

Hornsea Project Three
Offshore Wind Farm



Hornsea Project Three Offshore Wind Farm

Applicant's Comments on Relevant Representations
submitted to Deadline I

Date: 7th November 2018

Hornsea 3
Offshore Wind Farm.....

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Ørsted (UK) Ltd.

5 Howick Place,

London, SW1P 1WG

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1. Applicant's Comments on Relevant Representations

1.1 Introduction

1.1.1.1 Following closure of the Hornsea Project Three (UK) Ltd statutory consultation period under section 56 of the Planning Act 2008, the Applicant has taken the opportunity to review each of the Relevant Representations received by the Planning Inspectorate. Details of the Applicant's responses to each of those representations are set out within this document in subsequent sections below.

1.1.1.2 A glossary of key terms can be found in Chapter 1 - Introduction and Overarching Glossary of the Environmental Statement [APP-056]. References to Requirements in the draft DCO refer to the paragraphs in Part 3 of Schedule 1 of the draft DCO [APP-027].

1.1.1.3 A total of 155 representations have been made, of which 150 were submitted as the Relevant Representations and 5 as the Additional Submissions. They have been made from the following groups:

- 8 representations from local planning authorities;
- 10 representations from parish councils;
- 18 representations from prescribed consultees;
- 61 representations from landowners/occupiers;
- 34 representations from members of the public/businesses; and
- 24 representations from other organisations.

1.1.1.4 Where the response to a representation is long, a separate "full response" is provided for in the supporting Annex's to this submission. These include:

- Norfolk County Council [RR-035]
- CPRE [RR-037]
- South Norfolk Council [RR-054]
- Bidwells on behalf of Carl Baker & David Baker [RR-067]
- Environment Agency [RR-073]
- Marine Management Organisation [RR-085]
- Natural England [RR-097]
- Norfolk Coast Partnership [RR-101]
- Royal Society for Protection of Birds [RR-113]
- North Norfolk District Council [RR-133]
- Sarah Butikofer on behalf of Holt County Division [RR-142]
- National Farmers Union [RR-146]

1.2 Applicant's Response to Relevant Representations

1.2.1 Sarah Griggs-Smith [RR-001]

Relevant Representation Comment	Applicant's Response
<p>I live very close to the proposed substation at Mangreen. I will be directly affected in the following ways:</p> <ul style="list-style-type: none"> - View from back, I will see the structure and view spoilt. - Noise and disruption. - Road and access to work. - House devalued and difficult to sell it for the building time. - Destruction of hedges and wildlife. <p>What I ask for:</p> <ul style="list-style-type: none"> - Substation be built adjacent to Norwich Main Substation. if not- - Need to ensure planting of trees begins earlier than building. - Earth mounts 10 metres at least around site / building. - Keep it behind line of very old diverse hedges and trees. <p>Wood Fence provided around my property if requested.</p>	<p>Landscape and visual impacts: The visual impacts of the proposed onshore HVDC converter/HVAC substation have been assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. This concludes that there would be no significant effects during the construction, operation and maintenance or decommissioning phases associated with the onshore HVDC converter/HVAC substation outside of the site boundary. Potential impacts on residential properties is specifically addressed in Volume 6, Annex 4.6: Residential Visual Amenity [APP-147]. Specific consideration has been given to the property referenced, as shown in Figure 1.3 of APP-147, in Table 1.2 and concludes that Hornsea Three would not be overbearing and would not occupy the outlook in a way which would be oppressive such that the property would be rendered an unattractive place in which to live.</p>

	<p>Notwithstanding this, a number of mitigation measures have been identified to reduce the potential for visual impacts to the surrounding area. These include minimising the extent of hedgerow and trees to be removed as well as mitigation planting to supplement natural screening (further details provided in the Outline Landscape Management Plan (Outline LMP) [APP-181] and shown in Sheet 3 of 3 of the Onshore Limits of Deviation Plan [APP-026]. Implementation of these mitigation measures is secured by Requirements 8: Provision of Landscaping and Requirement 9: Implementation and Maintenance of landscaping of the dDCO [APP-027]. Furthermore, Figure 1.1 Volume 6, Annex 4.6: Residential Visual Amenity [APP-147] and Appendix A of the Outline LMP proposes potential tree planting within the edges of fields adjacent to residential properties to the south west and south east (including the property referenced in this representation) to provide additional screening. This would be offered as optional mitigation, to be taken forward should residents request this, and it is not essential to mitigate the effects of Hornsea Three. Residents may prefer to retain the openness of views (including some visibility of the onshore HVDC converter/HVAC substation) rather than having a tree belt close to their house.</p> <p>Since the point of application, the Applicant has committed to planting sections of the landscape planting at the commencement of works at the onshore HVDC converter/HVAC substation, which could be up to three years ahead of the planned completion of construction works, in order to maximise the screening provided during the construction and early years of operation. It is therefore proposed to add the following wording at newly created paragraphs 3.1.3.4-3.1.3.5 of the Outline LMP [APP-181] (new text shown as underline):</p> <p><u>"3.1.3.4 Hornsea Three has committed to implementing sections of the mitigation planting at the commencement of works at the onshore HVDC converter/HVAC substation, which could be up to three years ahead of the planned completion of construction works, in order to maximise the screening provided during construction and early years of operation. Areas which will not be pre-planted comprise planting to the north-west and south-east of the permanent HVDC converter/HVAC substation (where it connects to the onshore cable corridor), a 5 m buffer around the permanent site and between the permanent footprint and temporary construction site. These areas will not be pre-planted to facilitate the construction works at the site. Further details of the pre-planting to be undertaken at the onshore HVDC converter/HVAC substation will be provided in the final LMP which will be submitted and agreed with the relevant local planning authorities</u></p> <p><u>3.1.3.5 In a two-phase construction programme the remainder of the proposed mitigation planting (i.e. that is not implemented at the commencement of construction works of the first phase), would be implemented during the first available planting season following completion of the first construction phase, unless otherwise agreed with the local planning</u></p>
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	<p><u>authority. Some of these areas may subsequently need to be removed to allow construction of the second phase although they would be reinstated again following completion of the second phase. The need for such works will be determined as part of the final LMP."</u></p> <p>Based on the mitigation proposed, outside of the site boundaries, landscape and visual effects were assessed to be not significant once planting has matured. As such, and with due consideration of minimising the impact on the openness of the Norwich Southern Bypass Landscape Protection Zone, is considered that additional mitigation in the form of earth mounds around the site would not be appropriate.</p> <p>Alongside this, under Requirement 7 of the dDCO [APP-027], details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the HVDC converter/HVAC substation will be submitted to and approved by the relevant planning authority prior to commencement of construction.</p> <p>Ecology and Nature Conservation. The impacts of the proposed onshore HVDC converter/HVAC substation on habitats and wildlife have been assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. The assessment concluded that there would be minor adverse (i.e. no significant) effects during the construction, operation or decommissioning of the onshore HVDC converter/HVAC substation in terms of impacts on habitats (including hedgerows) and wildlife (including bats and wintering and breeding birds). Where sections of hedgerows are removed to facilitate construction, they will be replanted with native species (as per paragraph 6.5.1.15 of the Outline CoCP [APP-179]).</p> <p>Noise impacts: Volume 3, Chapter 8: Noise and Vibration, and Chapter 9: Air Quality of the Environmental Statement [APP-080 and APP-081] set out the assessment of noise and air quality impacts of Hornsea Three. During construction of the onshore HVDC converter/HVAC substation, and its associated accesses, no significant noise effects are predicted for properties at distance greater than 45 m and 50 m respectively. The property referenced in this representation is located approximately 100 m from the temporary construction compound associated with the onshore HVDC converter/HVAC substation at its closest point (as defined in Sheet 3 or 3 of the Onshore Limits of Deviation Plan [APP-026]). During operation, Pond Cottage' has been used as a representative location of the cluster of properties to the south-east of the onshore HVDC converter/HVAC substation, however, the property referenced is identified as a discreet sensitive receptor in Figure 8.2 of APP-080. The assessment concludes that there will be no significant effects in respect of noise during operation at the residential property referenced, or any other residential property close to the onshore HVDC converter/HVAC substation.</p> <p>Measures to manage potential amenity impacts associated with noise during construction are set out in paragraphs 6.2</p>
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	<p>and 6.3 of the Outline CoCP [APP-179] which will form the basis of the final CoCP to be submitted and approved by the local planning authority under Requirement 17 of the draft DCO [APP-027].</p> <p>Noise attenuation and mitigation measures to minimise noise from the onshore HVDC converter/HVAC substation during operation, including any noise limits, will be set out in a Noise Management Plan which will be approved by the relevant planning authority pursuant to Requirement 21 of the draft DCO [APP-027].</p> <p>Traffic and transport impacts: Hornsea Three has committed to using trenchless technologies (e.g. HDD) to cross all public roads, thus avoiding road closures. This is secured within the Outline Construction Traffic Management Plan (CTMP) where the Applicant has revisited the wording in paragraph 4.1.1.1 as follows (new text shown in underline):</p> <p><i>"4.1.1.1 It is envisaged that all All crossings of the public highway will be undertaken using HDD; the details of HDD techniques and the locations of crossings are set out within the following documents which form part of the Environmental Statement:</i></p> <p>..."</p> <p>HDD crossings are also secured via newly added Appendix E of the Outline CoCP [APP-179].</p> <p>Impacts relating to construction and operation access are addressed in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079]. As set out in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement, no significant effects relating to traffic are anticipated during construction or operation.</p> <p>It is noted that under Requirement 18 of the draft DCO [APP-027], a CTMP must be approved by the relevant planning authority in consultation with the relevant highway authority prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase; this will accord with the principles set out in the outline CTMP [APP-176].</p> <p>Compensation: Compensation for any depreciation in the value of land as a result of physical factors associated with the construction or operation of Hornsea Three is payable in accordance with the statutory compensation code. Further information is set out in paragraph 11.2 of the Statement of Reasons [APP-032].</p> <p>Site selection: Information pertaining to the site selection for the HVDC converter/HVAC substation station is provided in Environmental Statement Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059]. The site selection process was informed by extensive environmental surveys, technical and feasibility studies and consultation.</p> <p>The positioning of the HVDC converter/HVAC substation station adjacent to the existing Norwich Main substation was not considered to be feasible due to the technical constraints associated with the site being in close proximity to a quarry including limitations on the footprint available, accessibility and</p>
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Relevant Representation Comment	Applicant's Response
	<p>health and safety considerations. Furthermore, the quarry has plans to extend (as identified in Volume 4, Annex 5.2: Cumulative Effects Screening Matrix of the Environmental Statement [APP-097]) resulting in some areas being discounted as a site alternative.</p> <p>The proposed location for the HVDC converter/HVAC substation station was therefore determined to be the most suitable following our site selection process. In any event, for the reasons set out above, outside of the site boundaries, landscape and visual effects of the HVDC converter/HVAC substation were not identified to be significant once planting had matured.</p> <p>Mitigation Planting: In addition to mitigation planting provided for within the application, for those properties which directly look onto the proposed HVDC converter/HVAC substation (House on the Hill) and south east (Pond Cottage, Holly View Cottage, Park View Cottage, Mangreen Cottage), the Applicant is also willing to offer localised solutions – such as fencing, or tree planting within residents gardens should the residents choose. The provision of these localised solutions is provided outside of the Application and the mechanism to secure the offer (made on a none prejudice basis) is to be considered further by the Applicant and the residents. That offer is considered “open” to be taken up following Financial Investment Decision of the project, for up to 2 years following completion of construction works at the HVDC converter/HVAC substation. If the project is delivered in phases, this period being 2 years after the completion of the second phase.</p>

1.2.2 Gerald Frank Bullimore [RR-002]

Relevant Representation Comment	Applicant's Response
<p>I am against Orsted compulsory accessing my locked paddock and 99 year lease. My amenity and utility smallholding just 65 m square, has on it woodland apple orchard (protected) wooden summer house, utility services, a caravan. Permission given by sec state 2004, beehives, stables, haystore, 3 rescue ponies, a vast amount of wild birds owl box, bat boxes, butterflies and casualties that come off the heath (100 yds).</p> <p>I am a member of Norfolk Wildlife Trust. My argument - Why can't Orsted continue over field (agricultural) behind us instead of detouring across the road and crossing (Kelling paddocks) small privately owned plots (locked and insured) on a private road maintained by paddock owners.</p>	<p>The Applicant requests further clarification of the location suggested as an alternative. As the representation refers to a piece of land it is not clear what is meant by "behind". There are a number of constraints in the surrounding area that were identified during route design. The respondent previously sent a plan showing an alternative suggested route directly to the Applicant and if that is the correct alternative route then it was not suitable for a number of reasons. Firstly, it crosses the North Norfolk Railway on a bend rather than on a straight section as per the proposed route. Secondly it would involve an angled horizontal directional drill (HDD) of approximately 650 metres, as opposed to straight 520 metre HDD in the proposed route. Thirdly, it would also involve the creation of a new access road, rather than using an existing access road, as per the proposed route. Finally, it would involve a tight bend in the cable close to an HDD entry point, which would cause significant technical difficulties.</p> <p>The onshore cable route has been carefully considered and designed. In selecting the route, the Applicant has taken into account all reasonable factors at relevant stages, such as consultee comments, technical feasibility, the anticipated market regime and the minimisation of environmental and visual impacts and land take. Further information pertaining to the route selection process is provided in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p> <p>Where possible, Hornsea Three has sought to minimise impacts to local residential receptors, either through site selection/route refinement or through the identification of suitable mitigation measures. Measures to manage potential impacts associated with construction of Hornsea Three are set out in the Outline CoCP [APP-179] which will form the basis of the final CoCP to be submitted and approved by the local planning authority under Requirement 17 of the draft DCO [APP-027].</p> <p>Hornsea Three is proposing to use trenchless technology (e.g. HDD) to cross the smallholdings and paddocks close to Kelling Heath referred to in this representation. This will minimise impacts on the amenity uses and ecological receptors identified.</p> <p>The Applicant therefore considers that the route proposed for the onshore cable corridor is the most appropriate.</p>

1.2.3 Sherrill Catherine Bullimore [RR-003]

Relevant Representation Comment	Applicant's Response
<p>65m square small holding.</p> <p>I am against Orsted compulsory accessing my locked paddock and 99 year lease. My amenity and utility smallholding just 65 m square, has on it woodland apple orchard (protected) wooden summer house, utility services, a caravan. Permission given by sec state 2004, beehives, stables, haystore, 3 rescue ponies, a vast amount of wild birds, owl box, bat boxes, butterfly's and casualties that come off the heath (100 yds).</p> <p>I am a member of Norfolk Wildlife Trust. My argument. Why cant Orsted continue over field (agricultural) behind us instead of detouring across the road and crossing (Kelling paddocks) 8 small privately owned plots (locked and insured) on a private road maintained by paddock owners.</p>	<p>Please see the Applicant's response to Relevant Representation RR-002.</p>

1.2.4 T Wright [RR-004]

Relevant Representation Comment	Applicant's Response
<p>1) Proposed location of the Swardeston Substation being visually detrimental to the amenity of the area.</p> <p>3) Negative impact of the Swardeston substation being on a high point in the locality.</p>	<p>The visual impacts of the proposed HVDC converter/HVAC substation have been assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. This is supported by a set of visualisations of the HVDC converter/HVAC substation provided in Volume 6, Annex 4.5: Photograph Panels, Wirelines and Photomontages [APP-146] as well as an assessment of impacts on residential receptors in Volume 6, Annex 4.6: Residential Visual Amenity [APP-147]. Mitigation in the form of landscape planting to supplement natural screening is proposed to reduce the potential for visual impacts to the surrounding area (further details provided in the Outline Landscape Management Plan [APP-181]). Outside of the site boundaries, landscape and visual effects were assessed to be not significant once planting has matured.</p> <p>Requirement 7 of the draft DCO [APP-027] requires that details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the HVDC converter/HVAC substation will be submitted to and approved by the relevant planning authority prior to commencement of construction.</p>

Relevant Representation Comment	Applicant's Response
<p>2) Noise nuisance emanating from the proposed Swardeston substation with inadequate noise mitigation measures causing a loss of rurality, peace and quiet to local residents.</p>	<p>The noise impacts of the proposed HVDC converter/HVAC substation have been assessed in Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement [APP-080]. The noise effects were assessed to be not significant during operation.</p> <p>During construction of the onshore HVDC converter/HVAC substation, and its associated accesses, no significant noise effects are predicted for properties at distance greater than 45 m and 50 m respectively. No residential properties are located within 50 m of the onshore HVDC converter/HVAC substation. During operation, the assessment concludes that there will be no significant effects in respect of noise at any residential property close to the onshore HVDC converter/HVAC substation.</p> <p>Measures to manage potential amenity impacts associated with noise during construction are set out in paragraphs 6.2 and 6.3 of the Outline CoCP [APP-179] which will form the basis of the final CoCP to be submitted and approved by the local planning authority under Requirement 17 of the draft DCO [APP-027].</p> <p>Noise attenuation and mitigation measures to minimise noise from the onshore HVDC converter/HVAC substation during operation, including any noise limits, will be set out in a Noise Management Plan which will be approved by the relevant planning authority pursuant to Requirement 21 of the draft DCO [APP-027].</p>
<p>4) Recommendation that the proposed Swardeston Substation be reused and should be immediately next to the Norwich Substation which has a significantly less visual impact.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to the site selection process for the HVDC converter/HVAC substation station.</p>
<p>5) Negative impact of increased traffic and foreseeable road closures/restrictions both construction and lifespan os normal operations.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to traffic and transport impacts.</p>

1.2.5 Robert Hannan [RR-005]

Relevant Representation Comment	Applicant's Response
<p>I consider that the applicant has failed adequately to consider the impact of the project-generated traffic on the local road network and that the relevant planning authority (Norfolk County Council) has failed adequately to ensure consultation of local residents about and to challenge the traffic impact assessment.</p> <p>This is in particular regard to the proposed main compound at Oulton Airfield near Oulton Street. In its consultation with the residents and the Parish Council, the applicant has been told about the unsuitability of the local feeder roads to the proposed compound site which pass through the settlement of Oulton Street. These roads are narrow and for much of their length will not allow two vehicles, let alone lorries, to pass each other. Further, the houses in Oulton Street, for the most part abut the road with no significant verge or front gardens. Hence the risk of structural damage is great and the impact of lorry traffic on residents' enjoyment of their property would be detrimental.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I.</p>
<p>The applicant's response to these concerns has been inadequate. No mitigation measures have been proposed other than a vague proposal for a one-way system about which no details have been offered.</p> <p>I contend that Oulton Airfield is unsuitable as the main compound and has been chosen primarily because of the landowner's willingness to offer the site. Other possible sites close to the main road network have not been adequately assessed before being rejected.</p> <p>The traffic assessment is inadequate and has not been challenged by the planning authority. Neither the Base Traffic Flow (Annex 7.3) nor the Traffic Flow with Construction Traffic documents (Annex 7.7) include data on the roads which will serve the proposed Main Compound), namely the B1149, The Street, Oulton and Church Lane, Oulton. The accident figures data omits the junction of the B1149 and The Street which would take all traffic in and out of the proposed main compound.</p>	

1.2.6 Councillor Greg Peck (Reepham Division, Norfolk County Council) [RR-006]

Relevant Representation Comment	Applicant's Response
<p>As the County Councillor for Reepham Division and District Councillor for Eynesford many communities affected by this application fall within my constituency. I believe the Consultation process was flawed as the applicant has been unable or unwilling to answer many simple questions regarding their plans. For example the siting of the main depot at Oulton Airfield. They have not done any traffic movement modelling, they seem blissfully unaware of a previous planning application for the site which was turned down because Highways raised objections to the traffic movements which would have been generated in what are extremely narrow approach roads meaning trucks would be constantly backing up. Even after this was pointed out to them they seemed to ignore it and persist in saying traffic would also be directed through the village, which even the previous applicant acknowledged as a problem and avoided in their unsuccessful application. The impact of traffic movements on the surrounding communities, most of which are serviced by country lanes, over potentially an eight year period is unacceptable</p> <p>The method of digging the trenches they have chosen would have a negative impact on farmland, increasing compaction and using a wider trench than is necessary. They could have chosen a lighter touch method as promoted by another applicant. The applicant has consistently not answered landowners questions and concerns. Has refused to engage with landowners on this subject, recently cancelling a meeting with affected landowners and three local MP's at short notice. They have had an arrogant approach to the consultation and appear to have done a tick box exercise so that they can claim they have attended x number of meetings. At these meetings they were ill prepared and couldn't or wouldn't answer residents concerns. On these grounds, until they can answer these basic questions, I think the application should be refused.</p>	<p>Consultation: The Applicant does not accept the Councillor's comment that the consultation process was flawed. The Consultation Report [APP-034] sets out in detail the consultation process that has been undertaken for Hornsea Three. Norfolk County Council confirmed that it considered that appropriate and adequate consultation had been undertaken prior to the Application being accepted by the Planning Inspectorate [AoC-006].</p> <p>Main Construction Compound: Please see Appendix 20 to the Applicant's response to Deadline I, particularly Sections 4 in respect of site selection process for the main construction compound and section 6, 7 and 8 relevant to traffic and transport impacts along The Street.</p> <p>Construction Methodology for the onshore cable corridor: Please see Appendix 22 to the Applicant's response to Deadline I in respect of the implications the transmission system would have on the construction of the onshore cable corridor.</p> <p>The Applicant recognises the potential for minimising impacts and disruption to the local community through optimisation of the construction methodology. Therefore, the Applicant has made two commitments since the point of application; firstly, the Applicant has committed to installing all onshore export cables circuits within ducts, as opposed to direct burial. This approach means that trenching and cable installation can be de-coupled and will provide more flexibility for the installation process facilitating an improved ability to optimise works and delivery of components. Typically, this will result in the trenches being open for a shorter duration, which minimises the length of time subsoil is stored outside of the trench and makes the construction work less susceptible to poor weather conditions.</p>

