to the transposition of the new directive means any forthcoming application remains under the current EIA Regs, the absence of a climate change assessment could still be challengeable.

Notwithstanding the legality of the issue, climate change adaption and resilience assessment is promoted by the Institute of Environmental Management and Assessment and identified in their Environmental Impact Assessment Guide to Climate Change Resilience and Adaption (November 2015) and is considered best practice.

Moreover in this instance it may well be that the applicant inherently considers the issue when developing its windfarm and infrastructure such that demonstration of this should not be overly onerous. In the unlikely situation that it has been overlooked the

assessment of the effects are mutually beneficial. This applies equally for the onshore and offshore elements of the proposed development.

### *Cumulative Impacts*

The applicant should be reminded that the onus is on them to ensure they are satisfied that the Cumulative Impact Assessment identifies and assesses all 'relevant projects' as defined in the advice note. If and where projects that fall within the defined guidance are to be excluded robust justification should be provided.

A list of projects for the inter project cumulative effects (submitted or approved projects) that should be considered include:

- OL/TH/16/0550 Manston Airport - Provision of buildings/floorspace for the following uses; Employment (Use Classes B1a-c/B2/B8), Residential (Use Classes C3/C2), Retail (Use Classes A1-A5), Education and other non-residential institutions (Use Class D1), Sport and Recreation (Use Class D2), Hotel (Use Class C1), Open space/landscaping (including outdoor sport/recreation facilities), Car Parking, Infrastructure (including roads and utilities), Site preparation and other associated works.
- OL/TH/14/0050 | Application for outline planning permission including access for the erection of 785 dwellings, highways infrastructure works (including single carriageway link road), primary school, small scale retail unit, community hall, public openspace
- OL/TH/15/0187 | Outline application for the redevelopment of the existing site for up to 120 dwellings including access, following demolition of existing buildings | Flambeau Europlast Ltd, Manston Road, Ramsgate

### *Offshore Landscape and Visual Impact*

The Scoping Report identifies the following issues for further consideration as part of the EIA and is considered comprehensive:

- Temporary effects on coastal/seascape character
- Temporary effects on landscape character
- Temporary visual effects on views
- Long-term effects on coastal/seascape character
- Long-term effects on landscape character
- Long-term visual effects on views;
- Effects relating to decommissioning.

A thorough cumulative effects assessment is proposed to include other offshore windfarms in the study area, the most important of which are the London Array and Kentish Flats as the nearest.

A viewpoint from the highest point on the District around the centre of the District should be included within the SLVIA, and an additional view point from Minnis Bay in Birchington. It is anticipated that the identified ZTV is taken from the tip of the blade and therefore the LVIA will address the change in vertical scale of the proposed turbines in comparison to the existing. We would welcome the input of KCC'S Landscape Officer on this part of the EIA.

The use of CGIs is welcomed to present both the existing and proposed seascape from the viewpoints identified and these should be utilised to show cumulative effects from each view point where applicable.

#### *Onshore ground conditions and contamination*

The principle effect of the proposed development relates to excavation of the cable trench and soil/spoil handling procedures during construction and decommissioning which have the potential for mobilising contaminants (if present).

A Code of Construction Practice (CoCP) is to be employed during construction/decommissioning works to ensure that all appropriate and good practice guidelines (including the now withdrawn Pollution Prevention Guidelines (PPG)) are followed. It is recommended that this should form part of a CEMP produced as part of the EIA or secured by condition of any permission thereof.

An assessment of the operational impact of the development is proposed to be scoped out of the EIA. This is deemed acceptable given the nature and operational function of the proposed onshore development i.e. there will be no ground excavation or soil/spoil handling, and all infrastructure is to remain in situ.

#### *Onshore Air Quality*

Additional comments will be forthcoming from the Council regarding scope of air quality assessments, however our initial comment is below.

This part of the Scoping Report relates to the air quality impacts during construction, operation and decommissioning of the land based elements of the proposed development.

The Scoping Report identifies the following issues for inclusion in EIA for the construction period:

- Construction dust impacts – soiling of surfaces and effects on human health
- Increase in traffic based air quality pollutant concentrations – human health and nitrogen deposition on sensitive habitats.

The scope of this assessment includes assessment of the likely effects of vehicles movements within the Thanet Urban Area AQMA and is deemed comprehensive. Data on nitrogen deposition rates and dust in the European sites will need to be utilised and cross referenced in the ecology assessment and the Habitat Regulations Assessment required to support the application.