	<p>Furthermore, following a risk benefit analysis (see response to Examining Authority Q1.1.10), the Applicant has committed to installing ducts for the second phase as part of the first phase of works, should both phases be awarded a Contract for Difference in the same auction round. In order to secure these commitments, the Applicant has added the following wording in paragraph 1.1.1.6 and created a new paragraph 1.1.1.7 of the Outline CoCP [APP-179] (new text underlined):</p> <p><i><u>“1.1.1.6 Construction work is currently planned to commence in 2021, however the surveys and enabling works could start as early as 2020. Hornsea Three could be built in a single phase of construction or two phases, with the potential for an overlap or a gap of up to three years between the completion of construction activities in one phase and the start of the same construction activity in the second phase. It is also possible that some activities may be carried out during an earlier phase for the benefit of a later one. In this regard, should the project be delivered in two phases, Hornsea Three will install ducts for the second phase as part of the first phase of works should both phases be awarded a Contract for Difference in the same auction round. However, any works completed for a later phase(s) would be left in a safe state, as agreed with the relevant authorities, to await the appropriate phase for completion.</u></i></p> <p><i><u>1.1.1.7 Hornsea Three will install all cables by ducting, rather than direct lay, with ducts installed in the trenches which would then be backfilled and at a later date, the cables will be pulled through the ducts from one joint bay to the next. Any works completed during the trenching and ducting works, would be left in a safe state, as agreed with the relevant authorities, to await the cable installation works.</u></i> “</p> <p>An equivalent update has also been made in paragraph 1.1.1.3 of the Outline EMP [APP-180] as follows (new text shown in underline):</p> <p><i><u>“1.1.1.3 Hornsea Three will install all cables by ducting, rather than direct lay, with ducts installed in the trenches which would then be backfilled and at a later date, the cables will be pulled through the ducts from one joint bay to the next. Cable installation will be by open cut trenching other than where Horizontal Directional Drilling (HDD) is used to cross all ‘main’ and numerous ‘ordinary’ watercourses, key habitats (e.g., woodland) and infrastructure (e.g., roads, and railways). The onshore crossing schedule (see volume 4, annex 3.5: Onshore Crossing Schedule) summarises all the crossing points and provides details of the measures to be used to cross each feature along the onshore cable corridor.”</u></i></p> <p>The Applicant considers it to be appropriate to only commit to pre-ducting for the second phase if a CFD for both phases are secured in the same auction round as without certainty as to the timing or capacity of the second phase, the pre-installation of ducts for this phase could cause greater disruption than is necessary to the communities along the onshore cable corridor and a greater environmental impact should the final design for the second phase be of a different specification and therefore not be suitable for the installed ducts.</p>
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Relevant Representation Comment	Applicant's Response
	<p>Landowner Engagement: Appendices A and B of the Statement of Reasons [APP-032] set out the communication that took place with affected landowners prior to submission of the Application. An updated version of Appendix B has been submitted for Deadline 1 and sets out the current status of negotiations with landowners. The Applicant does not accept the Councillor's comment that it has refused to engage with affected landowners.</p>

1.2.7 Mervyn Bibb [RR-007]

Relevant Representation Comment	Applicant's Response
<p>Three alternative routes were proposed for the high voltage underground cable as it passes to the west of Little Melton, two of which could be extremely close to our dwelling and those of our neighbours which we would find unacceptable. We would like to ensure that we have the opportunity for representation should these latter two alternatives be considered as viable options by the Planning Inspectorate.</p>	<p>The onshore cable route has been carefully considered and designed. In selecting the route, the Applicant has taken into account all reasonable factors at relevant stages, such as consultee comments, technical feasibility, the anticipated market regime and the minimisation of environmental and visual impacts and land take. Further information pertaining to the route selection process is provided in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p> <p>The final route of the onshore cable is shown on the Works Plan (Onshore) [APP-013]. The Applicant has also sought to minimise impacts to local residential receptors through the identification of suitable mitigation measures.</p> <p>Whilst three alternative routes were consulted on, only one route has been included in the Application at this location. The Hornsea Three onshore cable corridor has been located to the west of Little Melton (where it is at least 70 m from the closest residential receptor), before it turns east, running adjacent to the Great Melton Road.</p>

1.2.8 Richard Perry [RR-008]

Relevant Representation Comment	Applicant's Response
<p>Protection of bridleways in the Little Barningham area. Works traffic and horses do not mix if a sub station is to be built near this path and works traffic uses the designated bridle path.</p>	<p>Impacts on bridleways and other local routes have been assessed in Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078] and the effects on bridleways and other local routes, with mitigation measures in place, were assessed to be not significant.</p> <p>A number of mitigation measures, including a Public Right of Way Management Plan, are referred to in the Outline CoCP [APP-179] to reduce the potential for impacts to bridleways and other local routes during construction. The details of how public rights of way will be managed will be approved by the relevant planning authority prior to commencement of construction pursuant to Requirement 17 of the draft DCO [APP-027].</p> <p>In respect to the two bridleways in the Little Barningham and neighbouring Plumstead area the following measures are proposed:</p> <ul style="list-style-type: none"> • Corpusty RB21, chainage 37.5 – 38.3 - measures including the separation of users and construction traffic, as well as the provision of signage to manage the interface, will be put in place. These are likely to remain in place for the whole of the construction period of the onshore HVAC booster station (approximately 12 months) on up to two occasions; and • Plumstead BR6 - the route would be temporarily diverted within the order limits to either the north or south as work proceeds for a maximum of 3 months on up to two occasions. Measures including the separation of users and construction traffic, as well as the provision of signage to manage the interface, will be put in place.

1.2.9 The Crown Estate [RR-009]

Relevant Representation Comment	Applicant's Response
<p>The Crown Estate manages property and rights which are owned by Her Majesty in right of the Crown. This portfolio includes around half of the foreshore and almost the entire seabed out to 12 nautical miles around England, Wales and Northern Ireland. Under the Energy Act 2004 and the Energy Act 2008, The Crown Estate also manages the rights over the continental shelf to offshore energy generation and the rights to carbon dioxide and natural gas storage and transportation (respectively).</p> <p>The Crown Estate requests to be registered as an Interested Party in the examination of the Hornsea Project Three offshore wind farm.</p> <p>Our interest in the project is that Orsted Hornsea Project Three holds an Agreement for Lease from The Crown Estate for the area of seabed to be occupied by the project, and (subject to obtaining the necessary development consents) The Crown Estate will issue a lease to Orsted Hornsea Project Three for construction of the project. We therefore wish to follow the progress of examination of the project.</p>	<p>The Applicant notes the representation submitted by The Crown Estate.</p> <p>Discussions are ongoing with The Crown Estate regarding an agreement for lease for the cable route close to/at the foreshore. The Applicant is hopeful that the necessary land and rights can be acquired by voluntary agreement and notes that compulsory acquisition powers cannot be used in respect of Crown interests.</p> <p>Section 135 of the PA 2008 provides that a DCO [APP-027] may include provisions authorising the compulsory acquisition of an interest in Crown Land or any other provisions relating to the Crown Land only if the Crown consents to the inclusion of the provisions.</p> <p>The Applicant is in discussions with the Crown Estate Commissioners in order to obtain their consent to the inclusion of these provisions as required under section 135 of the PA 2008.</p>

1.2.10 Lin Pateman [RR-010]

Relevant Representation Comment	Applicant's Response
<p>I am a local resident and Parish Councillor and wish to express an interest in this application. I have attended the meetings and commented on the plans for myself and on behalf of local residents.</p>	<p>The Applicant notes the representation submitted by the Parish Councillor. Responses to the points made by Edgefield Parish Council during consultation are set out in the Consultation Report Annex 15 - Phase 2 Responses [APP-049].</p>

1.2.11 Public Health England [RR-011]

Relevant Representation Comment	Applicant's Response
<p>Thank you for your consultation regarding the above development. Public Health England (PHE) welcomes the opportunity to comment on your proposals at this stage of the project and can confirm that:-</p> <ul style="list-style-type: none"> - We have no additional comments to make at this stage and can confirm that we have chosen NOT to register an interest with the Planning Inspectorate on this occasion. 	<p>The Applicant notes Public Health England has chosen not to register an interest in respect of the Application.</p>

1.2.12 Annemarie Wharton [RR-012]

Relevant Representation Comment	Applicant's Response
<p>1. Weybourne has had two previous windfarm projects with associated heavy construction traffic on small country roads. The disruption caused is well documented and it would seem unjust to allow a third project, lasting 8 years, to be visited on this village.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to traffic and transport impacts during the construction period. The assessment conclusions referred to in RR-001, are applicable to the local area around landfall, including Weybourne.</p> <p>At this stage, it is estimated that activities at the main construction compound associated with Hornsea Three would occur within an eight-year construction window; however, the active construction period associated with the onshore cable corridor would be limited to up to 30 months excluding mobilisation and demobilisation, whilst the landfall construction work which will have a duration of up to 32 months. This could be across a single construction phase, or two construction phases that may be separated by a "gap" period of reduced activity (as set in Section 3.8 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]). Should Hornsea Three be delivered across two phases with a gap period, the contractor would be demobilised and no active construction activities would occur during the 'gap', unless otherwise agreed with the local planning authority. Therefore, in respect of the local roads around Weybourne, the greatest volume of construction traffic will occur during the 30 months of onshore cable corridor construction, as well as the 32 months of landfall works, which may or may not overlap.</p> <p>Where deemed necessary, site specific traffic management measures will be identified in the final CTMP which will be required to be implemented prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase (as set out in Requirement 18 of the dDCO. An outline CTMP has been produced and accompanied the DCO application [APP-176].</p>
<p>2. The major income for the economy of this area is tourism. Holiday makers might not continue to return to an area overwhelmed by heavy works traffic.</p>	<p>Impacts on tourism and recreational activity, and its associated economic value, are assessed in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement. The assessment of effects related to tourism and recreation draws on the assessments provided in related chapters including Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076], Chapter 6: Land Use and Recreation [APP-78], Chapter 7: Traffic and Transport [APP-79] and Chapter 8: Noise and Vibration [APP-80]. The Applicant understands that this representation has a particular interest in Foxhills Camping site in Weybourne. Direct impacts from construction traffic on this recreational asset are assessed in Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-78] and no significant effects were identified (paragraph 6.11.1.34 and 6.11.1.37).</p> <p>More widely, and as reported in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement [APP-082], no significant effects relating to tourism are anticipated during construction or operation.</p>

Relevant Representation Comment	Applicant's Response
	<p>In order to minimise the impacts of construction traffic on tourism and local businesses, a CTMP [an outline version of which was submitted as APP-027] will need to be approved by the relevant planning authority in consultation with the relevant highway authority prior to the commencement of works pursuant to Requirement 18 of the draft DCO. The Applicant would refer the reader to the responses to Examining Authority Q1.11.2 (E) and Q1.11.8 (B) (Deadline I submission) in respect to measures proposed to minimise traffic impacts during the peak tourism season.</p>
<p>3. This is a designated ANOB and Foxhills is part of an Area of Scientific Interest. A third and prolonged period of invasive construction would be to the detriment of the local ecology.</p>	<p>Impacts on the Norfolk Coast AONB, which the onshore cable corridor crosses, are assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. This is expanded upon in Appendix 23 Impacts on the Qualities of Natural Beauty of the Norfolk Coast AONB to the Applicant's response to Deadline I. Given the local spatial extent and short duration of construction works, combined with the burial of the onshore export cable, no significant effects relating to the AONB are anticipated during construction or operation.</p> <p>The Applicant has sought to minimise impacts on ecological receptors through design, including avoidance of designated sites and the use of trenchless technologies (e.g. HDD) to avoid direct impacts on woodland, rivers and other ecological receptors and the implementation of mitigation measures. Impacts on ecological receptors are assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. The effects were assessed to be not significant with the implementation of mitigation measures.</p> <p>Mitigation measures in respect of ecological receptors are secured through Requirement 17 (Code of Construction Practice) and Requirement 10 (Ecological Management Plan) of the draft DCO [APP-027] and these documents must be approved by the relevant planning authority (in consultation with Natural England in respect of Requirement 10) prior to the commencement of construction. Details of the proposed mitigation measures are set out in the Outline Code of Construction Practice (document reference A8.5) and the Outline Ecological Management Plan [APP-180].</p>

Relevant Representation Comment	Applicant's Response
<p>4. The fragile coastline has been drilled and bored into for two previous projects. A third session of invasive tunneling would further weaken the structure of the shoreline and with increased the risk of flooding.</p>	<p>The Applicant will carry out the drilling works in the Hornsea Three intertidal area in a manner that protects the coastline. Impacts to the beach morphology are assessed in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. Hornsea Three will undertake geotechnical testing post-consent to inform the development of detailed design at landfall, including the most appropriate construction techniques (see section 3.7.2 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]). This includes the technical feasibility of using trenchless technology. The testing will include inspection of the cliffs for stability prior during and after construction to monitor integrity. It is also noted that the offset distances between Hornsea Three and the other two projects, Sherringham Shoal and Dudgeon Offshore Wind Farms, will reduce the in-combination impacts on integrity of the coastline from the geotechnical prospective.</p> <p>In terms of flood risk from sea it is considered that the maximum design scenario (i.e. most likely to increase flood risk from the sea) would be open cut trenches not use of HDD (drilling under the shoreline), as outlined in Volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement [APP-74] and Volume 6, Annex 2.1: Flood Risk Assessment [APP-124]. At the Hornsea Three landfall area, the shingle beach provides a natural flood defence. The use of open cut techniques across the beach has the potential to create a pathway for flood water and lead to a slight increase in flood risk in-land. However, by virtue of the current onshore land elevations the risk is low, in addition the construction process would include, but not be limited to, measures such as coffer dams and raised sheet piling to stabilise intertidal excavation to maintain the existing level of protection from tidal flood risk. These measures are outlined in Volume 1, Chapter 3: Project Description [APP-058]. Construction measures would be adopted to maintain the existing level of flood protection and would be discussed with the Environment Agency at detailed design and secured through paragraph 7.1.1.2 of the Outline CoCP [APP-179]. The assessment concluded that the effects are not anticipated to be significant.</p> <p>Please see the Applicant's response to Relevant Representation RR-133 relating to the use of the open cut technique at landfall.</p>

1.2.13 J D Jennings [RR-013]

Relevant Representation Comment	Applicant's Response
<p>The main issues which I wish to raise in relation to this application are:-</p> <p>1. Lack of information regarding the noise impacts of the onshore booster station.</p>	<p>The noise impacts of the proposed onshore HVAC booster station have been assessed in Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement [APP-080]. The assessment considers three example residential properties, reflecting the closer properties to the site (see Table 8.36) and the nearest PRoW running through Barningham Green Plantation and around New Covert woods. The assessment concludes that noise levels at the closest noise sensitive receptors would not be significant.</p>
<p>2. Inconsistencies between the assumptions made in the photomontages/LVIA and the application documentation.</p>	<p>The Applicant notes that no details have been provided in respect of the suggested inconsistencies.</p> <p>It should be noted that the purpose of the photomontages is to show an illustrative design for the onshore HVAC booster station at years 1 and 15 in order to assist the reader of the Environmental Statement visualise the development and do not form part of the assessment.</p> <p>The assessment presented within Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] is based on the wirelines presented in Volume 6, Annex 4.5: Photographic Panels, Wirelines and Photomontages [APP-146] which show the maximum potential design scenarios of the proposed HVAC booster station and the HVDC converter/HVAC substation from the agreed representative viewpoints.</p> <p>On this basis, without further clarification, the Applicant does not consider there to be any inconsistencies in the LVIA documentation.</p>
<p>3. Need or otherwise for the booster station needs to be confirmed prior to consent being granted.</p>	<p>Please see Applicant's response to Relevant Representation RR-133.</p>

1.2.14 National Federation of Fishermen's Organisations [RR-014]

Relevant Representation Comment	Applicant's Response
<p>The NFFO is a representative body of the fishing industry covering England, Wales and Northern Ireland. We intend to examine the assessment of impacts to fisheries, both direct impacts on fishing businesses and any related impacts to the fisheries resource base. We are interested in maximising the scope for coexistence between our two industries and will consider provisions to achieve this end.</p>	<p>The Applicant acknowledges this representation and is also in support of maximising coexistence where feasible. An Outline Fisheries Liaison and Coexistence Plan (FCLP) [APP-183] was submitted with the Hornsea Three application, describing the approach taken to liaison and consultation with the fishing industry throughout the lifetime of Hornsea Three. Since the relevant representations were issued, the Applicant has consulted the NFFO on the FCLP and provided them with an updated version to review [APP-183 – resubmitted] based on feedback received.</p> <p>This mitigation is secured via the dMLs [APP-027], which require the final FCLP to be approved by the MMO prior to commencement of works (condition 11(3) of Schedule 11, Generation Assets dML, condition 12(3), Transmission Assets dML).</p>
<p>We intend to pursue a statement of common ground with the applicant, which together with the applicant's documentation will then inform any detailed representations we wish to make.</p>	<p>Following submission of the project's application, the Applicant has now developed a SOCG with the NFFO, which is included in the Applicant's submission for Deadline 1.</p>

1.2.15 Wood Dalling Parish Council [RR-015]

Relevant Representation Comment	Applicant's Response
<p>Wood Dalling Parish Council have an interest in the cabling corridor, as it will run just outside the Parish. They are concerned that if the planning is permitted with the funding phased, the effect on the village and surrounding area will be extensive and prolonged.</p>	<p>As set out in paragraph 3.5.1.8 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], Hornsea Three may be constructed in a single phase or two phases, with a maximum onshore construction window of eight years unless otherwise agreed with the relevant planning authority. The Applicant requires this flexibility to construct the Authorised project in phases due to the complexity and scale of the project.</p> <p>However, the active construction period associated with the onshore cable corridor would be limited to up to 30 months excluding mobilisation and demobilisation. Should Hornsea Three be delivered across two phases with a gap period, the contractor would be demobilised and no active construction activities would occur during the 'gap', unless otherwise agreed with the local planning authority. A written scheme setting out the phasing of construction would be submitted to and approved by the relevant planning authority prior to commencement, secured by Requirement 6 of the dDCO.</p> <p>To minimise the potential for impacts on sensitive residential receptors during the construction phase, the Applicant has identified a number of mitigation measures, for example, Requirement 17 of the dDCO [APP-027] requires that a Code of Construction Practice must be submitted to and approved by the relevant planning authority, in consultation with the relevant highway authority and, if applicable, the MMO, prior to the commencement of each phase (which must accord with the Outline CoCP submitted with the Application, APP-179). It will include control measures and monitoring procedures for managing potential impacts and limiting disturbance from construction activities as far as reasonably practicable.</p> <p>Please also see the Applicant's response to Relevant Representation RR-006 relating to the commitment made by the Applicant regarding installing ducts for the second phase as part of the first phase of works, should both phases be awarded a Contract for Difference in the same auction round.</p> <p>On the basis of the onshore mitigation measures identified within the documents referenced above, the Environmental Statement did not assess the effects on residential receptors in respect to landscape and visual impacts [APP-076] and noise and vibration [APP-080], nor the local road network [APP-079] to be significant.</p>

1.2.16 Whale and Dolphin Conservation [RR-016]

Relevant Representation Comment	Applicant's Response
<p>WDC have been engaging with UK and devolved government bodies and developers for several years regarding marine renewable energy and provide our advice regarding marine renewable developments and their impacts on whales, dolphins and porpoises (cetaceans).</p> <p>Due to the impacts of climate change on cetaceans, WDC supports the development of well-considered marine renewable energy. However we have serious concerns about the potential impacts of these developments both individually and cumulatively, have on cetaceans.</p>	<p>This is acknowledged by the Applicant.</p>
<p>WDC are particularly concerned that the construction of Hornsea Project Three offshore wind farm has the potential to negatively impact cetaceans, in particular harbour porpoises (<i>Phocoena phocoena</i>) and the integrity of the Southern North Sea candidate Special Area of Conservation (cSAC), for which harbour porpoise are the qualifying feature. The cSAC site includes key winter and summer habitat for this species.</p> <p>Although Hornsea Project Three offshore windfarm does not lie directly within the cSAC, it's very close proximity means that the windfarm construction will impact the cSAC both alone and in-combination.</p> <p>The planned installation of all windfarms, as well as other activities within and adjacent to the cSAC, have the potential to disturb the harbour porpoise population of the cSAC and so should be taken into consideration.</p>	<p>The Applicant understands WDC's concerns and can confirm that the Report to Inform Appropriate Assessment ("RIAA", APP-051) produced in support of this application gives full regard to effects from the project both alone and in-combination on the cSAC. The RIAA concludes that there is no indication of effects on the integrity of the conservation objectives of the cSAC (see for example paras 6.5.2.49, 6.5.2.72, 6.5.2.128, 6.5.2.154, 6.5.2.168, 6.5.3.11, 6.5.3.23 and 6.7.2.14).</p>