With regard to the operational impacts of the proposed development the Scoping Report states:

“Operation of the proposed built infrastructure (the substation) and maintenance activities would not lead to a significant change in vehicle flows within the study area. Operational air quality impacts are therefore likely to be negligible and therefore it is suggested that, subject to consultation with relevant consultees (i.e. the Environment Agency and Local Authorities) and feedback from this Scoping Report, this impact will be scoped out from further consideration within the EIA.”

It is considered that while this may be the case, further clarification on the number and type of vehicles visiting the site during operation and maintenance is provided in the EIA to justify this position or cross reference to the transport assessment is made where relevant.

For example, in terms of operation the transport assessment makes reference to vehicle movements to and from the primary base port for the operation and management of the offshore elements of Thanet Extension in Ramsgate. This is not referenced in this chapter of the Scoping Report. The air quality impact of this should be considered as appropriate in the assessment and screened out if necessary.

A cumulative impacts assessment is proposed for the construction and decommissioning phase activities where these may occur concurrently with other similar activities associated with other developments within the study area. A list of cumulative sites/activities has not been provided as part of the Scoping Report albeit it is suggested that developments within 1km of the proposed Onshore Area of Interest are included.

It is however recommended that the temporal/spatial scope of the assessment is informed by the traffic assessment identifying links and zones whereby the volume and composition of traffic exceeds the thresholds set out in Table 6.3 Land-Use Planning & Development Control: Planning for Air Quality 2017.

It is further recommended that an outline Construction Environmental Management Plan or commitment to a CEMP is made within the EIA and relevant chapter to secure mitigation measures and ensure they are implemented during construction by the appointed.

#### *Water Resources and Flood Risk*

The scope of the proposed assessment on existing baseline conditions appears comprehensive.

However, of note is the lack of reference to climate change resilience (the future baseline) (see section 2.1 of this report). It is recommended that the assessment takes account of whether the proposed substation location would be either outside of the flood risk area for its operational life or considered resilient to flooding during its life in light of climate change. The extent of the fluvial and tidal flood zone is anticipated to increase as a result of climate change.

Consideration should also be given to the position and ongoing maintenance viability of the cable and landfall point in relation to anticipated coastal erosion rates and sea level rise.

#### *Onshore Land use*

The proposed substation location and ancillary uses lies within Thanet District and irrespective of option 1 or 2 and will result in the loss of c.8ha of grade 2 agricultural land.

It is not considered that the scale and location of the loss will result in a significant effect on farming practices, agricultural productivity or agricultural land at more than the parish level.

Effects on PRoWs/cycle paths and public health and safety during construction will be temporary and typically dealt with through standard construction practices. DHA would be comfortable for these to be dealt with by way of a Construction Environmental Management Plan rather than necessitating inclusion in the EIA as proposed

There are no significant permanent effects on land use anticipated in the Thanet District as a result of the proposed development. Should the applicant wish to include a land use assessment within the EIA the proposed scope appears acceptable and we have no further comments to make. Exclusion of the topic from the EIA could be reasonably justified and reduce the size and burden of the ES on the decision maker ensuring it focuses on the 'likely significant effects' only.

### *Onshore Noise and Vibration*

Additional comments will be forthcoming from the Council regarding scope of onshore noise and vibration assessments; however our initial comment is below.

The Scoping Report identifies the following issues for further consideration as part of the EIA during construction:

- Activities carried out on the surface along the proposed Onshore Cable Route (mainly earth moving and excavation);
- Construction activities at the substation site including any potential landscaping;
- HDD activities;
- Heavy goods vehicles servicing the proposed Onshore Cable Route and substation, delivering or removing materials (including spoil and fill) and plant; and
- Vibration to be considered as an issue where significant piling works are required.

It is considered that this identifies all the likely main impacts of the construction phase of the development, however it is not clear from the Scoping Report whether these effects will be considered with regard to noise sensitive areas (including Stonelees Golf Course, Pegwell Bay Country Park, long distance paths and other local PRow) as identified in the operational noise assessment (see below). It should be reiterated to the applicant that this is required and that such an assessment should inform the HRA assessment with regard to the continued effectiveness of the Country Park to manage recreational pressure on the wider European site if exposed to significant noise intrusion.

The potential permanent impacts of operational noise from the substation are identified as:

- The inherent operational noise from the proposed substation, and its characteristics, upon noise sensitive premises (including residential properties at Stonelees) and noise sensitive areas (including Stonelees golf course, Pegwell Bay Country Park, long distances paths and other local PRow);
- The proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and
- The proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife (nature conservation designation located at Pegwell Bay (NNR, SPA, Ramsar site, SSSI, SAC).

Noise and vibration impacts relating to operational or maintenance vehicular traffic has been scoped out of the EIA. Whilst it is agreed that a significant effect is improbable this should be reviewed once precise operational vehicle movements have been ascertained.

In the absence of sources of vibration associated with the operational scheme this has been scoped out of further assessment.



Reference to current British Standard assessment methodologies has been made and a cumulative effects assessment is proposed.

#### *Socio-Economic*

The assessment of the proposed airfield on the tourism industry within Thanet should be considered with reference to the landscape and visual impact and noise assessments and cross referenced where necessary.

No information on how the total direct job numbers have been calculated is provided, and this reinforces the concerns raised earlier in our comments about the delivery of the project and lack of business plan or similar document.

Overall the proposed assessment methodology is generic but comparable to other socio-economic assessments and we have therefore no comments to make on this. The overall scope of the assessment appears generally comprehensive.

#### *Archaeology and Heritage*

The potential for significant effects on the setting of listed buildings is limited for both the construction, operational and decommissioning stages of the proposed onshore development when considering the temporal nature of the works and the absence of built form in proximity to the heritage assets. Its proposed inclusion in the EIA is assumed to be for completeness and on a precautionary premise. The applicant is advised to keep this as succinct as possible, as only proportional assessment relative to the likely scale of effects is considered necessary.

#### *Proposed Structure of ES*

The inclusion of 'project need' within the ES is questioned, given the ES is an objective assessment of the environmental effects of a proposal, irrespective of the need, and should avoid promotional material. In accordance with best practice extensive standalone chapters on planning policy are deemed unnecessary additions to ES which are already extensive in size. Relevant policies should be briefly referenced in the topic chapters where required.

#### *Other matters*

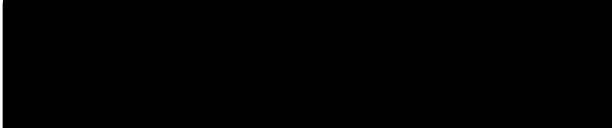
The Council would expect the applicant to enter into a Planning Performance Agreement with the Council and Kent County Council to ensure that adequate resources for handling the pre-application process and subsequent NSIP are available and to encourage joint working between the applicant and statutory consultees.

The Council also request an Outline Construction Environmental Management and commitment from the applicant at this stage. This will ensure that a framework from environmental issues and management procedures to be adopted during construction works identified in the ES, and will ensure that any Principal Contractor(s) is fully aware of the environmental issues that could affect the construction of the Proposed Development and that the identified mitigation measures in the ES are transposed on site. This should be included within the submission documentation with the application. The Council also request a pre-commencement condition requiring a full detailed CEMP to be submitted and approved prior to construction works commencing and agreed to by the appointed contractor.

The scope of the other identified issues is considered to be comprehensive however we anticipate and welcome the input from Kent County Council regarding Transportation, Archaeology and Landscape impact, and the Environment Agency and Natural England on other environmental matters.

These comments are made without prejudice to the Council's formal position on the Development Consent Order pre-application or application process. Additional comments will be forthcoming following receipt of internal consultee responses.

Yours sincerely

A large black rectangular redaction box covering the signature of the sender.

Iain Livingstone  
**Planning Applications Manager**



The Coal  
Authority

200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

0345 762 6848  
01623 637 119 (Planning Enquiries)  
[planningconsultation@coal.gov.uk](mailto:planningconsultation@coal.gov.uk)  
[www.gov.uk/coalauthority](http://www.gov.uk/coalauthority)

Mr R. Kent – Senior EIA and Land Rights Advisor  
The Planning Inspectorate

**[By Email: [environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)]**

Your Ref: EN010084

30 January 2017

Dear Mr Kent

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

**The Thanet Extension Offshore Wind Farm Development Consent Order – EIA Scoping Consultation**

Thank you for your letter of 5 January 2017 seeking the views of the Coal Authority on the EIA Scoping Opinion for the above proposal.

The Coal Authority is a non-departmental public body sponsored by the Department for Business, Energy and Industrial Strategy. As a statutory consultee, the Coal Authority has a duty to respond to planning applications and development plans in order to protect the public and the environment in mining areas.

The Coal Authority Response:

I have reviewed the proposals and confirm that the proposed development would be located outside of the defined coalfield. Accordingly, the Coal Authority has no issues that it would wish to see considered as part of the Environmental Statement for this proposal.