Relevant Representation Comment	Applicant's Response
<p>Our primary concern for Hornsea Project Three Offshore Windfarm development surrounds the intense noise pollution resulting from pile driving for all cetacean species in the region. Should consent be granted, our key recommendations for this development are:</p> <ul style="list-style-type: none"> - That pile driving is not used at all during construction; 	<p>The Applicant notes that this is a generic position adopted by WDC in relation to all offshore wind farm projects and not unique to Hornsea Three.</p> <p>The Applicant would highlight that along with the assessment presented in the RIAA as set out above, the assessment presented within Volume 2, Chapter 4: Marine Mammals [APP-064] assesses a minor adverse effect with mitigation from piling. As this is not significant in EIA terms, the Applicant's view is that pile driving need not be removed from the project envelope.</p> <p>This mitigation is secured via the deemed marine licences (dMLs, see APP-027), which require a marine mammals mitigation protocol to be approved by the MMO prior to commencement of works (condition 11(1)(g) of Schedule 11, Generation Assets dML, condition 12(1)(g), Transmission Assets dML).</p> <p>Furthermore, the Applicant notes that with specific regard to the SNS SCI a further commitment was made within the dMLs (condition 11(4) (5) and (6), of Schedule 11, Generation Assets dML, condition 12(4) (5) and (6), Schedule 12, Transmission Assets dML). These conditions were designed to ensure that construction cannot commence unless the MMO are satisfied that necessary mitigation to avoid any adverse effect on the integrity of a European offshore marine site or European site.</p> <p>The Applicant cross refers the Ex. A to the SoCG with WDC for further context on this point, and where this mitigation is confirmed to be an agreed point by both parties.</p> <p>The Applicant notes that the conditions relating to the SNS SCI as described above have now been replaced by the commitment to a Site Integrity Plan (following requests from Natural England and the MMO). This plan (an in-principle version of which is presented at Appendix 15 to the Applicants response to Deadline I, will afford the same level of control as the original condition proposed by the Applicant.</p>

Relevant Representation Comment	Applicant's Response
<p>- That strict limits be placed on noise levels during construction, including cumulative noise;</p>	<p>The Applicant notes that this is a generic position adopted by WDC in relation to all offshore wind farm projects and is not unique to Hornsea Three.</p> <p>The Applicant does not agree that it is necessary for limits to be imposed. As set out in Volume 2, Chapter 4: Marine Mammals [APP-064], the environmental impact assessment concluded that a minor adverse effect would occur for marine mammals due to noise effects. This is not significant in EIA terms. Additionally, in relation to Habitats Regulations, as outlined above, the RIAA concluded that there is no indication of effects on the integrity of the conservation objectives of the SCI. The Applicant further notes that:</p> <ul style="list-style-type: none"> a) The MMO (as the regulatory body) does not currently regulate through the application of specific noise limits for licenced activity. b) The Applicant has made a number of commitments to ensure noise levels are controlled through a soft start procedure at the onset of piling, as set out above. Furthermore, the Applicant has committed to additional noise reduction measures if determined necessary (determined prior to construction based on a understanding of other projects that may be coming forward at the same time as Hornsea Three), as also set out above. <p>The Applicant cross refers the Ex. A to the SoCG with WDC for further context on this point and confirmation that this mitigation is agreed by WDC</p>

Relevant Representation Comment	Applicant's Response
<p>- That proven mitigation methods are in place around the source to mitigate the impacts of radiated noise levels</p>	<p>The Applicant has made a number of commitments to ensure noise levels are controlled through a soft start procedure at the onset of piling (see above to avoid repetition).</p> <p>Furthermore and importantly, the Applicant has committed to additional noise reduction measures if determined necessary (to be determined prior to construction based on a understanding of other projects that may be coming forward at the same time as Hornsea Three), as detailed above.</p> <p>For the avoidance of any doubt, those measures identified under conditions 11/12 (4) that would be considered (in the highly unlikely scenario that sufficient projects are piling at the same time that there is genuine risk to the conservation objectives of the SNS SCI) comprise:</p> <ul style="list-style-type: none"> (a) seasonal restrictions to piling; (b) scheduling of piling, having regard to previous, ongoing and future piling associated with other offshore developments, based on an updated assessment of cumulative impacts; (c) the use of alternative foundation methodologies, such as jacket foundations or gravity base foundations; (d) the use of noise reduction at source technologies; and (e) the use of other relevant technologies or methodologies that may emerge in the future. <p>The Applicant cross refers the Ex. A to the SoCG with WDC for further context on this point.</p> <p>As identified above the Applicant notes that the conditions relating to the SNS SCI as described above have now been replaced by the commitment to a Site Integrity Plan (following requests from Natural England and the MMO). This plan (an in-principle version of which is presented at Appendix 15 to the Applicant's response to Deadline I, identifies the same suite of potential mitigation options as set out within the original condition proposed by the Applicant.</p>
<p>- That a robust impact monitoring strategy (Marine Mammal Monitoring Plan (MMMP)) is developed for the range of species that can reasonably be expected to be impacted;</p>	<p>Please see above references to mitigation.</p> <p>The Applicant confirms that this is now an agreed point by both parties, as reflected in the SoCG with WDC.</p>
<p>- That WDC is included as a consultee of the MMMP and that we are included in the discussions for the design of the MMMP as we have concerns regarding effectiveness of some mitigation methods;</p>	<p>The Applicant will continue to engage with WDC as the project moves forward towards construction for those matters of interest to WDC.</p> <p>However, the Applicant's position on this remains that it is considered appropriate for the MMO to determine who it should consult with on pre-commencement documentation.</p> <p>The Applicant confirms that, based on the Applicant's response as set out above, this is now an agreed point by both parties, as reflected in the SoCG with WDC.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - A robust MMMP should include: shut-down when marine mammals approach within a specified distance of operations (mitigation zone); 	<p>As stated above the Applicant can confirm that a robust MMMP will be developed using best practice measures and following SNCB guidance. This plan will be developed prior to the commencement of activity, once the final design of the Project is known.</p> <p>The Applicant and WDC agree that it is appropriate to define the content of the MMMP following final scheme design, as reflected in the SoCG</p>
<ul style="list-style-type: none"> - That the monitoring strategy is appropriate to consider cumulative impacts of all developments in the region; 	<p>As identified within Table 3.3 of the In-Principle Monitoring Plan [APP-182] the monitoring set out within the MMMP required under the dML (see above) will have regard to behavioural disturbance from percussive piling. Within this table the benefits that strategic monitoring may bring are noted. Specifically, it is noted within this table that the objectives of the monitoring will be to help reduce the uncertainty relating to the consequence of disturbance from piled foundation installation, particularly at a cumulative level.</p> <p>The Applicant confirms that this represents an agreed point by both parties, as reflected in the SoCG.</p>
<ul style="list-style-type: none"> - Ground-truthing of modelled noise assessment data should be undertaken; 	<p>The Applicant has made two specific noise monitoring commitments (see Schedule 11, Part 2, Condition 15(2)(b)(i and ii) and Schedule 12, Part 2 of the Generation Asset dML):</p> <p><i>(b) in relation to the construction phase of the authorised project—</i></p> <p><i>(i) where monopile foundations are to be employed, unless others agreed by the MMO in writing, details of proposed monitoring of the noise generated by the installation of the first four monopile foundations to be constructed under this licence;</i></p> <p><i>(ii) a plan for monitoring of the duration of piling activity;</i></p> <p>The Applicant cross refers the Ex. A to the SoCG with WDC for further context on this point.</p>
<ul style="list-style-type: none"> - Should any incident that results in mortality occur during construction, activities should be halted immediately until an investigation can be completed; 	<p>The Applicant understands from discussions with WDC that this is no longer a matter of concern for WDC as they recognise the impracticality of the issue. In any event, the Applicant notes that the mitigation commitments (within the MMMP) are designed to prevent this, and therefore, it would be extremely unlikely. However, the Applicant notes that MMO has the regulatory power to enforce such measures if it deems necessary.</p>
<ul style="list-style-type: none"> - An assessment report is publicly available within a reasonable timeframe of construction completion. 	<p>The Applicant can confirm that monitoring reports are made publicly available through The Crown's Estate's Marine Data Exchange (and that projects are committed to this through the AfL process).</p> <p>The Applicant considers that the WDC concerns have been addressed on this matter, as reflected in the SoCG.</p>

1.2.17 Judith Holland [RR-017]

Relevant Representation Comment	Applicant's Response
<p>Our home is within 100 yards of where the cables will be laid. I appreciate this is an Ørsted application, however what should be taken into consideration is the imminent DOC from Vattenfall as the cables from both companies will cross within 100 metres of our home. We are extremely concerned about the magnetic field generated from the cables. We understand Ørsted have not yet made a decision as to AC or DC, Vattenfall are committed to DC.</p>	<p>Magnetic field levels for Hornsea Three are provided in Volume 4, Annex 3.3: Electro-Magnetic Fields (EMF) Compliance Statement of the Environmental Statement [APP-087]. This provides maximum predicted field strengths to assess compliance with health protection guidelines for public exposure to magnetic fields. The assessment concludes that based on the maximum field strengths, using worst-case assumptions where required, the proposals are well below guideline levels and Hornsea Three is compliant.</p> <p>At the crossing point with the Norfolk Vanguard project, cumulative EMF sources do not create incremental changes i.e. two equal EMF sources do not double the field strength, rather peak EMFs in effect lay over one another. Therefore, as described in the 'Vattenfall and Orsted Circuit crossing – EMF Information' sheet (Appendix 19 to the Applicant's response to Deadline I), the combination of Hornsea Three EMF with any other EMF sources will not result in an incremental change and therefore, the Hornsea Three and Norfolk Vanguard projects EMF combined is forecast to continue to be well below well below guideline levels and the combined impact of the projects is compliant.</p> <p>On the basis of the above, the Applicant considers that there will not be significant effects on public health from EMF (including magnetic fields) either alone or in combination with Norfolk Vanguard. The Applicant's position is supported by Public Health England's decision not to register an interest in the Examination of the Application [RR-011].</p> <p>Please see Appendix 22 to the Applicant's response to Deadline I in respect to inclusion of both HVAC and HVDC transmission systems in the project envelope.</p>

1.2.18 Kelling Parish Council [RR-018]

Relevant Representation Comment	Applicant's Response
<p>We are concerned that not enough has been done to reduce the problem of construction traffic and speeding in the village of Kelling.</p> <p>We do not understand why Pudding Lane, Kelling, which is a restricted byway and well used footpath, should be temporary closed where it meets the A149 coast road during construction. This is at the edge of the construction area, and it is easily possible to move the area over to the west by only 10 metres, and widen the access gateway to the field to allow larger vehicle entry / egress. This would allow Pudding Lane to remain open at all times and allow uninterrupted access to Pudding Lane Cottage.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to traffic and transport impacts, in particular management of construction traffic and road closures.</p> <p>The commitment to use trenchless technologies (e.g. HDD) to cross all public roads, means that Pudding Lane in Kelling will remain open throughout the construction phase, and access to Pudding Lane Cottage will be maintained. As shown on the Works Plan – Onshore Sheet 1 [APP-013], the junction of Pudding Lane/Weybourne Road plus an approximate 10m length of the A149 to the west of that junction is within the Order Limits for access purposes. The western part of that junction may therefore be utilised as an access track. The public will continue to be able to use the eastern part of that junction to access Pudding Lane and traffic management will be required to manage the interface between the public and construction traffic. This will be agreed as part of the CTMP secured under Schedule 1, Part 3, Requirement 18 of the draft DCO [APP-027] as noted above. On this basis, traffic impacts at this location will not be significant and no additional mitigation beyond that set out in Volume 3, Chapter 7: Traffic and Transport [APP-079] is considered necessary.</p>

1.2.19 Ray Pearce [RR-019]

Relevant Representation Comment	Applicant's Response
<p>Our property is within 80 meters of the proposed position where the Hornsea Three Wind Farm Project cables (Orsted) are planned to cross with those from the Vanguard and Boreas Wind Farm Projects' (Vattenfall) cables. Orsted & Vattenfall have placed a commercial Non Disclosure Agreement (NDA) over their discussions regarding the crossing point of their cables which is detrimental to the planning process. Orsted have failed to provide a plan of how the crossing point will be engineered and, therefore, have failed in their duty to provide required information for public consultation through the Preliminary Environmental Impact Report. The planned cumulative energy through the crossing point will be up to 6GW (5 times the maximum output of Sizewell B nuclear power station) which will have a significant impact on the environment and, potentially, public health. Also, the crossing point creates a Vulnerable Point (VP) in the Nation's energy infrastructure security. National Grid plc allocated the project the connection point at South Norwich without co-ordination causing the crossing of cables - Hornsea Three should connect to NETS at Necton with a considerable saving on the environmental impact.</p>	<p>The Applicant is in regular contact with Norfolk Vanguard and Boreas promoters, Vattenfall, at all levels of the project and has sought to and will continue to liaise on environmental matters and share information where necessary and appropriate to do so. A Non-Disclosure Agreement is a standard agreement entered into when two commercial parties initiate discussions on a wide range of issues. The Applicant does not consider that such agreements are detrimental to the planning process.</p> <p>It is common for underground high voltage cables to cross one another, for example the proposed onshore cable route for Hornsea Three will also cross the onshore export cable for Dudgeon offshore windfarm (see the Onshore Crossing Schedule [APP-089]). The detailed design for the crossing point will be developed once contractors are in place and there is more certainty on the construction programme for each project. Notwithstanding this, all applicable health and safety requirements associated with crossings of this type will be complied with, for example relating to vertical separation distances and protective works.</p> <p>Please see the Applicant's response to Relevant Representation RR-017 in respect of EMF and impacts on public health.</p>

Relevant Representation Comment	Applicant's Response
	<p>Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059] sets out the process of identifying a grid connection location. This process can be summarised as follows:</p> <ul style="list-style-type: none"> • When a wind farm developer wishes to connect to the national transmission network, there is a joint assessment to identify a cost-effective connection point. The wind farm developer looks at offshore and onshore routeing considerations for the wind farm cables, and National Grid as System Operator looks at the network reinforcements that may be needed, taking account of the capacity sought and timing of the connection. • The connection point is agreed between the parties through that collaborative assessment and the connection offer is then made by National Grid reflecting the outcome of that process. <p>The above process was followed by National Grid and Vattenfall and then subsequently with Ørsted. The assessments for the Vattenfall Vanguard and Boreas projects and Ørsted's Hornsea Three project concluded that projects would cable below ground to the National Grid network, rather than National Grid extending its network of overhead lines across Norfolk to the coast. In respect to grid connection, Vattenfall applied first and through that joint assessment Necton was identified as their connection location. Necton was favoured over Norwich Main because of the comparative engineering and environmental challenges of routeing wind farm connecting cables either north around Norwich close to the city or south through the National Park. Ørsted then subsequently applied and the same joint evaluation process was undertaken, with Norwich Main being identified for that connection through that process. Necton was discounted for Hornsea Three due to a lack of capacity when taking into consideration existing capacity and contracted capacity (a total of approximately 5.3GW).</p> <p>The assessments of grid connection have therefore been undertaken in accordance with the framework set out by Government and no specific consideration of the relative environmental impacts is considered appropriate at this stage.</p> <p>In terms of security, measures to secure compounds and the onshore cable corridor during construction are set out in the Outline Code of Construction Practice [APP-179] and include fencing and specific entry and exit points for authorised access. With regards to security of supply, project assets and systems will be designed and constructed with physical access control and cyber-security measures as required by authorities and our internal policies as necessary to meet any threats. The Applicant would note that the energy network within the UK has sufficient flexibility inbuilt to enable it to absorb any potential system failures.</p>

1.2.20 The Corporation of Trinity House of Deptford String [RR-020]

Relevant Representation Comment	Applicant's Response
<p>Trinity House is the General Lighthouse Authority for England, Wales, the Channel Islands and Gibraltar with powers principally derived from the Merchant Shipping Act 1995 (as amended). The statutory role of Trinity House as a General Lighthouse Authority includes the superintendence and management of lighthouses, buoys and beacons within our area of jurisdiction.</p> <p>Trinity House wishes to be a registered interested party due to the impact the development would have on navigation within Trinity House's area of jurisdiction. It is likely that we will have further comments to make on the application and the draft Order throughout the application process.</p>	<p>The Applicant acknowledges this Relevant Representation and is in the process of developing a SoCG with The Corporation of Trinity House to address issues raised.</p>

1.2.21 J A Wright [RR-021]

Relevant Representation Comment	Applicant's Response
<p>Re: location of HVDC Converter / HVAC Substation by A47 with entry from B1113 - I wish to object to proposed location as...</p> <p>(a) the proposal is sited on productive farmland rising gently from B1113;</p> <p>(b) the B1113 is a rural road through villages and this will appear like a factory complex, detracting from the rural landscape of the area;</p> <p>(c) it is very close to 2 historic buildings, Gowthorpe Manor (of great historic significance) and Mangreen Hall and will detract from both from some viewpoints;</p> <p>(d) this could/should be relocated to a site adjacent to/north of the Norwich Main National Grid Substation which is currently being quarried so the Converter/Substation buildings could be hidden from view and there is excellent access from the A140.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 in respect of the site selection process for, and landscape and visual impacts of, the HVDC converter/HVAC substation.</p> <p>Please see the Applicant's response to Relevant Representation RR-078 relating to impacts of the HVDC converter/HVAC substation on historic environment assets.</p>

1.2.22 Samantha Neville [RR-022]

Relevant Representation Comment	Applicant's Response
<p>As a resident of an affected area I would like to be able to make any objections</p>	<p>The Applicant notes the comment and will address any objections if they are submitted.</p>

1.2.23 Broads Authority [RR-023]

Relevant Representation Comment	Applicant's Response
<p>The Broads Authority, having considered the documents submitted, does not have any objection to the application.</p>	<p>The Applicant notes the Broads Authority's position.</p>

1.2.24 Michael Wright [RR-024]

Relevant Representation Comment	Applicant's Response
<p>Although in general I would support such additions to our essential national infrastructure, I wanted to ask a few questions about the resilience being designed into, and operationally planned for, this important energy supply system.</p> <p>In a recent Economist article on electrical infrastructure resilience (The Economist, July 15th – 21st 2017, page 16, A Flash in the sky), the vulnerability of electricity infrastructure to geomagnetic storms is discussed along with possible civilian life consequences. As the article states, it is a low probability event but with high consequence.</p> <p>However, if one adds to this the higher probability (but maybe lower consequence) of unwelcome events such as destructive terrorism and cyber-attack, then the overall resilience strategy addressing issues for example of access control, surge blockers, electro-magnetic pulse protection and insurance spares, becomes very important.</p> <p>I am not expecting to be told the details of any such strategy, but it would be re-assuring to know if there is indeed a strategy and that it addresses all these risks and mitigations.</p> <p>Some information about myself. Although now retired, I worked for 40 years in the oil and gas industry (with a short spell at Sizewell B in the 1980's), mostly on development projects, including some at key onshore gas reception facilities where security has had to become considerably more robust over that time.</p>	<p>Hornsea Three will be designed and constructed according to British and international standards and good industry practice. This ensures that the project assets and systems are compliant with requirements and are resilient with regards to the physical issues raised in the relevant response.</p> <p>The specific threat related to geomagnetic storms is mainly a concern for long distance overhead lines, which are not going to be used in Hornsea Three (with the onshore cables buried along their entire length).</p> <p>With regards to terrorism and cyber-attacks the project assets and systems will be designed and constructed with physical access control and cyber-security measures as required by authorities and our internal cyber security policies as necessary to meet such threats. The Applicant would note that the energy network within the UK has sufficient flexibility inbuilt to enable it to absorb any potential system failures.</p>

1.2.25 Savills (UK) Ltd on behalf of Blue Sky Leisure [RR-025]

Relevant Representation Comment	Applicant's Response
<p>I am writing on behalf of our client Blue Sky Leisure. Blue Sky Leisure is a successful family company with a long track record of delivering high quality tourist and leisure facilities including a diverse range of accommodation from camping through to log cabins within North Norfolk and especially within the area of the proposed Hornsea Project Three Offshore Wind Farm.</p> <p>Our client's concerns are;</p> <ul style="list-style-type: none"> • North Norfolk is an AONB and a renowned tourist destination. • The significant adverse landscape and visual effects on the natural beauty, wildlife and cultural heritage of the AONB would be contrary to the primary purpose of the designation and the national duty to conserve and enhance the area's natural. • The scale, form, design, appearance and cumulative impacts of the proposals would significantly adversely affect visual amenity, local environment, economy and the recreational/tourist use • Orsted have failed to provide adequate mitigation, as the data being used to determine these provisions is incorrect, especially in terms of traffic, transport, noise and vibration. • Our client respectfully requests that these points are considered fully within the examination process and intends to submit a full written representation in due course. In addition, if appropriate, they request to make oral representations. 	<p>As set out in paragraph 4.11.1.9 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076], the value of the landscape within the North Norfolk AONB is generally considered to be of high value due to the national designation of the landscape. This has fed into the assessment, and it is considered that sufficient information is presented in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] and Volume 6, Annex 4.4: Qualities of Natural Beauty of the Norfolk Coast AONB of the Environmental Statement [APP-145] to determine the impacts on the Norfolk Coast AONB. However, this is expanded upon in Appendix 23 Impacts on the Qualities of Natural Beauty of the Norfolk Coast AONB to the Applicant's response to Deadline I to provide clarification on how conclusions have been reached in the Environmental Statement relevant to the special qualities of the AONB. Collectively, the various technical chapters of the Environmental Statement demonstrate that no significant effects are anticipated on the AONB.</p> <p>Notwithstanding this, the Applicant would also note that Requirement 7 of the draft DCO [APP-027] requires that details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the onshore HVAC booster station will be submitted to and approved by the relevant planning authority prior to commencement of construction.</p> <p>The potential for inter-related effects on tourism (i.e. noise, landscape and recreation) is acknowledged in Volume 3, Chapter 11: Inter-related Effects (onshore) of the Environmental Statement [APP-083]. Mitigation in respect to traffic and transport and noise vibration are set out in Volume 3, Chapter 7: Traffic and Transport [APP-079], and Chapter 8: Noise and Vibration [APP-080] respectively. This mitigation includes traffic management measures set out in an Outline Construction Traffic Management Plan [APP-176] which will be developed into a Construction Traffic Management and agreed with the relevant planning authority prior to construction works commencing (see Requirement 18 of the draft DCO [APP-027]). These have all informed the assessment on tourism presented within Volume 3, Chapter 10: Socio-Economics of the Environmental Statement [APP-082]. Taking these mitigation measures into consideration, no significant effects on tourism are anticipated as a result of Hornsea Three.</p>

Relevant Representation Comment	Applicant's Response
<p>Having been involved in the destination promotion in Norfolk for over 25 years the figures produced in Orsted's Socioeconomics chapter of the PEIR are considerably understated, out of date and/ or inaccurate.</p>	<p>Without further clarification is it difficult to ascertain which socio-economic data is being referred to, however, it is noted that data was updated (where available) in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement [APP-082] to reflect development since the submission of the PEIR. The methodology used to collect socio-economic baseline data is set out in Section 10.6 of Volume 3, Chapter 10: Socio-Economics [APP-082]. This methodology was agreed with the Secretary of State and relevant local planning authorities through the EIA Scoping Process (Volume 4, Annex 5.5: Scoping Report and Secretary of State's Scoping Opinion [APP-100]) and as such, the data is considered appropriate and accurate (based on the most up to date information available at November 2017 for all key socio-economic indicators).</p>
<p>Orsted have failed to provide details/responses to queries raised.</p>	<p>Hornsea Three is a nationally significant infrastructure project in a constantly evolving industry with a continuous focus on cost reduction and improvements in technology and construction methodologies. As such, it is not possible to provide precise final design details a number of years ahead of the time it will be constructed. As a result of this, the Applicant has employed a maximum design scenario approach, which reflects the Rochdale envelope approach. The Applicant has shared details of this maximum design scenario with stakeholders through the process described in the Consultation Report [APP-034].</p>

1.2.26 N2RS (No to Relay Stations) [RR-026]

Relevant Representation Comment	Applicant's Response
<p>Background: N2RS is a local campaign action group based in the East Ruston area of North East Norfolk. It was formed in April 2017 amidst concerns about the proposed onshore infrastructure planned to support Vattenfall's Norfolk Vanguard and Boreas offshore wind farms.</p> <p>N2RS has also been monitoring Ørsted's Hornsea Three project, which presents similar challenges for the communities affected and the potential for a cumulative, detrimental impact on the Norfolk landscape.</p> <p>With both projects the overriding issue for N2RS was the technology being proposed and the main concern was the prospect of cable relay stations. Like Ørsted, Vattenfall originally intended to seek planning permission for an HVAC system – with the possibility, post consent of changing to an HVDC system, if feasible.</p> <p>After intense campaigning and widespread support for HVDC, Vattenfall recognised the detrimental impact that cable relay stations and a 100 m wide cable corridor would have had on Norfolk's rural landscape and Vattenfall has now committed to newer, more environmentally friendly HVDC technology (prior to its planning application). As a result cable relay stations will not be required and the width of the cable corridor will be more than halved.</p> <p>This will significantly reduce disruption in North East Norfolk and along the cable corridor. It has also removed a great deal of uncertainty and created a much more acceptable project. Consequently this decision has been warmly welcomed by N2RS and many other interested parties.</p>	<p>Transmission Technology: Please see Appendix 22 to the Applicant's response to Deadline I in respect to inclusion of both HVAC and HVDC transmission systems in the project envelope. Please also see Applicant's response to Relevant Representation RR-133 in respect to the need for the onshore HVAC booster station.</p> <p>Landscape and Visual Impacts: The visual impacts of the proposed onshore HVAC booster station have been assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. This is supported by a set of visualisations of the onshore HVAC booster station provided in Volume 6, Annex 4.5: Photograph Panels, Wirelines and Photomontages [APP-146]. This concludes that there would be no significant effects during the construction, operation and maintenance or decommissioning phases associated with the onshore HVAC booster station outside of the site boundary. Notwithstanding this, a number of mitigation measures have been identified to reduce the potential for visual impacts to the surrounding area. These include minimising the extent of hedgerow and trees to be removed as well as mitigation planting to supplement natural screening (further details provided in the Outline Landscape Management Plan Outline LMP [APP-181] and shown in Sheet 3 of 3 of the Onshore Limits of Deviation Plan [APP-026]. Implementation of these mitigation measures is secured by Requirements 8: Provision of Landscaping and Requirement 9: Implementation and Maintenance of landscaping of the dDCO [APP-027].</p>

<p>The Ørsted Proposal: We have consulted with the Friends of North Norfolk, had discussions with land agents and stakeholders, attended Ørsted drop-in exhibitions and spoken at the NNDC cabinet meeting which debated the Hornsea Three project last year. HVAC technology is widely seen as the most damaging option for much of North Norfolk. From our own investigations into the impact of HVAC here in North East Norfolk we believe that it is also the wrong choice for Hornsea Three. It will have a negative impact on individuals, businesses, farming and especially on tourism.</p> <p>The large cable relay station proposed in open countryside near Little Barningham is of specific concern – and there is little information available to help interested parties determine what it might look and sound like.</p> <p>The long timelines for construction will also mean that areas of North Norfolk are plunged into planning blight for many years to come.</p> <p>Conclusion: Now that Vattenfall is able to commit to HVDC - a much better outcome for Norfolk - we call upon Ørsted to follow its lead by delivering the most environmentally friendly project possible – with HVDC at the heart of the scheme.</p> <p>N2RS wishes to make these views known to the Planning Inspectorate in writing but also to attend at any future hearings.</p>	<p>Since the point of application, the Applicant has committed to planting sections of the landscape planting at the commencement of works at the onshore HVAC booster station, which could be up to two years ahead of the planned completion of construction works, in order to maximise the screening provided during the construction and early years of operation. It is therefore proposed to add the following wording at newly created paragraph 3.1.2.3 – 3.1.2.4 of the Outline LMP [APP-181] (new text shown as underline):</p> <p><u>“3.1.2.3 Hornsea Three has committed to implementing sections of the mitigation planting at the commencement of works at the onshore HVAC booster station, which could be up to two years ahead of the planned completion of construction works, in order to maximise the screening provided in the shortest period of time. Areas which will not be pre-planted comprise planting to the immediate north and south of the permanent HVAC booster station site (where it connects to the onshore cable corridor), a 5 m buffer around the permanent site and between the permanent footprint and temporary construction site. These areas will not be pre-planted to facilitate the construction works at the site. Further details of the pre-planting to be undertaken at the onshore HVAC booster station will be provided in the final LMP which will be submitted and agreed with the relevant local planning authorities.”</u></p> <p><u>3.2.1.4 In a two-phase construction programme the remainder of the proposed mitigation planting (i.e. that is not implemented at the commencement of construction works of the first phase), would be implemented during the first available planting season following completion of the first construction phase, unless otherwise agreed with the local planning authority. Some of these areas may subsequently need to be removed to allow construction of the second phase although they would be reinstated again following completion of the second phase. The need for such works will be determined as part of the final LMP.”</u></p> <p>Alongside this, under Requirement 7 of the dDCO [APP-027], details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the onshore HVAC booster station will be submitted to and approved by the relevant planning authority prior to commencement of construction.</p> <p>Noise: The noise impacts of the proposed onshore HVAC booster station have been assessed in Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement [APP-080]. The assessment considers three example residential properties, reflecting the closer properties to the site (see Table 8.36) and the nearest PRoW running through Barningham Green Plantation and around New Covert woods. The assessment concludes that noise levels at the closest noise sensitive receptors would not be significant.</p>
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Relevant Representation Comment	Applicant's Response
	Construction Programme: Please see the Applicant's response to Relevant Representation RR-015 in respect to the construction programme and duration of impacts.

1.2.27 Peter Scott [RR-027]

Relevant Representation Comment	Applicant's Response
<p>I want to support this project for both national and local reasons as follows:</p> <p>1 The country urgently needs as much renewable power as it can get. Off-shore wind is an obvious way that this region can contribute, with its regular wind and shallow seas.</p> <p>2 Norfolk is particularly badly hit by rising sea levels and this is likely to get worse, which makes my first point all the more pressing.</p> <p>3 Any impact on wildlife will probably be temporary. Even if it is not, the overall long-term benefits to wildlife in helping to stabilise the climate more than outweighs that.</p> <p>4 Norfolk urgently needs acceptable broadband, which most of it does not have. If the condition is made that the project must allow fibre to be laid in the trenches with access, as is the case with Vattenfall, then organisations such as B4RN can use it to provide good broadband across a wide area.</p>	<p>The Applicant notes the comments made in support of Hornsea Three.</p> <p>In respect to co-locating other cables and assets with the Hornsea Three cables, there are a number of complexities which are summarised below:</p> <ul style="list-style-type: none"> • The Offshore Transmission Operator (OFTO) owner (to whom we must eventually divest the elements of the project associated with electricity transmission) is unlikely to be comfortable with the activity of laying an additional cable or asset within such close proximity to the Hornsea Three cables due to the extremely high insurance caps which could make the transmission asset unsaleable or jeopardise the business case and increase project risk; • The consent for the installation and operation of any other assets e.g. broadband cables, would need to be obtained by another party (it cannot be obtained as part of the Hornsea Three infrastructure as it has not been stated, consulted on, or incorporated into the Environmental Statement). Furthermore, as a Nationally Significant Infrastructure Project, Hornsea Three must demonstrate a need for all elements included within the project envelope and there is not a direct need associated with the project for broadband cable; and • Finally, the owner/operator of any other assets would be required to source its own agreements with all landowners linearly along the onshore cable corridor route. <p>On the basis of the above, no such infrastructure is proposed as part of Hornsea Three.</p>

1.2.28 Graham Everett [RR-028]

Relevant Representation Comment	Applicant's Response
<p>As the elected Broadland District councillor for Reepham Ward, I would request that the Planning Inspectorate considers requiring Orsted to install the ducting for Phase two of the scheme at the same time as the ducting and cabling is installed for phase one.</p> <p>I appreciate that Orsted have already reduced the project from three to two phases but this further amendment would considerably reduce the impact of the scheme at phase two stage on the local community and area by only requiring the cabling to be pulled through at various locations rather than the whole route being disrupted for a second time within an eight year period.</p>	<p>Please see the Applicant's response to Relevant Representation RR-006 relating to the commitment made by the Applicant regarding installing ducts for the second phase as part of the first phase of works, should both phases be awarded a Contract for Difference in the same auction round.</p>

1.2.29 Poringland Parish Council [RR-029]

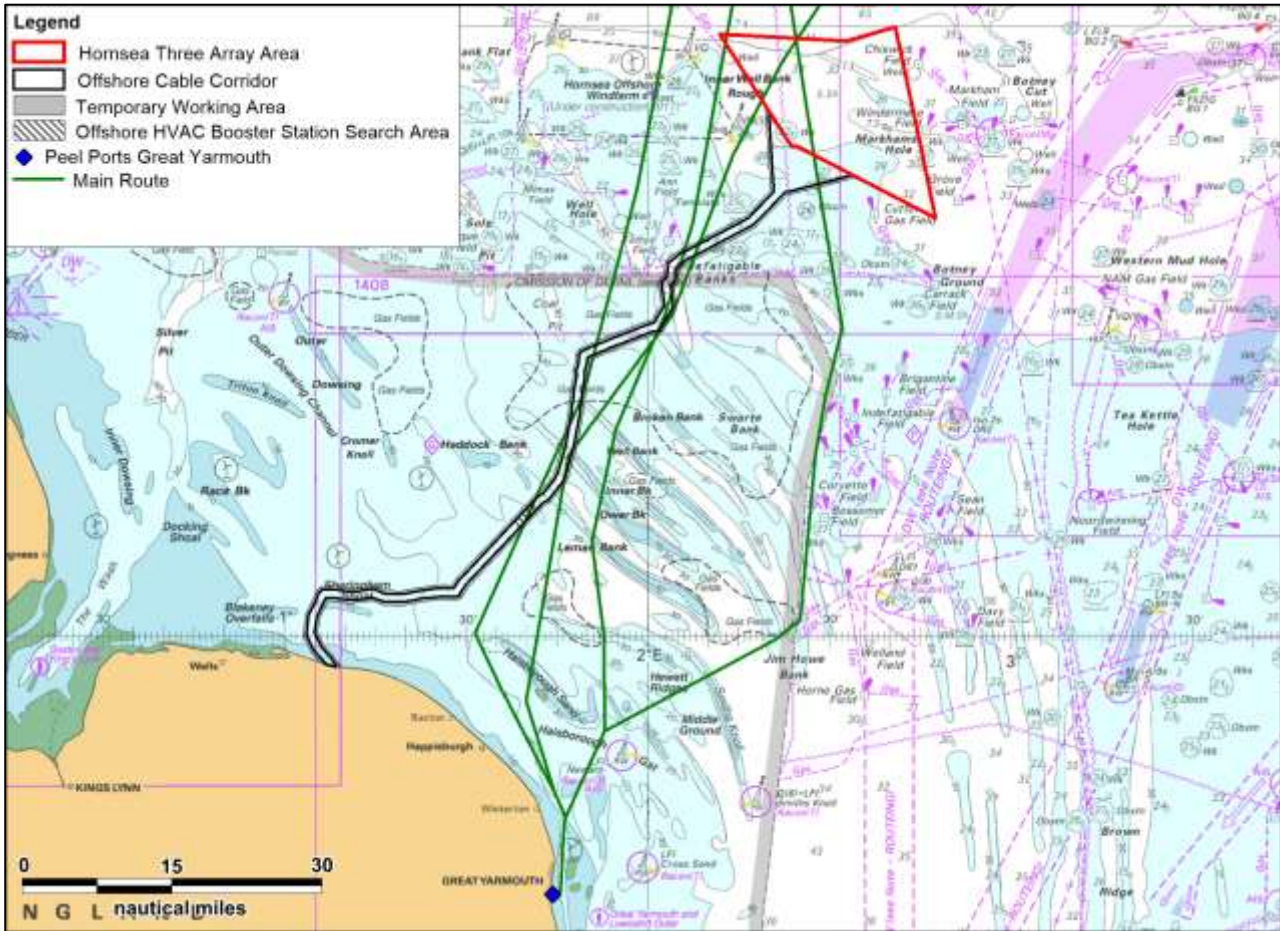
Relevant Representation Comment	Applicant's Response
<p>Poringland Parish Council would recommend that the proposed building in the Mangreen area is the smaller DC building at 15M tall; that it is grey rather than green; that it is sunk into the ground if possible; that it is masked into the landscape; and that it does not have a detrimental impact on the listed building Keswick Hall.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to the visual impact of the HVDC converter/HVAC substation.</p> <p>Impacts on heritage assets including Keswick Hall are assessed in Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077]. It is concluded that the effect of Hornsea Three on Keswick Hall would be minor adverse, which is not significant in EIA terms (paragraph 5.11.1.99).</p> <p>Consideration was given to a wide range of potential mitigation in respect to landscape and visual, and heritage effects; the lowering of the HVDC converter/HVAC substation below current ground level was one option which was considered (as set out in responses to Phase 2 consultation, APP-049). However, given that multiple underground cables need to connect into this infrastructure, this option would have had significant implications for the depth of cable trenches whereby the cables would be deeper and thus additional earthworks needed along a length of the onshore cable corridor, resulting in a greater environmental impact. Based on this, Hornsea Three has implemented a range of other mitigation measures which will mitigate the visual impact of the substation whilst not creating additional significant environmental impacts such as mitigation planting to supplement natural screening (further details provided in the Applicant's response to RR-001 and the Outline Landscape Management Plan [APP-181]).</p> <p>The preference for a lower maximum building height is noted; to clarify the maximum building height of up to 15 m is correct for the HVAC scenario, under the HVDC scenario the maximum building height would be up to 25 m (as set out in Volume 1, Chapter 3: Project Description of the Environmental Statement, [APP-058]). Further comparisons between the HVAC and HVDC are provided in Appendix 22 to the Applicant's response to Deadline I. Under Schedule 1, Part 3, Requirement 7 of the draft DCO [APP-027], details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the HVDC converter/HVAC substation will be submitted to and approved by the relevant planning authority prior to commencement of construction.</p>

1.2.30 Peel Ports [RR-030]

Relevant Representation Comment	Applicant's Response
<p>I refer to our letter of 20th September 2017. GYPC would like to emphasise that our interest are Port related and the potential effects on our operational interests and the statutory interests of the Port Authority which include navigational safety, shipping movements and dredging activities. As an interested party we are seeking the necessary assurance that vessel access to the Port will in no way be affected, construction and operation of the windfarm will not impact on port's radar, navigational or communications systems or that the construction or operations will not impede or otherwise adversely affect the dredging regime, infrastructure or operation of the Port.</p>	<p>The Applicant thanks Peel Ports for their response to the Hornsea Three application and their previous response to the Hornsea Three Preliminary Environmental Information Report (PEIR).</p> <p>As part of the Environmental Impact Assessment, an assessment was undertaken on potential impacts on shipping and navigation receptors in line with the Maritime and Coastguard Agency (MCA) Marine Guidance Note (MGN) 543, which requires specific consideration of (but not limited to) areas used for anchorage, safe haven, port approaches and pilot boarding or landing areas. This assessment was undertaken initially as part of the Navigational Risk Assessment (NRA) before then being assessed as part of the Environmental Statement. The NRA process included consultation with key stakeholders during which a hazard workshop was held, to which a Peel Ports representative was invited (see Hornsea Three Environmental Statement, Section 20 of Volume 5, Annex 7.1: Navigational Risk Assessment) [APP-112].</p> <p>The Navigational Risk Assessment (Volume 5, Annex 7.1 of the Environmental Statement) [APP-112] considers ports, particularly noting that the closest port to the Hornsea Three Array Area is Great Yarmouth, but that this port is located 76 nautical miles away to the south west of the array area. The proposed export cable corridor is also located to the north of Great Yarmouth with a landfall at Weybourne on the North Norfolk coast. Given the distance between the array area, the export cable corridor and the port of Great Yarmouth, there are not considered to be any direct or indirect impacts. Outputs of the assessment can be found in Section 22.8 of Volume 5, Annex 7.1: Navigational Risk Assessment of the ES [APP-112].</p> <p>The NRA also considered routing and did identify regular vessel routes to and from Great Yarmouth which intersected the proposed Hornsea Three Array Area – as shown in the Figure 1.2.30.1 below this table. The identified routes consist of Oil & Gas support vessels transiting up to one vessel per two days to gas fields such as Murdoch, Schooner and Ketch. Regarding direct impacts to Peel Ports' activities; due to the distance and the available sea room, the assessment concluded that there were no significant impacts on those routes or any impact on potential future increases to vessel numbers. Please see Section 17 of Volume 5, Annex 7.1: Navigational Risk Assessment of the ES [APP-112] for more detailed information.</p>

Relevant Representation Comment	Applicant's Response
	<p>Routes will also cross the export cable corridor, and Hornsea Three is committed to undertaking a cable burial assessment post consent (in line with MGN 543) to ensure that navigable depths are not adversely impacted (Section 23 of Volume 5, Annex 7.1: Navigational Risk Assessment) [APP-112]. Given the water depths that the cable corridor is to be installed in, the short duration of the installation of the cable and the distance from any notable commercial ports, impacts were assessed to be within acceptable limits.</p> <p>Given the early stage in the development process it is not yet possible to identify which ports will be used for construction, operation or maintenance of the Hornsea Three Array or Export Cable Corridor. However, measures adopted as part of the Hornsea Three application include Marine Coordination that will ensure that project vessels do not present an unacceptable risk to each other or to transiting vessels; therefore there are not anticipated to be any effects on existing vessel operations being undertaken within or near the ports that are finally selected.</p> <p>Other measures adopted as part of Hornsea Three will aid the safe management of shipping and navigation within the Hornsea Three Array Area, Export Cable Corridor and during the overarching construction process. The full list is contained within Section 23 of Volume 5, Annex 7.1: Navigational Risk Assessment of the Environmental Statement [APP-112]. However, a few notable examples are listed below which should give reassurance that operations and activities at the Port of Great Yarmouth will not be adversely impacted:</p> <ul style="list-style-type: none"> • Compliance with UK and Flag State regulations and IMO conventions including COLREGs and SOLAS; • Regarding vessel health and safety requirements, Hornsea Three will ensure that all project related vessels meet both IMO conventions for safe operation as well as HSE requirements, where applicable; • Promulgation of information; • Compliance with MGN 543; and • Cable burial assessment and periodic surveys.

Figure 1.2.30.1 Vessel routes to and from Great Yarmouth



1.2.31 Plumstead Parish Council [RR-031]

Relevant Representation Comment	Applicant's Response
DC should be used rather than AC as this delivers less overall impact	Please see Appendix 22 to the Applicant's response to Deadline I in respect to inclusion of both HVAC and HVDC transmission systems in the project envelope and their relative environmental impacts.

Relevant Representation Comment	Applicant's Response
Cables should be laid all in one go - no second phase	Please see the Applicant's response to Relevant Representation RR-015 regarding the construction programme and phasing, as well as RR-006 regarding the commitment made by the Applicant to install ducts for the second phase as part of the first phase of works, should both phases be awarded a Contract for Difference in the same auction round. Should the project be delivered in two completely distinct phases, the Applicant has sought to minimise disruption on the local community through design (such as the use of trenchless technologies to cross public roads to minimise road closures) and management measures (to be developed in line with the principles set out in the Outline Code of Construction Practice [APP-179] and Outline Construction Traffic Management Plan [APP-176]. These will be secured through Requirements 17 and 18 in the draft DCO [APP-027] respectively.
Money should be made available to communities facing significant disruption.	We have established voluntary Community Benefit Funds (CBFs) for a number of our projects which are currently under construction. Hornsea Three will review the interactions of the project as the proposal is refined and consider an appropriate way to feed benefits back into the local community. However, any decision to establish a community benefit fund for Hornsea Three would be made post final investment decision (FID).