Yours sincerely

*Mark Harrison*

**Mark E. N. Harrison** *B.A.(Hons), DipTP, LL.M, MInstLM, MRTPI*  
**Principal Manager - Planning & Local Authority Liaison**

**From:** [Stephen Vanstone](#)  
**To:** [Environmental Services](#)  
**Cc:** [Thomas Arculus](#); [Nick Dodson](#); [Trevor Harris](#)  
**Subject:** RE: EN010084 – Thanet Extension Offshore Wind Farm – EIA Scoping Notification and Consultation  
**Date:** 26 January 2017 11:35:23  
**Attachments:** [170105\\_EN010084\\_Letter\\_to\\_stat\\_cons\\_Scoping\\_AND\\_Reg\\_9\\_Notification.pdf](#)

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Good morning Richard,

Please be advised that Trinity House consider the following should be considered in the environmental statement:

#### Navigation Risk Assessment

- Comprehensive vessel traffic analysis in accordance with MGN 543.
- The possible cumulative and in-combination effects on shipping routes and patterns should be fully assessed, paying particular attention to the safe navigable sea room to the west of this proposed development.
- The impact this proposal will have on the operating practices of Port of London Authority, Peel Ports Medway, Port of Ramsgate and Dover Harbour Board and how this project will affect their customers.
- Proposed layouts, which should conform with MGN 543.

#### Risk Mitigation Measures

- A number of risk mitigation measures are detailed in MGN 543 and should be considered, as deemed necessary by the developer or specifically advised by an appropriate authority. One mitigation measure that we feel must be assessed is the provision of aids to navigation and should take into account both existing Trinity House aids to navigation in the area and the locally owned Thanet North Lighted Buoy, as well as future proposals to mark the extension both in its construction and operational phases. The general principles for such marking is outlined in IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) Recommendation O-139 on the Marking of Man-Made Offshore Structures document but must ultimately be agreed with Trinity House. Moreover, the applicant should note the necessity for any deployed aids to navigation to meet the internationally recognised standards of Availability.
- Safety Zone Applications should also be considered.
- A decommissioning plan, which includes a scenario where on decommissioning and on completion of removal operations an obstruction is left on site (attributable to the wind farm) which is considered to be a danger to navigation and which it has not proved possible to remove, should be considered. Such an obstruction may require to be marked until such time as it is either removed or no longer considered a danger to navigation, the continuing cost of which would need to be met by the developer/operator.
- The possible requirement for navigational marking of the export cables and the vessels laying them. If it is necessary for the cables to be protected by rock armour, concrete mattresses or similar protection which lies clear of the surrounding seabed, the impact on navigation and the requirement for appropriate risk mitigation measures needs to be assessed.

Kind regards,

Steve Vanstone  
Navigation Services Officer  
Trinity House

---

**From:** Environmental Services [mailto:environmentalservices@pins.gsi.gov.uk]

**Sent:** 05 January 2017 16:11

**To:** Navigation  
**Cc:** Thomas Arculus; Nick Dodson  
**Subject:** EN010084 – Thanet Extension Offshore Wind Farm – EIA Scoping Notification and Consultation

Dear Sir/Madam

Please see the attached correspondence on the proposed Thanet Extension Offshore Wind Farm.

Please note the deadline for consultation responses is 2 February 2017 and is a statutory requirement that cannot be extended.

Kind regards,

Richard Kent  
Senior EIA and Land Rights Advisor  
Major Casework Directorate  
The Planning Inspectorate, 3D Temple Quay House, Temple Quay, Bristol BS1 6PN

Direct Line: 0303 444 5895

Helpline: 0303 444 5000

Email: [environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)

Web: [www.gov.uk/government/organisations/planning-inspectorate](http://www.gov.uk/government/organisations/planning-inspectorate) (The Planning Inspectorate)

Web: [www.infrastructure.planninginspectorate.gov.uk](http://www.infrastructure.planninginspectorate.gov.uk) (National Infrastructure Planning)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

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Customer Services: 0303 444 5000  
e-mail: [environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk)

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**(Sent by Email)**

Your Ref:

Our Ref: 170105\_EN010084-000022

Date: 05 January 2017

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Dear Sir/Madam

**Planning Act 2008 (as amended) and The Infrastructure Planning  
(Environmental Impact Assessment) Regulations 2009 (as amended) –  
Regulations 8 and 9**

**Application by Vattenfall Wind Power Limited for an Order Granting  
Development Consent for the Thanet Extension Offshore Wind Farm**

**Scoping consultation and notification of the applicant's contact details and  
duty to make available information to the applicant if requested**

The applicant has asked the Secretary of State for its opinion (a scoping opinion) as to the information to be provided in an environmental statement relating to the project. You can access the request and the report via our website:

<https://infrastructure.planninginspectorate.gov.uk/projects/south-east/thanet-extension-offshore-wind-farm/>

Alternatively, you can use the following direct link:

<http://infrastructure.planninginspectorate.gov.uk/document/EN010084-000019>

An identical lower resolution version of the document with a reduced file size is also available at:

<http://infrastructure.planninginspectorate.gov.uk/document/EN010084-000020>

The Secretary of State has identified you as a consultation body which must be consulted by the Secretary of State before adopting its scoping opinion. The Secretary of State would be grateful therefore if you would:

- Inform the Secretary of State of the information you consider should be provided in the environmental statement, or

- Confirm that you do not have any comments.

If you consider that you are not a consultation body as defined in the EIA Regulations please let us know.

The Secretary of State is entitled to assume under Regulation 8(11) that you do not have any comments to make on the information to be provided in the environmental statement, if you have not responded to this letter by **2 February 2017**. The deadline for consultation responses is a statutory requirement and cannot be extended. Responses received after this deadline will not be included within the scoping opinion but will be forwarded to the applicant for information.

Responses to the Secretary of State regarding the scoping report should be sent preferably electronically to [environmentalservices@pins.gsi.gov.uk](mailto:environmentalservices@pins.gsi.gov.uk), or by post marked for the attention of Richard Kent.

Once complete, you will be able to access the Secretary of State's scoping opinion via our website, using the following link:

<http://infrastructure.planninginspectorate.gov.uk/Thanet-Extension-Offshore-Wind-Farm>

As the Secretary of State has been notified by the applicant that it intends to prepare an environmental statement, the Secretary of State is also informing you of the applicant's name and address:

Helen Jameson  
Vattenfall Wind Power Limited  
St Andrew's House  
Haugh Lane  
Hexham  
Northumberland  
NE46 3QQ

You should also be aware of your duty under Regulation 9(3), if so requested by the applicant, to make available information in your possession which is considered relevant to the preparation of the environmental statement.

Advice may be given about applying for an order granting development consent or making representations about an application (or a proposed application). This communication does not however constitute legal advice upon which you can rely and you should obtain your own legal advice and professional advice as required.

A record of the advice which is provided will be recorded on the National Infrastructure Planning website together with the name of the person or organisation who asked for the advice. The privacy of any other personal information will be protected in accordance with our Information Charter which you should view before sending information to the Planning Inspectorate.



If you have any queries, please do not hesitate to contact us.

Yours faithfully

*Richard Kent*

**Richard Kent**  
**Senior EIA and Land Rights Advisor**  
**on behalf of the Secretary of State**

**From:** [KATIE AMAOUCHE](#)  
**To:** [Environmental Services](#)  
**Subject:** Fwd: Sandwich Bay proposed cable route  
**Date:** 02 February 2017 19:48:15

---

Dear Sir/madam

please see below issues from Worth PC.

How the works to lay the cable through the Bay would impact on residents bearing in mind that the proposed route is over the only access road to their homes. Traffic

management would be a huge issue. (This may not be considered an environmental issue but worth a try)

What measures will be taken to protect the wildlife, flora and fauna in the adjoining nature reserves, particularly the rare wild orchids that grow in the area

What will be put in place to mitigate any damage to the shellfish population between the river mouth and Sandwich Bay, cockles and shrimp in particular

The proposed cable will have to cross the river Stour at some point if this route is taken and will have an effect on the navigable channel of the river. Sandwich Port &

Haven Commissioners are the responsible Authority and should be consulted.

How will Vattenfall show compliance with regulations imposed by the SSSI and RAMSAR site designations of most of this area.

Regards

Worth Parish Council

--

Katie Amaouche  
Clerk to Worth Parish Council  
Inglewood, Dover Road  
Ringwould  
Deal  
Kent CT14 8BP  
01304 729081  
[worthpc@gmail.com](mailto:worthpc@gmail.com)

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Katie Amaouche  
Clerk to Worth Parish Council  
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Ringwould  
Deal  
Kent CT14 8BP  
01304 729081  
[worthpc@gmail.com](mailto:worthpc@gmail.com)

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## **LATE SCOPING CONSULTATION RESPONSES**

Consultation bodies have 28 days to respond with any comments, stating either the information that they consider should be included in the ES or that they do not have any comments.

Any responses received after the deadline are not considered within the scoping opinion but are forwarded to the applicant for consideration in accordance with the policy set out in Advice Note 7: Environmental Impact Assessment, Screening and Scoping.

The following EIA scoping consultation responses were received after the consultation deadline specified under legislation and therefore did not form part of the Secretary of State's scoping opinion.