1.2.32 Equinor [RR-032]

Relevant Representation Comment	Applicant's Response
<p>As the Hornsea Three project is planned to cross the Dudgeon transmission assets (both offshore and onshore cables), Equinor, as current operator of these assets is a vested stakeholder.</p> <p>It is expected that a proximity agreement and crossing agreement will be sought from the Dudgeon operator as part of the development.</p> <p>However, it must be noted that once the Dudgeon OFTO transaction completes this will no longer be an Equinor consultation matter as Equinor will not be asset owner of the cables. Consultation must be run through and with the OFTO buyer:TCP.</p>	<p>The Applicant has consulted with Equinor regarding interactions with the Dudgeon transmission asset and is aware of the ongoing OFTO transaction with Transmission Capital Partners.</p> <p>Appropriate protective provisions have been included within the DCO [APP-027] at Schedule 9, Part 1 to ensure suitable protection of the assets of licenced undertakers such as Equinor.</p> <p>Prior to construction and pursuant to the protective provisions in the DCO, the Applicant will provide Equinor with details of the crossing and Equinor will be able to stipulate the protective measures that must be put in place if required.</p>

1.2.33 Stephen Wharton [RR-033]

Relevant Representation Comment	Applicant's Response
<p>With the increase in heavy works construction traffic which the Hornsea Project will bring, I am concerned about the safety of pedestrians on the A149 walking between Weynor Gardens and Weybourne village centre. This section of the road has no pavement and a blind bend for part of the way. There is no verge to escape the traffic. Weynor residents and holiday makers staying at Foxhills Camping wish to use the road to access the pub, church, coffee shop and the beach. I would like to suggest a pavement be provided and construction traffic use of the road limited to weekdays only.</p>	<p>As acknowledged in paragraph 7.7.5.7 of Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079], there are no pedestrian facilities along the single carriageway A149 between Weynor Gardens and Weybourne village, and high hedgerows limit forward visibility on bends. There are many sensitive receptors and a lack of footways to village facilities such as shops, pubs and a church. There is on-street parking and houses which front straight onto the road in the village, with poor visibility for several houses with driveways. The A149 is a bus route and buses, along with all other delivery and service vehicles (including HGVs) route along it and the speed restriction varies between 20 mph and 30 mph along this stretch of road. Table 7.16 in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] assesses the sensitivity of this section of the A149 to be high. Table 7.18 in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] sets out the impact of Hornsea Three Construction Traffic Flows. The figures for this section of the A149 (Link 1) to the east to the landfall access would be subject to increased levels of HGV traffic approximating to those assigned to Link 2, the link immediately to the east.</p> <p>Therefore, the eastern section of Link 1 should reasonably be subject to further assessment given that the impact of HGVs would be higher than those ascertained from further inspection of Table 7.18.</p> <p>An assessment of the pedestrian safety at this location has been undertaken within APP-079 informed by Volume 6, Annex 7.4: Personal Injury Accident Locations [APP-162] which states that there have been no Personal Injury Accidents within the last five year period on this section of the A149 between Weynor Gardens and Weybourne (according to Government guidance set out in their 2014 publication 'Planning Practice Guidance: Travel Plans, Transport Assessments and Statements'). Furthermore, there has been only one personal injury accident within the last nine years, with the nature of that incident leading it to be reasonable to assume that either driver error or pedestrian error was the contributory factor. This period includes the previous construction works associated with the construction of the Sheringham Shoal and Dudgeon Offshore Wind Farm onshore infrastructure.</p> <p>A document which considers the fluctuation levels of HGV construction traffic will be submitted to the Examining Authority for Deadline 3. This will input to a more managed approach to traffic for use within the CTMP on sensitive links.</p>

Relevant Representation Comment	Applicant's Response
	<p>Although there will be an increase in vehicle movements along this link as a result of Hornsea Three construction, as set out at Volume 6, Annex 7.1: Transport Assessment (Appendix b) of the Environmental Statement [APP-159], this will be temporary associated with the construction of the onshore cable corridor and the landfall. As such, based upon the Planning Policy Guidance*, the assessment presented in APP-079 concluded that there would be no significant effects on pedestrian safety. The Applicant considers therefore that the measures set out in the Outline CoCP [APP-179] and Outline CTMP [APP-176] are sufficient and appropriate to maintain pedestrian safety and there is not a need to provide dedicated footways along this section of the A149.</p> <p>The Applicant has inserted the following in paragraph 2.1.2.4 and inserted a newly created paragraph 2.1.5.3 of the Outline CTMP to identify the mechanism by which measures relating to pedestrian safety will be identified (new text shown in underline):</p> <p><i>"2.1.2.4 If deemed necessary by the HAs, construction access routes will have temporary signs posted along the confirmed routes. <u>This may include signs to improve pedestrian awareness of HGV movements along roads where footways are not provided or are limited. The need for such signs, and their proposed locations, would be discussed and agreed with the HA during the preparation of the final CTMP.</u></i></p> <p><i><u>2.1.5.4 The final CTMP will identify the need for and nature of measures to be implemented to enhance pedestrian safety at locations where HGVs are routed along roads without pedestrian footways.</u></i></p> <p>The CTMP (Requirement 18 of the dDCO) will be developed in line with the principles set out in the Outline CTMP [APP-176].</p> <p>On the basis of the above, it is considered that sufficient consideration has been given to pedestrian safety along the A149, and Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] assessed there to be no significant effects. On this basis, the Applicant does not consider it necessary to restrict the working hours or the use of this section of the A149 to weekdays only. The proposed working hours during construction of Hornsea Three are set out in paragraph 4.1.1 of the Outline CoCP [APP-179].</p> <p>*Ministry of Housing, Communities and Local Government (2014) Planning Practice Guidance: Travel Plans, Transport Assessments and Statements. London. Ministry of Housing, Communities and Local Government</p>

1.2.34 Oulton Parish Council [RR-034]

Relevant Representation Comment	Applicant's Response
<p>The main issues that OPC wish to raise during the examination process are as follows:</p> <p>1. No proper pre-application assessment has been made of either the suitability of the Oulton site or the feasibility of the access route. For instance, the highways issues in the case are many, and some are intractable. These include:</p> <ul style="list-style-type: none"> - the southern end of Oulton Street is unfeasible for HGV traffic in both directions (see Appeal Decision Ref: APP/K2610/A/14/2212257) and use of the northern (residential) end of The Street by Orsted traffic is completely unacceptable; - low overhead power and phone cables; - a railway hump very close to proposed site entrance; - Impact on Blickling Conservation Area. - Impact on tourists visiting NT Blickling Hall/Conservation Studio (Oulton Street) - The B1149 has been assessed to have a Personal Injury Accident record 25% higher than the national average. HGVs will use the B1149 to and from the Main Compound/cable routes via 'The Street'. - B1149 will experience an increase in traffic...“B1149 at Edgefield, north of the village hall and south of Hempstead Road (11.3%); and B1145 east of Cawston, west of the B1149 crossroads (17.9%).” - Oulton Street has NOT been assessed as a sensitive receptor, houses directly on road with no garden or pavements. - School children have to walk to taxi pick-up point along 'The Street' as there are no buses. <p>This list is not exhaustive.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I, particularly Section 4 in respect the site selection process, consideration of alternatives and feasibility relating to the onshore main construction compound. The Appendix also provides a summary of the impact of the main construction compound in respect to historic environment, traffic and transport, noise and air quality as reported within the relevant chapters of the Environmental Statement.</p>
<p>2. Deficiencies in the post-application assessments: Automatic Traffic Counters (ATCs) were installed in the parish for a period of approx. 2 weeks between about 15th and 30th June. The locations chosen for these ATCs will mean that much of the HGV agricultural traffic (e.g. a percentage of that generated by Street Farm) will not be recorded at all, and – vitally - the entire period of installation “happens” to coincide with one of the rare lulls in agricultural activity i.e. between sowing/planting and harvesting. The traffic assessment data will therefore be dangerously unrepresentative.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I in respect to surveys undertaken post-application to inform the development of the CTMP.</p>

Relevant Representation Comment	Applicant's Response
<p>3. Orsted's failure to produce even an outline CTMP, pre-application, has made it impossible for them, us, PINS and Vattenfall to assess the cumulative impact of the fact that Vattenfall are also locating 2 of their compounds in this parish and sharing the same access road.</p>	<p>To establish the principles to be used to inform a detailed CTMP in due course, an Outline CTMP was submitted with the Application [APP-176]. Since Application, further analysis in respect of traffic and transport has been undertaken and is reported in Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I. This analysis is ongoing and will inform the continued refinement of the Outline CTMP during the examination process.</p> <p>Since the Hornsea Three application was submitted, the application for Vattenfall's Norfolk Vanguard project has been submitted and accepted by PINS. Hornsea Three and Norfolk Vanguard are in regular dialogue and are working towards providing an update to the Cumulative Effect Assessment (CEA) undertaken for the two projects at application stage. The Applicant will submit this update at a future Examination Deadline.</p>
<p>4. Light pollution: Oulton is a dark skies area.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I in respect to lighting controls at the main construction compound.</p>
<p>5. Noise pollution: will impact on 24 dwellings in The Street and the several dwellings very close to the western edge of the site. As well as traffic noise, there are grave concerns relating to: - generators – especially at night; - on-site traffic movement noise; - on-site reversing alarms (hard to control with use of sub-contractors). - Cumulative impact of Noise from both Orsted & Vattenfall's Compounds/Mobilisation area/cable route/traffic associated with these projects, if both projects run concurrently.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I.</p>
<p>6. The Old Railway Gatehouse: situated at the very entrance to the proposed site, the impact of noise and emissions would mean that the quality of life of the residents would be utterly destroyed for the entire 8 years of the project.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I.</p> <p>The Applicant is consulting directly with the occupants of The Old Railway Gatehouse on the access strategy for the main construction compound in order to understand the most appropriate detailed management measures in the vicinity of this property. Once an access strategy has been agreed (see Appendix 20, Annex A and B), this work will be supported by noise and air emissions modelling based on the predicted construction traffic flows associated with the main construction compound and reported in a future Examination Deadline. This will inform the development of the Outline CoCP [APP-179], or Outline CTMP [APP-176] during the examination.</p>
<p>7. HVDC and the Ducting method: OPC raises these overarching issues because of the huge implications they would have in minimizing both the length of the project and the overwhelming disruption it causes.</p>	<p>Please see Appendix 22 to the Applicant's response to Deadline I, in respect to inclusion of both HVAC and HVDC transmission systems in the project envelope.</p> <p>Please also see the Applicant's response to Relevant Representation RR-006 relating to the commitment made by the Applicant regarding installing ducts for the second phase as part of the first phase of works, should both phases be awarded a Contract for Difference in the same auction round.</p>

1.2.35 Norfolk County Council [RR-035]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in Norfolk County Council's Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation in Annex 1 of this document.</p> <p>Norfolk County Council supports the principle of Hornsea Three, subject to the issues below being resolved:</p>	<p>The Applicant has responded to each of the detailed points from this Relevant Representation in Annex 1 – Full response to Norfolk County Council (RR-035) of this document. A summary of the points covered in Annex 1 is set out below:</p> <p>It is noted that Norfolk County Council have been engaged in consultation with Hornsea Three throughout the pre-application and post-application process. These discussions are also reflected in the Statement of Common Ground between Norfolk County Council and Hornsea Three.</p>
<p>Onshore infrastructure:</p> <ul style="list-style-type: none"> • Preferred option for Hornsea Three is the High Voltage Direct Current (HVDC) transmission option, although acknowledge that this will result in a taller HVDC convertor station. • Request the implementation of a secondary interconnection along the Hornsea Three onshore cable corridor. • Will work pro-actively with the Applicant regarding the use of the Great Yarmouth port facilities during the construction, and operation and maintenance phase of Hornsea Three. • Stakeholders/communities should be made aware of the Community Benefit Fund. • Appropriate compensation for affected businesses and communities should be provided. • Request penalties for the Applicant if they overrun beyond the timetable in the Environmental Statement. 	<ul style="list-style-type: none"> • Transmission technology and the realistic maximum design scenario used in the assessments; • Grid connection • The decision process for selecting port facilities; • Community benefits and compensation for landowners directly affected; • Future meetings to discuss strategic highway issues; • The reduction in the area of Mineral Safeguarding Area that would be occupied by Hornsea Three and the continued dialogue with Norfolk County Council; • Flood and drainage issues including SuDS, infiltration testing and the detailed drainage design; • Public health and environmental health issues; • Response to Local Member Views; • Traffic and highways including temporary access issues (e.g. The removal of temporary construction site accesses), permanent accesses to the onshore HVDC converter/HVAC substation and HVAC booster station, damage to the highway and video condition surveys, main construction compound, Abnormal Indivisible Loads, Travel Plans and cumulative impacts with Norfolk Vanguard; • Ecology including the Outline Ecological management Plan [APP-180], • Landscape; • Public Rights of Way (PRoW) including the preparation of a PRoW Management Plan; and
<p>Commercial fisheries:</p> <ul style="list-style-type: none"> • Welcome the proposed mitigation and compensation measures set out in the Hornsea Three Environmental Statement. <p>Minerals and waste:</p> <ul style="list-style-type: none"> • Does not have any mineral and waste planning concerns at this stage. <p>Public Health:</p> <ul style="list-style-type: none"> • Does not wish to raise any concerns, providing the relevant local county councils are satisfied with the proposal in relation to construction noise and local environmental health. 	

Relevant Representation Comment	Applicant's Response
<p>Ecology and Nature Conservation:</p> <ul style="list-style-type: none"> • Volume 3, Chapter 3: Onshore Ecology and Nature Conservation of the Environmental Statement (Document A6.3.3) describes the ecological baseline and makes a robust assessment of impacts resulting from Hornsea Three. • The effect of construction of Hornsea Three on County Wildlife Sites is considered to be of negligible to minor adverse significance due to the inclusion of mitigation measures. • Norfolk County Council acknowledge that the Outline Code of Construction Practice (CoCP) (Document 8.5) is a live document and will be updated post-submission of the Development Consent Order (DCO) as required. • Norfolk County Council would like to be involved in any consultation on the Outline Ecological Management Plan (Document 8.6). <p>Landscape:</p> <ul style="list-style-type: none"> • The concept and design justification within the Outline Landscape Management Plan (Document 8.7) includes suitable measures to reduce the landscape and visual impacts. 	<ul style="list-style-type: none"> • Archaeology and the Outline Written Scheme of Investigation.
<p>Highways:</p> <ul style="list-style-type: none"> • The requirement to produce a Construction Traffic Management Plan should be included in the DCO. • The proposed Hornsea Three onshore cable corridor should not fetter any future plans for the strategic highway network. • The Applicant needs to demonstrate that permanent safe access points to the onshore HVAC Booster station and onshore HVDC converter/HVAC substation can be provided. Details of the proposed visibility splays are necessary. • The main compound has changed since pre-application discussions. It is now located on the former Oulton Airfield and seeks to utilise and access an HGV route which the Planning Inspectorate (PINS) identified in 2014 as being unsuitable for heavy good vehicles (HGVs). • A legal agreement is needed between the Applicant and the Highway Authority that will ensure the Applicant repairs any damage caused by HGVs. <p>Abnormal loads:</p> <ul style="list-style-type: none"> • Satisfied the impact from abnormal loads will be insignificant. <p>Travel plans:</p> <ul style="list-style-type: none"> • Satisfied that a Travel Plan has not been submitted with Hornsea Three application for Development Consent. <p>Cumulative impact:</p> <ul style="list-style-type: none"> • Hornsea Three has satisfactorily assessed the cumulative impact from construction traffic associated with other currently committed development. 	

Relevant Representation Comment	Applicant's Response
<p>Flood and drainage:</p> <ul style="list-style-type: none"> • Welcomes that sustainable drainage systems (SuDS) have been proposed for Hornsea Three where permanent above ground infrastructure is proposed. • Pleased that strategies have been supplied for the onshore HVAC booster station and the onshore HVDC converter/HVAC substation study areas. • Additional information regarding the stockpiled construction material location is requested to be included in the flood risk assessment and drainage strategy. • A surface water drainage scheme incorporating infiltration testing; detailed drainage design modelling calculations; design of drainage structures; a maintenance and management plan should be submitted and agreed with the Secretary of State or his delegated approving body. <p>Public rights of way:</p> <ul style="list-style-type: none"> • Continued discussions are necessary regarding the management of the Norfolk Coastal Path in the vicinity of the Hornsea Three intertidal area. <p>Archaeology:</p> <ul style="list-style-type: none"> • The DCO is to include a requirement that states that no development shall take place until an archaeological written scheme of investigation has been submitted to and approved by Norfolk County Council in writing. <p>Socio- economic:</p> <ul style="list-style-type: none"> • Must ensure that Hornsea Three brings socio-economic benefit to affected communities and the whole county. 	

1.2.36 ConocoPhillips (U.K) Limited [RR-036]

Relevant Representation Comment	Applicant's Response
<p>ConocoPhillips (U.K.) Limited ("COP") as a consultee of the Hornsea Project Three Offshore Windfarm, has considered maps, plans and associated documentation for the proposed project. COP, as Operator and one of the owners of assets in proximity to the proposed Hornsea Wind Project Three offshore development, wishes to register as an interested party to take part in the examination of the application for Development Consent of Hornsea Project Three Offshore Windfarm</p>	<p>The Applicant acknowledges the response from ConocoPhillips (U.K.) (COP) to the Hornsea Three DCO application.</p>

Relevant Representation Comment	Applicant's Response
<p>COP must be able to fully consider all possible implications and ensure satisfactory mitigations are in place for the continued safety and integrity of COP pipelines and infrastructure. Offshore locations and physical contact points of proposed cables crossing the COP owned and Operated pipelines and piggy backed methanol lines are required. Crossings of COP pipelines should be kept to a minimum through bundling or other appropriate methods where possible</p>	<p>The Applicant can confirm that there are no COP operated pipelines located within the Hornsea Three array area or within the proposed 500 m safety zone around the Hornsea Three array area. At the time of the Environmental Statement there were seven ConocoPhillips (U.K.) Limited ("COP") operated pipelines which intersect the Hornsea Three cable corridor and are listed in Table 11.15 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. COP has subsequently divested one of the listed pipelines to another operator.</p> <p>Crossing locations along the Hornsea Three cable corridor route have been kept to a minimum through consultation with oil and gas operators including COP (see Table 11.4 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]).</p> <p>Where necessary, the Applicant will negotiate crossing and proximity agreements with COP for all their operated pipelines as discussed in paragraph 11.7.15.2 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The technical details of each crossing/proximity arrangement will be detailed in these agreements, and consideration will be given to appropriate crossing methodologies through further consultation with COP, once more detailed design of the Hornsea Three export cable route has been conducted post consent. This approach was agreed between COP and the Applicant during the consultation meeting on 24 October 2018.</p>
<p>There should be no impediment to access to COP facilities that may compromise or complicate decommissioning activity.</p>	<p>Consultation with oil and gas operators and data from the Oil and Gas Authority (OGA) in regard to submitted and/or approved decommissioning plans for oil and gas projects have been compiled to identify which assets due for decommissioning have the potential to be affected by Hornsea Three. These assets are presented in Table 11.14 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The COP owned platforms Viscount VO and Vampire OD are both situated in licence block 49/16a which is within 1 km of the Hornsea Three offshore cable corridor. These platforms are located at a distance of 15.4 km (Viscount VO platform) and 4.4 km (Vampire OD platform) from the Hornsea Three array area at the nearest point. Based on the current programme for Hornsea Three, construction would not impede access to these facilities as they are due to be decommissioned by 2021, prior to the construction of Hornsea Three. There are no other COP decommissioning activities which are in licence blocks coincident or within 1 km of Hornsea Three.</p> <p>The implications of any changes to the decommissioning plans for COP owned assets will be taken into consideration as and when the Applicant is notified of these by COP.</p>

<p>Collision Risk Management - The impact of displacing shipping is uncertain, however traffic is likely to increase proximate to our assets. This has a number of significant implications to COP's existing Marine Operations arrangements including the Radar Early Warning System (REWS) and Emergency Response and Rescue Vessels (ERRV). COP expects Hornsea Project Three to agree that it will have an obligation to procure a mitigation solution, if required, to identify the extent of the risk to the Collision Risk Management System, REWS and ERRV, and suitable and proportionate mitigation measures to ensure that such systems are not impaired by the construction and operation of Hornsea Project Three</p>	<p>Table 11.17 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071] identifies installations equipped with Radar Early Warning System (REWS) within 32.4 nm (60 km) of the Hornsea Three array area. REWS located on the Murdoch and Saturn platforms (operated by COP), located 16.9 nm and 17.7 nm from the Hornsea Three array area respectively, are potentially just within the detection range for a 100 m² Radar Cross Section (RCS) target.</p> <p>The potential impact of Hornsea Three on the COP operated Saturn and Murdoch platform REWS have been considered in paragraphs 11.11.2.69 and 11.11.2.70 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. Since the Murdoch platform REWS has overlapping coverage with the Katy platform REWS (also operated by COP), and the Katy platform REWS is at a distance of 24.1 nm which is outside the detection range for a 100 m² RCS target, the Murdoch platform REWS was not considered within the Hornsea Three EIA, as significant effects on this platform are unlikely to occur.</p> <p>Radar modelling was carried out in order to identify the impact of Hornsea Three on the Saturn platform REWS and is presented in Section 5.2 of Volume 5, Annex 11.1: Radar Early Warning Systems Technical Annex of the Environmental Statement [APP-119]. The RCS modelling considered a small test vessel of 100 m². The modelling indicated that the range of detection is 16 nm, therefore the Hornsea Three array area will not impact the REWS for a 100 m² RCS test vessel due to the distance of the REWS from the nearest turbine (i.e. 17.7 nm).</p> <p>As the smaller test vessel could not be detected from the Saturn platform, a larger test vessel of 1,000 m² RCS was also modelled. This represents a 1,000 GT vessel. The modelling indicated that the typical radar detection range for a 1,000 m² RCS target is approximately 26.6 nm. The modelling identified that, for a larger vessel, the Hornsea Three array area is unlikely to affect the performance of the REWS on the Saturn platform. This was concluded because although there will be some detection loss at the edges of the Hornsea Three array area, this is sufficiently far to uphold the integrity of the Time to Closest Point of Approach (TCPA) alarms. The significance of effect was therefore predicted to be of negligible significance for the Saturn platform REWS, which is not significant in EIA terms.</p> <p>The Environmental Statement also assessed the potential effect of Hornsea Three on vessel routes, and the subsequent effect of the route deviations on CPA and TCPA alarms on the REWS on oil and gas platforms (paragraph 11.11.2.79 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]). The results of the assessment on the CPA and TCPA alarms on the COP operated Saturn, Mimas and Tethys platforms were all less than 5 % which was considered to be within the statistical tolerance of the models used. The effect on the Saturn, Mimas</p>
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Relevant Representation Comment	Applicant's Response
	and Tethys platforms was therefore considered to be minor adverse significance, which is not significant in EIA terms.
<p>Potential crossing/proximity issues - COP must be able to assess the proximity of wind farm construction and maintenance operations to infrastructure as well as any construction or maintenance vessels, to determine the requirement for any additional protection measures.</p>	<p>Hornsea Three construction activities (including vessels) and Hornsea Three operation and maintenance activities are discussed in section 3.6 and section 3.9, respectively, of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058].</p> <p>There are no COP operated platforms or subsea infrastructure located within the Hornsea Three array area and Hornsea Three offshore cable corridor, or within 1 km of the Hornsea Three array area or cable corridor.</p> <p>The impact of the construction of Hornsea Three on existing cables and pipelines, or restricting access to cables and pipelines (including those operated by COP) is assessed in paragraphs 11.11.1.14 to 11.11.1.22 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The COP operated pipelines for which proximity issues have the potential to arise will be addressed within the Crossing and Proximity Agreements which will be prepared between COP and the Applicant post consent and which was agreed during the consultation meeting between COP and the Applicant on 24 October 2018.</p> <p>The significance of effect was predicted to be of minor adverse significance, which is not significant in Environmental Impact Assessment (EIA) terms. The impact of operation and maintenance activities of Hornsea Three restricting access to cables and pipelines is assessed in paragraph 11.11.2.10 to 11.11.2.10, Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. As above, the COP operated pipelines for which proximity issues have the potential to arise will be addressed within the Crossing and Proximity Agreements which will be prepared between COP and the Applicant and which was agreed during the consultation meeting between COP and the Applicant on 24 October 2018.</p> <p>The significance of effect was predicted to be of minor adverse significance, which is not significant in EIA terms.</p>
<p>Crossing Points should be designed such that the crossing angle be as close to 90 degrees as possible with a 300mm physical separation between the cable and pipeline at the midpoint between anodes to minimise the potential for adverse mechanical loads and electrical interference with the pipeline CP system. To preserve Cathodic Protection and minimise interference, a minimum 50m proximity zone is required to ensure the safety of COP pipelines.</p>	<p>The Applicant and COP will, where appropriate, negotiate crossing and proximity agreements for all their operated pipelines which will be crossed by or within 500m of Hornsea Three's export cables as discussed in paragraph 11.7.15.2 of Volume 2, Chapter 11: Infrastructure and Other Users [APP-071]. The technical details of each crossing/proximity arrangement will be detailed in these agreements, and consideration will be given to appropriate crossing methodologies through further consultation with COP, once more detailed design of the Hornsea Three export cable route has been conducted, post consent, which has been agreed between COP and the Applicant during consultation meeting 24 October 2018.</p>

Relevant Representation Comment	Applicant's Response
<p>COP is willing to act reasonably and enter into commercial discussions with Orsted in good faith. The execution of crossing/proximity agreements is required to appropriately address all the important issues raised in this consultation including those outlined above. These agreements require review and acceptance by the other infrastructure owners, on behalf of whom COP operate.</p> <p>Please note that concerns raised at this time are based on headline issues currently captured. Further concerns may be raised following review of technical detail as it becomes available.</p>	<p>The Applicant notes COP's position and confirms, as set out above, the Applicant is also willing to enter crossing or proximity agreements where these are required. The Applicant acknowledges that whilst such agreements will be discussed primarily between the Applicant and the pipeline operator (in this instance COP), the pipeline operator may wish to include other infrastructure owners on behalf of whom they operate, which shall be advised to the Applicant on a case by case basis.</p>

1.2.37 CPRE Norfolk [RR- 037]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in CPRE Norfolk's Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation in Annex 2 of this document.</p> <p>CPRE Norfolk feel that the Planning Inspectorate (PINS) should not have accepted Hornsea Three application due to issues with:</p> <p>Planning:</p> <ul style="list-style-type: none"> • No explanation of the physical differences between High Voltage Alternating Current (HVAC) and High Voltage Direct Current (HVDC) transmission along the Hornsea Three onshore cable corridor in terms of land take, either during construction or the permanent easement. • Use of HVAC transmission adopts the maximum design scenario as the baseline all along the Hornsea Three onshore cable corridor. • The decision to pursue HVAC transmission is not compliant with PINS Advice Note Nine (2012). 	<p>The Applicant has responded to each of the detailed points from this Relevant Representation in Annex 2 of this document. A summary of the points covered in Annex 2 is set out below:</p> <ul style="list-style-type: none"> • The use of the maximum design scenario approach to allow the project to be assessed on the basis of maximum design parameters in line with guidance from the Planning Inspectorate; • Transmission technology and the realistic maximum design scenario used in the assessments; • The consideration of the National Planning Policy Framework relating to biodiversity; • The evolution of Hornsea Three from the PEIR to the Environmental Statement including refinements of the onshore cable corridor and the use of HDD to avoid designated sites; • The retention of hedgerows and re-planting hedgerows where losses are do occur; • Summary of engagement with the Norfolk Ponds project;

Relevant Representation Comment	Applicant's Response
<p>Ecology:</p> <ul style="list-style-type: none"> • HVAC cable installation would create more disturbance to wildlife and habitats in general than HVDC cable installation, and for longer times. • HVDC transmission would provide more opportunities to keep at a distance from wildlife habitats, such as farmland ponds, especially important in an area where Great Crested Newts are relatively common. • This is the only example of a project where the Hornsea Three onshore cable corridor runs along the spine of a river system however there is scant mention in the Preliminary Environmental Information Report (PEIR) of the ecological network. <p>Pollution:</p> <ul style="list-style-type: none"> • HVAC cable installation would cause more water borne soil and agrichemicals to enter the river system and adversely affect the river ecology. • The upper Glaven is the only place in East Anglia with a healthy population of White Clawed Cray fish. If there was a contamination incident, the impact and profile would be huge; particularly if working with HVAC. 	<ul style="list-style-type: none"> • The use of HDD to avoid all 'main' and most 'ordinary' watercourses; • Mitigation measures to avoid pollution of watercourses and the mechanism to secure these measures; and • Biosecurity mitigation measures.

1.2.38 Clive Searson [RR-038]

Relevant Representation Comment	Applicant's Response
<p>Traffic and noise disturbance to the village and associated problems resulting in a lowering of our quality of life.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I, in respect of traffic, noise and general amenity impacts arising from the use of the main construction compound.</p> <p>Once an access strategy has been agreed (see Appendix 20), this work will be supported by noise and air emissions modelling based on the predicted construction traffic flows associated with the main construction compound and reported in a future Examination Deadline. This will inform the development of the Outline CoCP [APP-179], or Outline CTMP [APP-176] during the examination.</p>

1.2.39 Jill Leigh [RR-039]

Relevant Representation Comment	Applicant's Response
<p>I am concerned about access to our property, which is a single track road, and how it will be affected by additional traffic due to the development.</p>	<p>Impacts on the local road network are assessed in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] and no significant effects are anticipated during construction or operation. Notwithstanding this, it is noted that under Requirement 18 of the dDCO [APP-027], a Construction Traffic Management Plan will be required to be implemented prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase; an outline of this document has been produced and accompanied the DCO application [APP-176]. The final CTMP will, where appropriate, identify traffic management measures which reflect the sensitivities of a given location.</p>
<p>I am concerned about the noise level from the development, which is adjacent to our property.</p>	<p>Effects relating to noise and vibration are assessed in Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement [APP-080]. This concludes that taking mitigation measures into account (as identified in the Outline CoCP [APP-179]), the significance of noise and vibration effects from the construction of the Hornsea Three onshore cable corridor, HDD works, onshore HVAC booster station and onshore HVDC converter/HVAC substation are no greater than negligible to minor adverse which is not significant in EIA terms.</p>
<p>I would like to understand the impact the development will have on wildlife and the natural environment in Reepham, Cawston and Booton.</p>	<p>Impacts on ecology and nature conservation are assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. This considers ecological receptors located within Reepham, Cawston and Booton as appropriate. The inclusion of designed in mitigation measures (most notably, the use of HDD techniques to avoid ecologically sensitive areas such as county wildlife sites, water courses etc.), has minimised impacts on ecological receptors. Furthermore, additional mitigation measures in respect of ecological receptors are set out in the Outline CoCP [APP-179] and the Outline EMP [APP-180]. These will be secured through Requirement 17 and Requirement 10 of the draft DCO [APP-027], relating to the CoCP and EMP respectively, which requires the final version of these documents to be approved by the relevant planning authority (in consultation with Natural England in respect of Requirement 10) prior to the commencement of construction.</p> <p>The assessment as report in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075] concluded that the effects on ecological receptors in these locations is not considered to be significant.</p>

1.2.40 Norwich City Council [RR-040]

Relevant Representation Comment	Applicant's Response
<p>This representation is made on behalf of Norwich City Council issued at officer level.</p> <p>The majority of the scheme is a considerable distance from the Administrative Area of Norwich City Council and therefore these comments relate solely to the HVDC Converter and HVAC Substation which is proposed to be located to the south of the A47 and east of the B1113. Norwich City Council do not wish to comment on the other elements of the proposal. The HVDC Converter and HVAC Substation is located approximately 1.4km to the south of Norwich to the southern side of the Yare River Valley and beyond the A47. Buildings/structures in the area are proposed to be up to 25m tall and screened by a woodland planting belt.</p> <p>Figure 4.7 of the Volume 3 Chapter 4 of the Environmental Statement (ES) suggests that the zone of visual influence does not extend into the administrative area of Norwich. An assessment of impact from Marston Marshes (viewpoint SS4) is considered and 4.7.6.48 of the above chapter of the ES concludes:</p> <p>Viewpoints SS4 and SS8 are located at the areas of Marston Marshes and Swardston Common where there would potentially be the most open views of Hornsea Three. The scale of effect at these locations is assessed to be negligible, as set out in Table 4.14 and volume 6, annex 4.5: Photograph Panels, Wirelines and Photomontages, and effects on receptors within these areas would not therefore be significant so they are not considered further. Eaton Common is located immediately adjacent to Marston Marshes with a similar pattern of landform and vegetation cover, as such, effects here are unlikely to be different to those at Marston Marshes and it is therefore also excluded from further consideration as effects are unlikely to be significant.</p> <p>Without selecting the viewpoints to be assessed during the scoping work, we cannot be certain that there will not be a more significant visual impact resulting from the proposed development on the natural landscapes of the Yare River valley than the negligible impact identified in the ES. To ensure any impacts are mitigated we would like to see a more robust screening mix on site with a mix of broadleaf native trees with some selected standard specimens that will mature more rapidly than the proposed transplants and ultimately provide effective screening for the development from the Yare River valley.</p>	<p>The Applicant notes Norwich City Council's comments regarding the scope of its RR.</p> <p>All points raised with RR-040 have been addressed and agreed through consultation with Norwich City Council. This is reflected within the Statement of Common Ground between Hornsea Project Three and Norwich City Council.</p>

1.2.41 Peter Glenser [RR-041]

Relevant Representation Comment	Applicant's Response
<p>My family and I live at (redacted) Oulton. We would be the closest neighbours to the proposed development of the Main Compound and thus amongst the most closely effected. I am extremely concerned about the severe adverse impacts on our residential amenity and the severe adverse impacts on our quality of life if this proposal is granted permission. The peace and quiet of this remote location was a major factor in our decision to buy the house. The quiet enjoyment of this property will be severely effected by the construction of a site nearly eight acres in size, with lights, generators, facilities for staff and heavy vehicle movements just a few hundred metres away and in the direction the house faces. It is difficult to overstate how quiet and this area is at night and how much vehicle reversing alarms, engines and even voices will disturb this silence. Similarly the area is very dark at night – inevitably security lighting will cause light pollution in this dark skies area.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I.</p>

1.2.42 Daisy Turville-Petre [RR-042]

Relevant Representation Comment	Applicant's Response
<p>1. I have grave concerns about the increased traffic along this very narrow residential street. I have three children who live with me in the village and walk unaccompanied along the road at times. Increased HGV traffic will no doubt be a risk to the buildings themselves, the conservation area in which we live, but also to the lives and well-being of the residents - including children - of this area.</p> <p>The research submitted by the parish council in this area indicates that the increase in traffic will be substantial and I am very concerned that the impact will be significant and detrimental to the village as a whole. My youngest daughter is seven - that is most of her childhood in this village.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I.</p>
<p>2. Orsted's failure to produce even an outline CTMP, pre-application, has made it impossible for them, us, PINS and Vattenfall to assess the cumulative impact of the fact that Vattenfall are also locating two of their compounds in this parish and sharing the same access road.</p>	<p>Please see the Applicant's response to Relevant Representation RR-034 (3).</p>
<p>3. Light pollution: Oulton is a dark skies area.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I which addresses matters relevant to lighting at the onshore main construction compound.</p>

Relevant Representation Comment	Applicant's Response
<p>4. Noise pollution: will impact on 24 dwellings in The Street and the several dwellings very close to the western edge of the site. As well as traffic noise, there are grave concerns relating to:</p> <ul style="list-style-type: none"> • generators – especially at night; • on-site traffic movement noise; • on-site reversing alarms (hard to control with use of sub-contractors). 	<p>Please see Appendix 20 to the Applicant's response to Deadline I, which relates to the onshore main construction compound.</p>

1.2.43 David Jackson [RR-043]

Relevant Representation Comment	Applicant's Response
<p>My concerns are the amount and type of heavy traffic on our class C roads - and how it will conflict with farm traffic.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to traffic and transport impacts on the local road network. Please see Appendix 20 to the Applicant's response to Deadline I, which addresses matter relevant to the onshore main construction compound access strategy.</p>
<p>I am also very concerned that any LIGHTING does not harm our wonderful dark skies here!</p>	<p>Please see Appendix 20 to the Applicant's response to Deadline I which addresses matter relevant of lighting at the onshore main construction compound.</p>

1.2.44 Keith Reeves [RR-044]

Relevant Representation Comment	Applicant's Response
<p>I am alarmed by the proposed increase of commercial traffic through a small village with a single narrow lane. This same lane and the type of industrial vehicles cited, were recently the subject of an attempt by the same farming family to turn the only road through the village into an industrial slip road serving their agricultural industry alone. Their 'industry' has seen many examples where planning has been sought to remove farming from the agenda, only to be replaced by power generation or storage, with concomitant traffic increase, in one form or another. On appeal this was forbidden. Why would it be allowed now? Keith Reeves 16/07/18</p>	<p>Please see Appendix 20 to the Applicant's response to Deadline I, which relates to the onshore main construction compound.</p>

1.2.45 Norfolk Wildlife Trust [RR-045]

Relevant Representation Comment	Applicant's Response
<p>The Norfolk Wildlife Trust (NWT), has more than 35,000 members and has been taking a lead role on action for wildlife in Norfolk, since its foundation in 1926. NWT is one of a network of 46 Wildlife Trusts (TWT), which with more than 800,000 members is the largest UK voluntary organisation dedicated to conserving the full range of the UK's habitats and species. NWT representation focuses on onshore biodiversity impacts of Hornsea Three. However, we also support The Wildlife Trust's submissions regarding offshore marine mammal and benthic impacts. NWT & TWT were members of the MCZ Assessment Group and NWT was a member of the Onshore Ecology Working Group.</p>	<p>The Applicant notes that all onshore issues between TWT/NWT have been agreed in the SoCG.</p>
<p>Impacts relating to the width of the cable route: We have not taken a view on the merits of using AC or DC, rather that ecological impacts should be minimised, whatever method is adopted. However, it is clear that habitat disturbance will be less if DC option is used, even if designated sites and the majority of areas of Priority Habitat are avoided. This is particularly relevant in relation to loss of hedgerow and foraging habitat for species such as great-crested newt.</p>	<p>The Applicant has agreed that the approach taken to both great-crested newt mitigation and hedgerow replanting and enhancement is appropriate in its SoCG with The Wildlife Trusts/Norfolk Wildlife Trusts. This position is based on the maximum design scenario for the cable corridor width, which is the HVAC transmission system. For further clarification on the differences between use of HVAC or HVDC transmission, the Applicant would direct the Norfolk Wildlife Trust to Appendix 22: Transmission System (HVAC/HVDC) Briefing Note of the Applicant's submission to Deadline I.</p>
<p>Impacts on Booton Common SSSI: NWT manages Booton Common SSSI. We are pleased to see that HDD will be used with regard to the Blackwater Drain, in order to avoid impacts on Booton Common. There is however, potential for impacts on hydrology of the SSSI resulting from a cable buried in close vicinity to this wetland site. We would like to see further information to make clear that this issue has been fully addressed and may wish to make a representation.</p>	<p>The potential for HDD crossings to create preferential pathways has been considered in Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement [APP-073]. A number of mitigation measures have been identified to reduce the potential for impacts on surface water hydrology and groundwater (Table 1.5 of Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement [APP-073] and Table 2.17 of Volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement [APP-074]), and on this basis, the assessment concluded that effects on Booton Common SSSI were not significant during construction or operation (section 2.13).</p> <p>Notwithstanding this, an outline crossing method statement was submitted as part of the Outline CoCP [APP-179]. This sets out the typical measures that will be implemented for HDD crossings, such as that proposed at Blackwater Drain.</p> <p>Particular consideration was given to Booton Common SSSI and its interaction with Norfolk Valley Fens SAC in Volume 6, Annex 2.4: Hydrological Characterisation Study [APP-127].</p> <p>The site specific method statement will be developed further during the detailed design stage, following geotechnical site investigation, in consultation with the Environment Agency and Natural England in order to incorporate management measures to reflect the site-specific conditions at Booton Common SSSI. This has been agreed as an appropriate approach in both the Environment Agency and Natural England SoCGs.</p>

Relevant Representation Comment	Applicant's Response
<p>Impacts on great-crested newt: Although, we accept that the survey methodology used to assess cable routes and impacts is in line with that from similar projects, we do have some concerns in relation to impacts on great-crested newt meta-populations, particularly in the Bodham and Heydon areas. This is because there is detailed information available on presence of great-crested newt in these areas as a result of surveys carried out by University College London. We understand that this evidence has been presented to Orsted. It appears that great-crested newt may be present in ponds that were not visited, or assessed as unsuitable by the project ecologists. Where meta-populations are divided by the cable route, non-priority terrestrial habitats linking ponds should be considered important for movement of GCN and mitigation should be at an appropriate level. In this context, consideration of whether AC or DC is used, may be of relevance.</p>	<p>The University College London data referred to in this RR is being incorporated into the Applicant's ongoing discussions with the Norfolk Ponds Project (of which the Norfolk Wildlife Trust is a member).</p> <p>As a result of EWG meeting advice (25 July 2017), Hornsea Three has been engaging with the Norfolk Ponds Project with regard to the implementation of the preferred landscape-scale licencing route for GCN. Hornsea Three is preparing a ghost licence application using this method, which will be submitted to Natural England during the course of Examination no later than Deadline 3. If Natural England do not agree that a Letter of No Impediment can be issued with the principles outlined in the ghost licence application, Hornsea Three propose to submit a revised ghost licence application based on the traditional exclusion route.</p> <p>It is noted that the landscape-scale approach offers habitat improvement outside the Hornsea Three Order Limits.</p> <p>This approach is agreed to be appropriate in the TWT/NWT SoCG.</p>