Mr Richard Kent - EIA and Land Rights  
Advisor  
The Planning Inspectorate  
Temple Quay House (2 The Square) Temple  
Quay  
Bristol  
Avon  
BS1 6PN

**Our ref:** KT/2017/122249/01-L01  
**Your ref:** 170105\_EN010084-000022  
**Date:** 03 February 2017

Dear Mr Kent

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9; application by Vattenfall Wind Power Limited for an order granting development consent for the Thanet Extension Offshore Wind Farm; scoping consultation and notification of the applicant's contact details and duty to make available information to the applicant if requested**

#### **Thanet Extension Offshore Wind Farm**

Thank you for consulting us on the scoping report for the above proposal. We have the following comments to make.

#### **Flood Risk**

The report correctly identifies the requirement for a Flood Risk Assessment to be submitted in support of any application made. The applicant will need to ensure that the substation and any other essential infrastructure can be raised above the flood level.

As of 6<sup>th</sup> April 2016, the Water Resources Act 1991 and associated land drainage byelaws has been amended and flood defence consents will now fall under the Environmental Permitting (England and Wales) Regulations 2010. Under the terms of the regulations, a permit may be required for any activities between the mean low water mark and sixteen metres of the landward toe of the flood defence with some activities excluded or exempt. Further details and guidance are available on the GOV.UK website: <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>.

Please contact the Partnerships and Strategic Overview team at [ps0.EastKent@environment-agency.gov.uk](mailto:ps0.EastKent@environment-agency.gov.uk) or our National Customer Contact Centre on 03708 506 506 or [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk) for more information.

#### **Groundwater and Contaminated Land**

The onshore area of this proposal overlies a chalk aquifer, any pathways for contamination must be strictly controlled to avoid pollution of the principal and secondary aquifers from any historic contamination identified on the site from previous uses.

At this stage, the Environment Agency does not provide detailed site-specific advice or comments with regard to land contamination issues apart from identifying the site sensitivity as above.

Environment Agency  
Orchard House Endeavour Park, London Road, Addington, West Malling, Kent, ME19 5SH  
Customer services line: 03708 506 506  
Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)



Whilst we will not be providing specific advice at this stage in the planning process, it is recommended that the requirements of the National Planning Policy Framework (NPPF) are followed. Paragraph 109 of the NPPF states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels water pollution. Therefore, in completing any site investigations and risk assessments the applicant should assess the risk to groundwater and surface waters from contamination which may be present and where necessary carry out appropriate remediation.

In making our response we have considered issues relating to controlled waters. The evaluation of any risks to human health arising from the site should be discussed with the Environmental Health Department.

We recommend that the applicant:

- Applies the risk-based framework set out in the Model Procedures for the Management of Land Contamination (CLR 11) and follow the guidance in that document so that the best decision are made for the site,
- Refers to the Environment Agency guidance on requirements for land contamination reports,
- Uses BS 10175 2001, Investigation of potentially contaminated sites – Code of Practice as a guide to undertaking the desk study and site investigation scheme,
- Uses MCERTS accredited methods for testing contaminated soils at the site, and
- Consult our website for further information about any permissions that may be required.

### **Marine**

The scoping report (para 250, 2.3.2) states that,

*“The potential for release and dispersion of sediments and any associated contaminants due to construction, operation and decommissioning of Thanet Extension has been informed by a physical processes assessment in Section 2.2 Marine Geology, Oceanography and Physical Processes. The EIA will look at the potential for effects on shellfish waters protected areas and be used to inform the assessments for other receptor topics such and Benthic Ecology, Fish and Shellfish Ecology and Marine Mammal Ecology.”*

We note the later comments (paras 251-255) regarding previous monitoring of the TOWF site and possible impact route via disturbance of sediment, however we should point out that if any of the works fall within 2km of a designated EU bathing water then we would expect consideration of the impacts of construction to be provided within a separate WFD assessment. Bathing waters too are protected elements of WFD waterbodies (as are the shellfish waters) and whilst chemical compliance risks might be low (we would expect to see contemporary sediment analyses provided within the WFD assessment to demonstrate the risk is acceptable) the drivers for the bathing waters are primarily microbiological. Effects on bathing waters classification could be avoided altogether by undertaking construction works (within 2km of bathing waters) outside the statutory bathing season- but if this is not possible or viable then the WFD assessment must be able to justify the impacts will be insignificant, and we may require some sampling in the vicinity of the bathing water during any construction activity to demonstrate the risks are being adequately managed, and that there is a method in place to ensure that, should the activity be found to be causing poor bathing water quality, the construction activity will cease until such times as the water quality has returned to an acceptable level.

We note the changes to the Shellfish Waters Directive and its subsequent incorporation as a protected element of the general water framework directive have resulted in transposition of the chemical and physico-chemical elements into the main Water Framework Directive, but the intention was to provide at least the same level of protection as the earlier directive, and the older directive did specifically detail the levels of suspended solids uplift permissible before suspended solids becomes a trigger for a compliance failure. We suggest the uplifts caused, if any, remain within the spirit of the older directive.