1.2.46 Sarah Greaves [RR-046]

Relevant Representation Comment	Applicant's Response
<p>Traffic impact on Oulton/Oulton Street residents due to HGV movement and construction site traffic</p> <p>Noise and light pollution created by the above activity</p> <p>Wildlife impact due to the above - specifically on deer population who roam freely around Oulton/Oulton Street</p> <p>Infrastructure impact on large vehicles travelling many times over a defined timespan and the impact on road construction</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I.</p> <p>In respect to impacts on ecological receptors, construction impacts (such as habitat loss and disturbance) on protected species have been assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. The assessment focuses on Valued Ecological Receptors which are sites, habitats or species of ecological or nature conservation importance that could be significantly affected by a project. Deer are not protected by nature conservation legislation and therefore, impacts to the deer population have not been specifically assessed. However, the Applicant has sought to minimise impacts on ecological receptors through design, including avoidance of designated sites and the use of trenchless technologies (e.g. HDD) to avoid direct impacts on woodland, rivers and other ecological receptors and the implementation of mitigation measures.</p> <p>Furthermore, additional mitigation measures in respect of ecological receptors are set out in the Outline CoCP [APP-179] and the Outline EMP [APP-180]. These will be secured through Requirement 17 and Requirement 10 of the draft DCO [APP-027], relating to the CoCP and EMP respectively, which requires the final version of these documents to be approved by the relevant planning authority (in consultation with Natural England in respect of Requirement 10) prior to the commencement of construction.</p> <p>The assessment as report in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075] concluded that the effects on ecological receptors which would be of relevance to the area around Oulton are not considered to be significant.</p>

1.2.47 The Wildlife Trusts [RR-047]

Relevant Representation Comment	Applicant's Response
<p>The Wildlife Trusts (TWT), with more than 800,000 members, is the largest UK voluntary organisation dedicated to conserving the full range of the UK's habitats and species. This representation focuses on offshore marine mammal and benthic impacts. However, we also support the Norfolk Wildlife Trust's submissions regarding onshore biodiversity impacts.</p>	<p>The Applicant notes the submission from TWT.</p>
<p>Marine Mammals: TWT has concerns regarding the impact of underwater noise from construction on marine mammals, in particular, cumulative disturbance to harbour porpoise. We have concerns regarding the approach to the cumulative and in-combination assessment.</p>	<p>The Applicant notes the overarching comments raised by TWT and that specific matters are cited in the subsequent paragraphs in their response. The Applicant has held a number of meetings with TWT since the submission of this Relevant Representation and our responses to the specific detailed points are reflective of this engagement.</p>

Relevant Representation Comment	Applicant's Response
<p>In addition:1. TWT does not agree with the current proposal on underwater noise management. The science underpinning the approach is weak, it is difficult to deliver and does not encourage noise reduction.</p>	<p>The Applicant understands from discussions with TWT that this concern relates to issues that TWT hold with the SNCB advice on how the thresholds have been established (and how they would be subsequently managed) for the significant disturbance Conservation Objective of the SNS SCI. The Applicant considers its approach to assessing impacts from underwater noise on the feature of the SNS SCI to be appropriate as in line with the SNCB advice (given during the Evidence Plan process) on thresholds relating to disturbance effects in this regard (as detailed in paragraph 6.5.2.33 of the RIAA [APP-051]).</p>
<p>2. Underwater noise should be managed at a regional seas level using noise limits. Noise limits should apply across all construction activities associated with offshore wind farm development. This approach is used in Germany, the Netherlands and Belgium, and should be applied in English and Secretary of State waters, ensuring consistency across the Southern North Sea.</p>	<p>Again, the Applicant understands this to be a concern that TWT hold with the regulatory system in the UK and therefore, has nothing further to add at this stage other than to note that currently the MMO does not set noise limits for licenced activity within the UK and that no long term residual significant effects are predicted on the harbour porpoise population from the development of Hornsea Three either alone or at a cumulative level.</p>
<p>3. Due to cumulative underwater noise impacts, underwater noise mitigation should be conditioned as part of planning consents.</p>	<p>The Applicant notes that this is a comment aimed more at the MMO and Secretary of State. The Applicant has undertaken what it considers to be a robust assessment in Volume 2, Chapter 4: Marine Mammals of the Environmental Statement [APP-064] and has put in all necessary mitigation commitments on the basis of that assessment (in its opinion) including soft start procedures for piling, and the implementation of a Marine Mammal Mitigation Protocol (secured via the deemed marine licences ("dMLs" [APP-027]), condition 11(1)(g) of Schedule 11, Generation Assets dML, and condition 12(1)(g), Transmission Assets dML).</p>
<p>4. Fishing should be included in cumulative/in-combination assessments; it is not part of the baseline.</p>	<p>The Applicant recognises that fishing has an impact on certain receptors. This is considered within the environmental baseline against which the assessments have been carried out. It is not possible to determine what the baseline conditions would be without the impacts that fishing impacts impose on such receptors and therefore there is no means by which the Applicant can undertake such an assessment.</p>
<p>5. Detailed monitoring of noise levels and harbour porpoise population activity should be undertaken at a strategic level to verify predictions made in planning applications and to provide information for the growth of the offshore wind sector.</p>	<p>The Applicant considers that this is an industry wide issue that TWT have raised and is beyond the remit of any specific project to address. The Applicant considers that it has appropriately characterised the baseline environment for the assessment of underwater noise effects on marine mammal receptors, and that the approach to this was agreed with relevant interested parties through the evidence plan process.</p>
<p>6. Strategic mitigation and monitoring should be implemented through a conditioned levy payment which would also establish and support a Southern North Sea underwater noise management steering group.</p>	<p>The levy approach suggested by TWT is not currently, in Orsted's view, the appropriate manner in which to manage any impacts that require mitigation, as the mitigation should be proportionate to the impact. Notwithstanding this, the Applicant makes the following points:</p>

Relevant Representation Comment	Applicant's Response
	<p>With regard to underwater noise mitigation, the Applicant has committed to the standard industry measures in the form of soft start to piling and a robust MMMP. The impact assessment of underwater noise impacts on marine mammals did not identify any residual significant effects from either the project alone or at a cumulative / in-combination level. The Applicant recognised the uncertainty in the in-combination assumptions and made a commitment to secure approval from the MMO of any necessary mitigation to appropriately mitigate effects on the feature of the SNS SCI under the unlikely scenario that risk to site integrity was identified (at an in-combination level) prior to the commencement of works (as detailed at Condition (11/12 (4, 5 and 6) of the submitted draft DCO [APP-027]). It is noted that this commitment has been updated (following request from Natural England and the MMO) to a commitment to a Site Integrity Plan which will afford the same level of protection for the SCI (as detailed within the updated draft DCO, as presented at Appendix 15 to the Applicants response to Deadline I).</p> <p>With regard to monitoring, the Applicant agrees with the TWT that strategic monitoring may form an appropriate means to address any uncertainty that merits monitoring. Indeed the monitoring proposals as identified within the in-principle monitoring plan (IPMP [APP-182]) reflect this. However, the Applicant has not ruled out site specific monitoring either, should it be determined (at the time of compiling monitoring plans for approval under the dMLs [APP-027]) that this would be more appropriate in the context of the project that is being brought forward.</p>
<p>7. TWT value the relationship developed with applicants during the pre-application stage. Due to the uncertainties on marine mammal mitigation and monitoring at examination, we wish to be named on any associated documents for consultation post-consent e.g. MMMPs, In-Principle Monitoring Plan.</p>	<p>The Applicant will continue to engage with TWT as the project moves forward towards construction for those matters of interest to TWT.</p> <p>However, the Applicant's position on this remains that it is considered appropriate to leave it to the MMO to decide who it needs to formally consult with on pre-commencement documentation.</p>
<p>Cabling and benthic impacts</p> <p>TWT is pleased that that applicant has rerouted the offshore cable to avoid impacts on the chalk reef within Cromer Shoal Chalk Beds MCZ. However, a more detailed assessment on The Wash and North Norfolk Coast SAC is required to give greater certainty of no adverse effect. More realistic expectations on cable burial and protection within the SAC is required, which should be conditioned if consent is granted.</p> <p>The science to support the impact assessment on ocean quahog is weak. The cumulative impact assessment for ocean quahog does not consider fishing, which is one of the main threats to this species. This should be taken account of in a more detailed assessment.</p>	<p>The Applicant notes the comments from The Wildlife Trusts in relation to the Hornsea Three offshore cable corridor re-route and the resulting reduction in impact on the Cromer Shoal Chalk Beds MCZ.</p> <p>The Applicant is continuing to develop a Statement of Common Ground with The Wildlife Trusts and would seek to clarify and resolve through this process any issues with the information presented within the Environmental Impact Assessment and the Report to Inform Appropriate Assessment (RIAA; AS-002).</p> <p>The assessments within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] and the RIAA on the Wash and North Norfolk Coast SAC are based on the maximum design scenario for cable installation, operation and maintenance, and decommissioning; this includes burial and use of cable protection measures within the SAC. For cable burial, a range of methodologies and tools have been</p>

Relevant Representation Comment	Applicant's Response
	<p>considered, including pre-trenching and rock cutting which can be used to install cables in stiff clays and soft rock. The assumptions in relation to cable protection measures are considered to be conservative and are based on the Applicant's experience from multiple offshore wind projects in the UK and overseas.</p> <p>As outlined in paragraph 2.7.1.22 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], ocean quahog was recorded from nine sites (from six sites as single specimens and three sites where two individuals were recorded) in the former Hornsea Zone. All records were of juvenile ocean quahog, except for one which measured less than 10 mm, indicating it was a spat rather than a juvenile. No ocean quahog were recorded within the Hornsea Three array area or offshore cable corridor. Consideration of the sensitivity of ocean quahog to key impacts such as habitat disturbance and increased suspended sediments/deposition are presented in paragraphs 2.11.1.36 and 2.11.1.114 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], respectively and were based on the most up to date evidence available from the MarESA sensitivity assessments.</p> <p>As outlined in Volume 4, Annex 5.2: Cumulative Effects Screening Matrix of the Environmental Statement [APP-097], commercial fisheries was considered to be included as part of the benthic ecology baseline and hence was not considered within the cumulative impact assessment. Given the high sampling density across the Hornsea Three benthic ecology study area, as shown in Figure 2.1 of Volume 5, Annex 2.1: Benthic Ecology Technical Report of the Environmental Statement [APP-102], and the low occurrence of ocean quahog in the samples collected, it can be concluded that the Hornsea Three array area and Hornsea Three offshore cable corridor are unlikely to be of particular importance for this species within the OSPAR Region II.</p>
<p>General: We have some concerns regarding the assessment methodology and subsequent conclusions drawn across some assessments.</p> <p>We would also like to raise that fishing is not included in cumulative/in-combination assessments. TWT does not consider fishing to be part of the baseline. Following the commencement of judicial review proceedings by TWT against Dogger Bank Wind farms, we were given assurances that fishing would be included in future offshore wind farm assessments.</p>	<p>The Applicant has sought to address each specific point raised by TWT throughout this response. The Applicant will continue to engage with TWT on any further matters of concern that are raised throughout this examination.</p> <p>The Applicant cross refers TWT to its response above in relation to consideration of fishing within the cumulative / in-combination assessments.</p>

1.2.48 Cadent Gas Limited [RR-048]

Relevant Representation Comment	Applicant's Response
<p>Cadent is a licensed gas transporter under the Gas Act 1986, with a statutory responsibility to operate and maintain the gas distribution networks in North London, Central and North West England. Cadent's primary duties are to operate, maintain and develop its networks in an economic, efficient and coordinated way.</p> <p>Cadent wishes to make a relevant representation to the Hornsea Project Three Offshore Wind Farm DCO in order to protect its position in light of infrastructure which is within or in close proximity to the proposed DCO boundary. Cadent's rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or in close proximity to the order limits including should be maintained at all times and access to inspect such apparatus must not be restricted.</p> <p>The documentation and plans submitted for the above proposed scheme have been reviewed in relation to impacts on Cadent's existing apparatus located within this area, and Cadent has identified that it will require adequate protective provisions to be included within the DCO to ensure that its apparatus and land interests are adequately protected and to include compliance with relevant safety standards.</p> <p>Cadent has low, intermediate and high pressure (major accident hazard) gas pipelines located within the order limits which are affected by works proposed.</p> <p>As a responsible statutory undertaker, Cadent's primary concern is to meet its statutory obligations and ensure that any development does not impact in any adverse way upon those statutory obligations. Cadent is discussing the potential impacts on its network with the promoter however any proposed relocation of apparatus or protections including the extent of any land or rights required by Cadent to facilitate works have not been finalised.</p> <p>Cadent wishes to reserve the right to make further representations as part of the examination process but in the meantime will continue negotiations with the promoter with a view to reaching a satisfactory agreement.</p>	<p>Hornsea Three has been in discussions with Cadent regarding the various potential asset interactions along the onshore route.</p> <p>Protective provisions for the protection of gas operators have been included within the DCO [APP-027] to protect Cadent's interests and discussions are ongoing with regard to the commercial and technical implications of any crossings, proximities or potential diversions.</p> <p>The relocation of any works, if required, will be discussed further with Cadent as part of these ongoing discussions.</p>

1.2.49 Mulbarton Parish Council [RR-049]

Relevant Representation Comment	Applicant's Response
<p>Onshore HVDC converter and HVAC substation at Swardeston</p> <p>The currently proposed site for this facility is on rising ground alongside the A47 trunk road. It is at present undeveloped farmland, in agricultural use.</p> <p>Due to the large size, height, and scale of the proposed building and associated works, the use of this site would have significant visual and environmental impact, leading to extensive mitigation measures.</p> <p>Further, if the currently proposed site is adopted, then it would also appear that all vehicle access, including during the construction phase, would need to be made to and from the B1113.</p> <p>Given that Highways England has recently stated that access to the site from the A47 will not be permitted, there would seem to be no advantage in continuing with this particular site.</p> <p>A more suitable site is potentially available at the Lafarge Aggregates quarry, Mangreen (52°34'46.2"N 1°16'35.4"E). This alternative location is a working gravel extraction site, with existing heavy goods vehicle access to and from the A140 trunk road, and in very close proximity to the Norwich Main National Grid Substation.</p> <p>Gravel extraction is a progressive process, and the site will necessarily become exhausted when all commercially viable supplies of gravel have been removed. Excavations are then typically backfilled, and restored to agricultural use.</p> <p>There is clearly an opportunity to obtain economic and environmental benefits by using a part of the existing Large Aggregates site for the construction of the Onshore HVDC converter and HVAC substation.</p> <p>There seems to be no evidence so far that the potential advantages of this alternative location have been seriously considered, or discussed with the site operator. These possibilities should be fully explored before a final site selection decision is made.</p>	<p>Please see the Applicant's response to RR-001 as it relates to site selection and landscape and visual impacts for the onshore HVDC converter/HVAC substation.</p> <p>In respect to access to the onshore HVDC converter/HVAC substation, this will be provided during construction from the B1113 as shown in Sheet 33 of 35 of the Access to Works Plan [APP-014]. The permanent access will also be provided from the B1113, as agreed with Norfolk County Council as the Highways Agency (see Applicant's response to RR-035 as well as drawing no. JNY8772-72 Revision A provided at Appendix 29 Permanent Access Note for HVDC converter/HVAC substation to the Applicant's response to Deadline I. No access will be taken from the A47 directly to the onshore HVDC converter/HVAC substation site.</p>

1.2.50 Edgefield Parish Council [RR-050]

Relevant Representation Comment	Applicant's Response
<p>Edgefield will be hugely affected by the cabling route through to north Norfolk. The storage unit is to be in Oulton, so all vehicles going to the North Norfolk coast would come through the centre of our village. The edge of the village will also have cabling going through and the Parish Council have concerns of disruption to the village over a number of years whilst cables are being laid. The booster station will also be clearly visible from the Parish as it is in the village next door.</p>	<p>Impacts on the local road network, including links close to Edgefield, are assessed in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079]. At link 59, the B1149 at Edgefield (see Table 7.12), the Environmental Statement assessed that no significant effects would occur during construction or operation. Notwithstanding this, it is noted that under Requirement 18 of the draft DCO [APP-027], a CTMP will be required to be approved by the relevant planning authority prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase; an outline of this document has been produced and accompanied the DCO application [APP-176]. The final Construction Traffic Management Plan must be in accordance with this outline document.</p> <p>On the basis of the onshore mitigation measures identified within the documents referenced above, the Environmental Assessment did not predict that effects from traffic and transport, or associated effects relating to noise and air quality impacts on residential receptors (Volume 3, Chapter 8: Noise and Vibration [APP-080] and Chapter 9: Air Quality [APP-081] of the Environmental Statement respectively) would be significant.</p> <p>The Applicant refers to its response to RR-026 regarding the potential landscape and visual impacts associated with the onshore HVAC booster station.</p>

1.2.51 Martin Paul Kemp [RR-051]

Relevant Representation Comment	Applicant's Response
<p>I strongly object to the development proposed for the Hornsea Project Three Offshore Wind Farm, where the onshore cable corridor is coming through my farm, which is earmarked for future development. I have already spent a considerable amount of time and money promoting the development over the last thirty years. I am objecting to where the cable corridor runs as the land would be sterilized for development by the permanent cable corridor, and also any future development on my land would need to take this corridor into account.</p>	<p>The onshore cable route has been carefully considered and designed. In selecting the route, the Applicant has taken into account all reasonable factors at relevant stages, such as consultee comments, technical feasibility, the anticipated market regime and the minimisation of environmental and visual impacts and land take. Further information pertaining to the route selection process is provided in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p> <p>The land in question appears to have no development allocation, nor was it submitted as part of a recent "call-for-sites" in South Norfolk Council recently, so there is nothing publicly available to suggest development plans on the land. The Applicant has sought clarification from the respondent in respect of proposed development on the land, but the respondent has refused to engage with the Applicant. The Applicant would refer to Written Response to Examiners Question Q1.9.1.</p> <p>Where development land with genuine potential has been identified along the onshore cable corridor route the Applicant is seeking to enter into relevant voluntary agreements that make provision for future development. Should compulsory powers be used in the absence of a voluntary agreement there are provisions for dealing with development land in the legislation.</p>

1.2.52 Natasha Hall [RR-052]

Relevant Representation Comment	Applicant's Response
<p>Firstly as owners of the only property (redacted) in close proximity of the converter we are disappointed and upset with the communication and withholding of information from Orsted</p> <p>After purchasing (redacted) in 2003 we made appoint of contacting South Norfolk Council who told us in no uncertain terms there would be no construction between our boundary and the Southern bypass which I believe has now been contravened to support this latest application.</p> <p>Orsted have been slow in communication with us and we have had lots of mis- guided information</p> <ol style="list-style-type: none"> 1. The sound monitors were put up at our property (when asked what they were for we were told they just monitor the wind speed). Asking what effect this will have on us they replied absolutely nothing!!!! 2. We voiced our concerns about the construction traffic (Not knowing about the impending roundabout on the B1113) They did but let us voice our concerns and look stupid 3. We asked why the substation could not be located nearer the main substation at Mangreen/Caister again they knew that there was a proposed reserve substation in the process- we didn't <p>Below is the abstract from the sound report which they carried out in March 2017 promising us a copy before it went to planning inspectorate surprisingly we got it 1st June 2018 17 days after the misinterpreted report was sent to the planning inspectorate.</p> <p>The results of the assessment for (redacted) shows that with the design mitigation applied, it is anticipated that during operation in the day time there would be no change in the sound level at the property, and during evening the anticipated change (+0.3 decibel increase) has been assessed as negligible for the purpose of the assessment.</p>	<p>This response is applicable to both Relevant representations RR-052 in RR-055.</p> <p>Given the proximity of their property to the onshore HVDC converter/HVAC substation, the Applicant has engaged regularly with this stakeholder. Notwithstanding this, the Applicant has responded to each of the points raised in the representation below.</p> <ol style="list-style-type: none"> 1. Details of the baseline noise surveys undertaken to inform the noise assessment presented in Volume 3, Chapter 8: Noise and Vibration [APP-080], are provided in Volume 6, Annex 8.1: Baseline Noise Survey [APP-167]. This explains the methodology implemented, the baseline noise context and the results recorded. 2. The Applicant has sought to communicate any relevant project information to the respondent, as well as any known updates in the local area which have been identified at a given point in time. In respect to the B1113/A140 junction, the Applicant would refer to Appendix 33 A140/B1113 Junction Technical Note to the Applicant's Response to Deadline 1 which addresses matters relating to the capacity of the junction. 3. Please see the Applicant's response to RR-001 relating to the site selection process for the HVDC converter/HVAC substation. <p>Noise Impacts: Please also see the Applicant's response to RR-001 relating to the potential noise impacts relevant to the onshore HVDC converter/HVAC substation. The property referenced in this representation is located approximately 180 m from the onshore HVDC converter/HVAC substation, excluding areas reserved for landscape mitigation, at its closest point (as defined in Sheet 3 or 3 of the Onshore Limits of Deviation Plan [APP-026]). During operation, the property referenced in this representation has been used as a representative location to the south-west of the onshore HVDC converter/HVAC substation and is identified as a discreet sensitive receptor in Figure 8.2 of APP-080. An assessment of the potential noise effects resulting from the construction and operation of the HVDC converter/HVAC substation is presented in paragraphs 8.12.1.48 and 8.12.2.14 respectively. Noise attenuation and mitigation measures to be taken to minimise noise from the onshore HVDC converter/HVAC substation, including any noise limits, will be set out in a Noise Management Plan which will be approved by the relevant planning authority pursuant to Requirement 21 of the draft DCO [APP-027].</p>