Assessment of the potential to trigger elevation in E.coli or Intestinal Enterococci in the designated bathing waters nearby should be undertaken. This should include identification of the existence of any nearby sources of faecal pollution which could microbiologically compromise the surface sediment loads that would be disturbed when constructing the cable corridor. We accept that quantitative testing of sediments for microbial loads may not necessarily be that informative for bathing waters risks, as should there be sources of intermittent faecal pollution present, there are difficulties in predicting the levels at the time of construction (baseline could change suddenly), and modelling the wrong initial load before dispersion/disturbance of sediment would not give a reliable prediction of water column levels. We would much prefer to see the WFD assessment as a standalone document (containing all relevant evidence within it) rather than have to pick out relevant paragraphs for WFD from the main body of the EIA.

### **Fisheries, Biodiversity and Geomorphology**

The report identifies that most of our concerns about the construction and operation of the onshore component of the proposal will be addressed.

With respect to the sub-station site, however, two issues appear to have been omitted.

#### **1. The quality of the river corridor**

Development of the site presents an ideal opportunity to review the condition and nature of the river wall that runs for much of the length of the site, identify what work can be delivered to improve it and, at the same time, to enhance the river corridor in accordance with requirements of section 118 of the National Planning Policy Framework.

As a starting point, the existing structure (which, on a recent visit, appeared to be in poor condition - under-grown by trees) should be removed, a natural river bank be re-created and flood defence structures to protect the sub-station be constructed at a distance from the river.

Not only will this help to deliver the mitigation measure for the Stour Transitional and Coastal (TraC) Waterbody by removal of artificial riverbanks, required by the South East River Basin Management Plan for the Water Framework Directive but it will help ensure that the river does not suffer from light pollution from the sub-station, below, because development will be set back from the river.

#### **2. Light pollution**

It appears, that the impact of light pollution from operation of the sub-station site on the adjacent river has been overlooked.

Section 3.7.2. of the report states that "*potential impacts associated with operation may include . . . lighting impacts which have the potential to impact on birds through disturbance to adjacent habitats*".

This fails to address the impact of lighting on migratory fish, including sea trout and, occasionally, salmon, known to be in the river.



It is important that all proposed site lighting be assessed for its effects on the surrounding area and then designed to prevent backscatter or direct lighting on to adjacent habitats including the Great Stour. Of particular concern is lighting installed for security on the perimeter of the site and operational lights on and in buildings that may be too close to the site boundary.

**Other concerns:**

We oppose any loss of Priority Habitats (as per Natural Environment and Rural Communities Act 2006) including, as mentioned in section 3.7.2, the “*potential permanent loss of coastal and floodplain grazing marsh habitat at the construction site for the substation*”.

We would expect to see plans that provide at least equal, preferably greater, areas of habitat creation to offset the loss of the Priority Habitat at all parts of the development.

**Species comments**

1. The developers should be aware that, although not protected, beaver *Castor fiber* are present in the catchment and it may be necessary to have plans to ensure that any animals that affect the development sites can be managed humanely and in accordance with relevant legislation, which, for various reasons, may change over the next three years.

2. As an aside, water vole is described in the report as *Arvicola terrestris*, this is incorrect. It has been *A. amphibius* for some time.

3. Shining ram’s-horn snail *Segmentia nitida* and Otter *Lutra lutra* are species of interest to the Environment Agency. If they are found in any surveys, then we request that all records be passed to the Kent and Medway Biological Records Centre (<http://www.kmbrc.org.uk>).

We hope you find our comments useful. If you have any queries please do not hesitate to contact me.

Yours sincerely

**Ms Jennifer Wilson**  
**Planning Specialist**

Direct dial 0208 474 6711

Direct e-mail [kslplanning@environment-agency.gov.uk](mailto:kslplanning@environment-agency.gov.uk)

Development Control  
Bexley Civic Offices  
2 Watling Street, Bexleyheath,  
Kent, DA6 7AT  
020 8303 7777  
www.bexley.gov.uk



LONDON BOROUGH OF  
**BEXLEY**

m/r 17/00024/SCOPE

Direct Dial

020 3045 5840

y/r 170105\_EN010084-000022

Date

**02 FEB 2017**

The person dealing with this matter is

Helen Acton

helen.acton@bexley.gov.uk

PINS RECEIVED

06 FEB 2017

The Planning Inspectorate,  
3D Eagle Wing,  
Temple Quay House,  
2, The Square,  
Bristol,  
BS1 6PN

Dear Sir/Madam,

Planning Act 2008 (as amended) and the Infrastructure Planning (EIA) Regulations 2009 (as amended)- Regulations 8 and 9

Application by Vattenfall Wind Power Limited for an Order Granting Development Consent for the Thanet Extension Offshore Wind Farm

Scoping consultation and notification of the applicant's contact details and duty to make available information to the applicant if requested.

I refer to your letter dated 5<sup>th</sup> January 2017, requesting this Council's views as a consultation body, regarding the information which should be provided in the applicant's environmental statement.

I can confirm that this Council does not have any comments.

Yours sincerely

Susan Clark  
Head of Development Control

Date: 7 February 2017  
Your Ref: 170105\_EN010084-000022  
Direct Dial: 01843 577140  
E.mail: iain.livingstone@thanet.gov.uk



Mr Richard Kent  
3D Eagle Wing  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN

Dear Mr Kent,

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

**Application by Vattenfall Wind Power Limited for an Order Granting Development Consent for the Thanet Extension Offshore Wind Farm**

Thanet District Council wishes to clarify that no additional comments regarding the submitted Scoping Report will be made following the receipt of internal consultee advice.

Yours sincerely

A large black rectangular redaction box covering the signature of Iain Livingstone.

Iain Livingstone  
**Planning Applications Manager**

Thanet District Council  
PO Box 9  
Cecil Street  
Margate  
Kent  
CT9 1XZ

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[www.thanet.gov.uk](http://www.thanet.gov.uk)



**Defence  
Infrastructure  
Organisation**

Kalie Jagpal  
Assistant Safeguarding Officer  
Ministry of Defence  
Safeguarding – Wind Energy  
Kingston Road  
Sutton Coldfield  
West Midlands B75 7RL  
United Kingdom

Your Ref:170105\_EN010085-000022

Telephone [MOD]: +44 (0)121 311 3674

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Our Ref: DIO 10038701

E-mail: DIOSEE-EPSSG2a2@mod.uk

**Richard Kent  
The Planning Inspectorate  
3D Eagle Wing  
Temple Quay House  
2 The Square  
Bristol,  
BS1 6PN**

14/02/2017

Dear Mr Kent

**Please quote in any correspondence: DIO 10038701**

**Site Name: Thanet Extension Offshore Wind Farm**

**Proposal: Erection of 34 Wind Turbines**

**Planning Application Number: Scoping Consultation**

**Site Address: 8 km offshore (at the closest point), in proximity to the operational Thanet Offshore Wind Farm**

Thank you for consulting the Ministry of Defence (MOD) on the above Scoping consultation in your communication dated 05/01/2017. I am writing to tell you that the MOD has no objection to the proposal.

The application is for 34 turbines at 215.00 metres to blade tip. This has been assessed using the grid references below as submitted in the planning application or in the developers' or your pro-forma. The grid references provided are for the boundary outline of the development in which the turbines will be located:

<b>Turbine</b>	<b>100km Square letter</b>	<b>Easting</b>	<b>Northing</b>
1	TR	44356	77566
2	TR	47608	80705
3	TR	56669	81338
4	TR	58777	79199
5	TR	56879	70961
6	TR	50579	71197
7	TR	52279	73381
8	TR	56466	73384
9	TR	56342	75996
10	TR	52489	79863
11	TR	50119	79748
12	TR	48019	77656

In the interests of air safety the MOD requests that the development should be fitted with aviation safety lighting in accordance with the Civil Aviation Authority and the Air Navigation Order.

The principal safeguarding concern of the MOD with respect to the development of wind turbines relates to their potential to create a physical obstruction to air traffic movements and cause interference to Air Traffic Control and Air Defence radar installations.

Defence Infrastructure Organisation Safeguarding wishes to be consulted and notified of the progression of planning applications and submissions relating to this proposal to verify that it will not adversely affect defence interests.

If planning permission is granted we would like to be advised of the following prior to commencement of construction;

- the date construction starts and ends;
- the maximum height of construction equipment;
- the latitude and longitude of every turbine.

This information is vital as it will be plotted on flying charts to make sure that military aircraft avoid this area.

If the application is altered in any way we must be consulted again as even the slightest change could unacceptably affect us.

I hope this adequately explains our position on the matter. If you require further information or would like to discuss this matter further please do not hesitate to contact me.

Further information about the effects of wind turbines on MOD interests can be obtained from the following websites:

**MOD:** <https://www.gov.uk/government/publications/wind-farms-ministry-of-defence-safeguarding>

Yours sincerely

Mrs Kalie Jagpal  
Assistant Safeguarding Officer – Wind Energy  
Defence Infrastructure Organisation

**SAFEGUARDING SOLUTIONS TO DEFENCE NEEDS**