Relevant Representation Comment	Applicant's Response
<p>For your information, since we last spoke we have submitted our planning application for Hornsea Project Three to the Planning Inspectorate on 14th May. You will be formally notified by us in writing if the application is accepted for examination, so that you have the opportunity to view the full suite of documents and make a written representation.</p> <p>So there will be no sound affect during the day when they are constructing less than 200 metres from our property this is without the dust and eyesore we will be exposed to</p> <p>Putting up a few trees and landscaping is not going to make up for this</p> <p>We have raised our family and would now be looking to downsize but are now prisoners in our own home as no one will buy with 12+ years of construction</p>	<p>Based on this, the assessment concludes that the effect of noise on residential receptors, including the property referenced in this representation, will be of negligible significance, which is not significant.</p> <p>Amenity Impacts during Construction: In respect to amenity impacts during construction, measures to manage potential noise and air quality (including dust) during construction are set out in paragraphs 6.2 and 6.3 of the Outline CoCP [APP-179] which will form the basis of the final CoCP to be submitted and approved by the local planning authority under Requirement 17 of the draft DCO [APP-027]. The measures identified to control dust are in accordance with best practice guidance from the Institute of Air Quality Management and as such the Applicant considers them sufficient to manage and minimise potential impacts from dust.</p> <p>Landscape and Visual Impacts: Please see the Applicant's response to relevant representation RR-001 in respect to the landscape and visual impacts on the onshore HVDC converter/HVAC substation. This concludes that, with the mitigation proposed, landscape and visual effects outside of the site boundaries were not identified to be significant during construction, or during operation once planting has matured. Specific consideration has been given to the property referenced in this representation, as shown in Figure 1.3 and Table 1.2 of Volume 6, Annex 4.6: Residential Visual Amenity [APP-147], concluding that Hornsea Three would not be overbearing and would not occupy the outlook in a way which would be oppressive such that the property would be rendered an unattractive place in which to live. The optional mitigation planting along field boundaries, as well as the commitment to plant sections of the landscape planting at the commencement of works on the HVDC converter/HVAC substation, discussed in RR-001 is also of direct relevance to the property referenced in this representation.</p>

1.2.53 Orsted Wind Power A/S (RR No. RR-053)

Relevant Representation Comment	Applicant's Response
<p>The proposed Hornsea Project Three Offshore Wind Farm is located within the former Hornsea Zone in the southern North Sea region. The Hornsea Zone was one of the nine zones identified by the Crown Estate's Round 3 offshore wind programme in 2009. The Hornsea zone was disbanded in early 2016 and four separate project agreements are now in place. Each Agreement for Lease (AfL) or Lease is held by a separate subsidiary of Ørsted Wind Power A/S:-</p> <ul style="list-style-type: none"> • Hornsea Project One (Hornsea 1 Limited. Company 07640868). • Hornsea Project Two (Breesea Limited. Company 07883217). • Hornsea Project Three (Ørsted Hornsea Project Three UK Limited. Company 08584210). • Hornsea Project Four (Ørsted Hornsea Project Four Limited. Company 08584182). <p>Hornsea Project One was granted a Development Consent Order (DCO) on 31st December 2014 and has since been awarded a Contract for Difference (CfD). The Project took Final Investment Decision in February 2016 with onshore construction works commencing in January 2016 and offshore construction works commencing in January 2018. Hornsea Project One anticipates that construction will be completed and the wind farm will be fully operational by 2020.</p> <p>Hornsea Project Two was granted a DCO on 16th August 2016 and was awarded a CfD in September 2017. The Project took Final Investment Decision in September 2017 and the onshore substation construction works commenced in April 2018 and offshore construction works are due to commence in 2020. Hornsea Project Two anticipates that construction will be completed and the wind farm will be fully operational by 2022.</p> <p>Ørsted has an AfL for Hornsea Project Four, and is currently considering how to take this project forward. Hornsea Project Four has commenced initial engagement with relevant statutory consultees to gather relevant baseline data to inform route planning and site selection. Hornsea Project Four is currently working towards submission of the EIA Scoping Report to the Planning Inspectorate in October 2018, and statutory consultation in May 2019. Submission of the Project Four DCO application is anticipated to be made in Q1-Q2 2020.</p> <p>Hornsea Project One, Hornsea Project Two and Hornsea Project Four support the development of Hornsea Project Three, but each project, as a separate entity, reserves the right to make further representations throughout the forthcoming examination period, if appropriate.</p>	<p>Noted.</p> <p>Ørsted has an AfL for Hornsea Project Four and is currently investigating the development opportunity presented by Hornsea Four. Route Planning and Site Selection work has commenced to determine the feasibility of developing a Marine Export Cable Route (ECR) from the Offshore Wind Farm (OWF) connecting to the Creyke Beck substation in Cottingham. Potential landfall along the East Riding of Yorkshire is being evaluated. Hornsea Project Four have recently submitted their EIA Scoping Report to the Planning Inspectorate in October 2018, and statutory consultation on their PEIR in May 2019. Submission of the Project Four DCO application is anticipated to be made in Q1-Q2 2020.</p>

1.2.54 South Norfolk Council (RR No. RR-054)

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in South Norfolk Council's Relevant Representation is provided below. The full South Norfolk Council's Relevant Representation is provided in Annex 3 to this document.</p> <p>South Norfolk Council supports the principle of Hornsea Three, subject to the issues below being resolved:</p> <p>General:</p> <ul style="list-style-type: none"> • Recognises the importance of Hornsea Three in relation to the diversification of UK energy supplies and potential contribution to the national and local economy. • Welcome the economic benefits in terms of investment and job creation. • The Environmental Statement is comprehensive and of good quality and there are no substantive issues arising from it. • Wish to continue to work pro-actively with the Applicant as the application is progressed through Examination to resolve the outstanding issues. <p>Heritage assets:</p> <ul style="list-style-type: none"> • The impact of Hornsea Three on both the setting of Keswick Hall and the setting of the historic parkland should be considered to be a greater level of impact and of more significance in the Environmental Impact Assessment (EIA) than currently attributed, particularly with regard to the options between the onshore HVDC converter/HVAC substation. • Mitigating measures could include further tree planting and careful consideration of the proposed colours of the building/buildings. 	<p>Please see the Applicant's full response to this Relevant Representation in Annex 3 of this document.</p> <ul style="list-style-type: none"> • The magnitude of impact and significance of effect at Keswick Hall and associated parkland and appropriateness of proposed mitigation at the HVDC converter/HVAC substation. • The timing and design of landscape planting mitigating any impacts at HVDC converter/HVAC substation. • Classification of Important Hedgerows and locations of individual trees. • Measures to control noise and pollution agreed between the Applicant and South Norfolk Council through the SoCG process to be included in the final CoCP(s). <p>It is noted that South Norfolk Council have been engaged in consultation with Hornsea Three throughout the pre-application and post-application process. Although each point has been responded to in turn, these discussions are also reflected in the Statement of Common Ground between South Norfolk Council and Hornsea Three.</p>

Relevant Representation Comment	Applicant's Response
<p>Landscape and visual impact:</p> <ul style="list-style-type: none"> • Satisfied that the work has been undertaken in accordance with the accepted industry guidance. • Key landscape and visual impacts will result from the laying of underground cabling in respect of the removal/loss of hedgerows, trees and key landscape features, and the impact of the onshore HVDC converter/HVAC substation which would be a significant adverse effect (major-moderate adverse). • Suggest an onshore HVAC substation which is lower height and use of recessive colour for the building. • Concerned that hedgerows have not been assessed by 'importance' as well as species composition and condition. • Concerned that there does not appear to be any assessment of the existing trees that are potentially affected by Hornsea Three. • Concerned that the creation of woodland would impact on the openness of the bypass protection zone, which could result in a significant adverse effect. <p>Noise and pollution:</p> <ul style="list-style-type: none"> • Specified works to be undertaken are adequately covered by the Requirements in the Draft Development Consent Order (DCO) (Document 3.1). • In general agreement with the Outline Code of Construction Practise but wishes to confirm that issues relating to hours of operation, siting of any standby generators, good practise procedures, prior notification of constructional noise, floodlighting, movement and storage of waste materials, public safety, dust control, emissions, telecommunication or television interference and decommissioning should be in place in the final document. 	

1.2.55 Steven Hall (RR No. RR-055)

Relevant Representation Comment	Applicant's Response
<p>Firstly as owners of the only property (redacted) in close proximity of the converter we are disappointed and upset with the communication and withholding of information from Orsted.</p> <p>After purchasing (redacted) in 2003 we made appoint of contacting South Norfolk Council who told us in no uncertain terms there would be no construction between our boundary and the Southern bypass which I believe has now been contravened to support this latest application.</p> <p>Orsted have been slow in communication with us and we have had lots of mis- guided information.</p> <ol style="list-style-type: none"> 1. The sound monitors were put up at our property (when asked what they were for we were told they just monitor the wind speed). Asking what effect this will have on us they replied absolutely nothing!!!! 2. We voiced our concerns about the construction traffic (Not knowing about the impending roundabout on the B1113) They did but let us voice our concerns and look stupid 3. We asked why the substation could not be located nearer the main substation at Mangreen/Caister again they knew that there was a proposed reserve substation in the process- we didn't. <p>Below is the abstract from the sound report which they carried out in March 2017 promising us a copy before it went to planning inspectorate surprisingly we got it 1st June 2018 17 days after the misinterpreted report was sent to the planning inspectorate.</p> <p>The results of the assessment for (redacted) shows that with the design mitigation applied, it is anticipated that during operation in the day time there would be no change in the sound level at the property, and during evening the anticipated change (+0.3 decibel increase) has been assessed as negligible for the purpose of the assessment.</p> <p>For your information, since we last spoke we have submitted our planning application for Hornsea Project Three to the Planning Inspectorate on 14th May. You will be formally notified by us in writing if the application is accepted for examination, so that you have the opportunity to view the full suite of documents and make a written representation.</p>	<p>Please see Applicant's response to relevant representation RR-052.</p>

Relevant Representation Comment	Applicant's Response
<p>So there will be no sound affect during the day when they are constructing less than 200 metres from our property this is without the dust and eyesore we will be exposed to</p> <p>Putting up a few trees and landscaping is not going to make up for this.</p> <p>We have raised our family and would now be looking to downsize but are now prisoners in our own home as no one will buy with 12+ years of construction.</p> <p>Stuart Livsey (Orsted)said on live radio that there is no evidence that the construction would devalue our property (in that case they could purchase and sell at the end of construction with no monetary loss).</p>	

1.2.56 National Trust [RR-056]

Relevant Representation Comment	Applicant's Response
<p>The proposal would not impact directly on land owned or managed by the National Trust, but some elements of the proposal would abut or be close to such land and may impact indirectly. This land at Oulton Street where the construction compound is proposed and land to the south of Weybourne Cliffs (to the north of Sheringham Park) which is located to the east of the proposed landfall.</p> <p>The Trust wishes to comment on three particular aspects of the proposal:</p> <ul style="list-style-type: none"> - The proposed construction compound at Oulton Street and its impacts upon the local highway; - The proposed construction compound at Oulton Street and its impact upon heritage; - The archaeology in the area of the on-shore landfall. <p>Land at Oulton Street – Highway Impacts</p> <ul style="list-style-type: none"> - A construction compound is proposed at Oulton Street, which abuts the boundary of land owned by the Trust. The National Trust has significant landholdings within the vicinity of the site which attract large numbers of visitors each year who come to enjoy the heritage, wildlife and leisure opportunities that they provide. - The airfield is located on 'The Street' which is accessed from the B1149. This is a rural road with a narrow carriageway and the National Trust questions the appropriateness of this for use by the construction traffic. This is having regard to the potential peak daily staff vehicle and HGV movements (a peak of 130 daily staff vehicle movements and a peak of 118 daily HGV movements) and the potential construction period (under a two-phase construction programme a duration of up to 8 years and under a single-phase programme a duration of up to six years). 	<p>The Applicant has addressed each of the points identified in the relevant representation in turn below.</p> <p>Main Construction Compound: Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I in respect of traffic and heritage impacts at the main construction compound.</p> <p>North Norfolk Coast – Archaeology: The heritage interest below Mean High Water Springs (MHWS) is assessed within Volume 2, Chapter 9: Marine Archaeology of the Environmental Statement [APP-069] and associated appendices. The heritage interest above MHWS is assessed within Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077] and associated appendices.</p> <p>Coastal geology deposits and associated archaeological remains are considered in Volume 5, Annex 9.1: Marine Archaeology Technical Report of the Environmental Statement [APP-114]. The presence of material possibly associated with Second World War Coastal Defences is described at paragraph 3.7.3.2. Further consideration of coastal geology deposits and associated archaeological remains is made in Volume 6, Annex 5.1: Desk Based Assessment of the Environmental Statement [APP-149]. The report notes the likely presence of Roman remains around Weybourne at paragraph 1.6.2.28 and military remains in the coastal area and beyond at paragraph 1.6.2.49.</p>

Relevant Representation Comment	Applicant's Response
<p>- No details have been provided of the traffic management measures.</p> <p>- The scope of the use of the main construction compound is not yet known; therefore it is difficult for interested parties to fully consider the impacts.</p> <p>- The National Trust is concerned about the impacts that the level of traffic using this rural road and the impacts the traffic management measures could have on its tenants, staff and visitors who use this road. The lack of detail and uncertainty at this stage about the traffic management measures gives cause for concern.</p> <p>Land at Oulton Street – Heritage Impacts</p> <p>- There is no assessment of the significance of Oulton Airfield which the National Trust considers to be an undesignated heritage asset.</p> <p>- The former RAF Oulton is inextricably linked with Blickling Hall (Grade 1 Listed), which provided accommodation and facilities for the RAF in WWII and was perhaps the most impressive country house in the county to serve as a mess site for an operational airfield. The runways and tracks at Oulton are one of the most complete surviving examples of a wartime built RAF airfield in the county.</p> <p>- The airfield is an important part of the history of Oulton and Blickling. Further detail can be provided within a subsequent submission.</p> <p>- The significance and character of the airfield, its historic relationship to the village and the Blickling estate and the contribution it makes to the setting of the Blickling Conservation Area have not been acknowledged within the application. There is no appraisal to ensure any harm caused to the heritage asset of the airfield is minimised.</p> <p>North Norfolk Coast – Archaeology</p> <p>- The results of any archaeological work for the land near our coastal land ownership should be appropriately recorded and made publicly available.</p> <p>- The section near our coastal land is important as there may be military defences within the coastal zone and also very old activity associated with deeper geological layers. An understanding of this would give a greater indication as to whether similar remains might exist within our land. These areas are prone to erosion and loss. Information on coastal geology deposits and any archaeological finds or layers would also be of value. We request that appropriate mitigation is in place to record this information.</p>	<p>Volume 2, Chapter 9: Marine Archaeology of the Environmental Statement [APP-069] provides mitigation measures which are expanded on in Volume 5, Annex 9.2: Outline Written Scheme of Investigation of the Environmental Statement [APP-115]. This provides a protocol for archaeological discoveries during construction works at Appendix A, including measures for discoveries within the intertidal zone below MHWS. It also describes the reporting procedures to ensure that the results of archaeological work are made publicly available. The Applicant must, before commencing offshore works, provide to and have approved by the MMO a written scheme of investigation in accordance with this outline (See draft DCO [APP-027] dML Schedule 11 condition 11(2) and Schedule 12 condition 12(2)).</p> <p>Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077] provides mitigation measures for the onshore project above MHWS. This includes a programme of advance archaeological investigation following consent focussing on identified sites that will be adversely affected by Hornsea Three. Targeted geophysical survey and trial trenching will be undertaken in other areas of the onshore cable corridor as appropriate. A Written Scheme of Archaeological Investigation will be submitted and approved by the relevant authorities prior to commencement of the consented works in accordance with Schedule 1, Part 3, Requirement 16 of the draft DCO [APP-027]. Furthermore, investigation of unexpected archaeological sites encountered during the construction phase will be undertaken in line with procedures (e.g. a chance find procedure) agreed in advance with the relevant authorities (see outline CoCP [APP-179]). It is intended that this onshore WSI will also describe publication to ensure that the results of archaeological work are made publicly available.</p>

1.2.57 Broadland District Council [RR-057]

Relevant Representation Comment	Applicant's Response
<p>The District Council notes that the proposed development will deliver a significant national benefit in the supply of substantial renewable energy in the UK. However the anticipated local impacts should be addressed.</p> <p>The main construction compound for the on-shore works is on part of the former airfield to the east of the small village of Oulton which is designated as a Conservation Area and served by narrow country lanes. The predicted construction period for a 2 phase build is at least 8 years and it has been indicated that construction traffic will pass through the village centre, it is anticipated that the residents of Oulton will experience significant danger and disruption during the entire build period and there will be a negative effect on the character of the Conservation Area. Regard should be given to the dismissal of a planning appeal in 2014 for an anaerobic digester plant on the former airfield on grounds that it would result in material harm to highway convenience and safety and the living conditions of the occupiers of The Old Railway Gatehouse (to the south of the access) in respect of noise and disturbance. Detailed consideration needs to be given to all impacts arising from the position of the main construction compound but if these can't be adequately resolved that the position of the main construction compound should be revised.</p> <p>A separate cable corridor and associated development within the District is proposed as part of the Norfolk Vanguard off-shore wind farm. The cumulative impacts of the two proposals need to be considered. In this respect it is noted that Norfolk Vanguard are proposing two compounds in Oulton using the same access road as the Hornsea Three proposals. In addition the two cable corridors cross at a point north of Reephams and this has the potential to increase the visual and environmental impacts of the proposal in the locality of this intersection.</p> <p>Two areas of woodland designated as Ancient are within 500m of the cable corridor one is Jenniss Wood (north of Ebony Hall, Ringland) and the other is on the boundary with South Norfolk at Harman's Grove, the corridor appears to run directly adjacent to these areas of woodland. Both are County Wildlife Sites and should be protected. The installation of the cable route will also require the removal of sections of hedgerow; these will have to be assessed using the criteria set out in the Hedgerow Regulations 1997 to establish if they would be considered as important due to the flora, fauna or historical significance associated with them. If sections are removed and cannot be replaced following installation of the cables this will have greater long term significance to the landscape of the locations and some form of mitigation would be appropriate which could include replacement planting on adjacent land.</p>	<p>The Applicant notes BDC's opening comments and would refer to the Statement of Common Ground (SoCG) between Hornsea Project Three and Broadland District Council which addresses each of the matters raised.</p> <p>To support the information presented within the SoCG, please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I which presents the proposed access strategy (including the cumulative impacts associated with Norfolk Vanguard). The Applicant is consulting directly with NCC, BDC, OPC and the occupants of The Old Railway Gatehouse on the access strategy for the main construction compound in order to understand the most appropriate detailed management measures along The Street and in the vicinity of this property. Once an access strategy has been agreed (see Appendix 20 of the Applicant's response to Deadline 1), the Applicant will continue to develop noise and air assessments based on the predicted construction traffic flows associated with the main construction compound and report the findings in a future Examination Deadline. This will inform the development of the Outline CoCP [APP-179], or Outline CTMP [APP-176] during the examination.</p> <p>The assessment methodology in respect to impacts on hedgerows and trees currently assumes a maximum design scenario of removal in all areas where HDD is not proposed, or specific protective measures are not identified within the Outline EMP [APP-180] (i.e. as done for retained habitats of ecology and nature conservation concern, paragraph 4.2.2). This approach provides BDC with sufficient comfort that impacts on hedgerows and trees identified under the maximum design scenario have been considered and where appropriate, suitable mitigation is captured within the Outline CoCP [APP-179], Outline EMP [APP-180] and Outline LMP [APP-181]. Buffer zones around retained hedgerows will be established where practicable to minimise impacts to hedgerow roots (paragraph 4.2.2.1 of the Outline CoCP). The Applicant has provided BDC with a plan clarifying the classification of Important Hedgerows relevant to the Hedgerow Regulations 1997 (issued on 26.10.2018 and provided as Appendix 38 Important Hedgerows to the Applicant's response to Deadline 1). Hornsea Three has minimised the removal of these Important Hedgerows through the use of HDD or HDD with a haul road over. Where a haul road is proposed, the exact location of the haul road within the Order Limits would be optimised through agreement with a suitably qualified ecologist. The Applicant has amended paragraph 6.5.1.14 of the Outline CoCP as follows to capture this commitment (new text shown in underline):</p> <p><u>6.5.1.14 – "The length of individual hedgerow sections to be removed will be reduced as far as reasonably practicable. In this regard, where an HDD with a haul road, or HDD with ducting laydown is proposed, the exact location of the haul</u></p>

Relevant Representation Comment	Applicant's Response
	<p><u>road/ducting laydown within the Order Limits would optimised through agreement with a suitably qualified ecologist to further minimise hedgerow and tree removal.</u>"</p> <p>All sections of hedgerow removed to enable construction of the onshore cable corridor will be replanted as soon as practicable after each phase of cable installation. Replacement planting will comprise a species-rich mix of native shallow-rooting hedgerow species typical of the area. This commitment is captured in the Outline EMP (paragraph 5.3.3.2, APP-180).</p> <p>The Applicant has committed within the Outline EMP to provide productive buffer zone surrounding retained areas of woodland (15 m in width or the width of the tree root protection zone, whichever is the greater, as advised by an appropriately qualified surveyor) is appropriate and provides sufficient protection to the areas of woodland (including Jennis Wood and Harman's Grove as identified in BDC's relevant representation RR-057) located directly adjacent to the onshore cable corridor. This approach has been agreed through the SoCG with BDC.</p>
<p>The Hydrology & Flood Risk Statement Vol. 3 Chapter 2 (pg. 28; 2.7.6.2) incorrectly states that the District Council does not hold records of private water supply information.</p>	<p>The Applicant notes BDC's response regarding private water supplies. The Applicant's consultants, RPS submitted a data request to Broadland District Council via email dated 24 February 2017, which included a request for information on private abstraction licences. In their response Broadland District Council advised that the information requested could be obtained from Norfolk County Council. This information was then requested from NCC.</p>
<p>The District Council would like to reiterate that the Norfolk authorities have signed up to County position statement in respect of offshore wind energy proposals that was sent to the Rt. Hon Dr Greg Clark MP on 26 February 2018 which requests that the offshore energy companies undertake to:</p> <ul style="list-style-type: none"> a) Secure improvements to the local electricity distribution networks in the County; and b) Ensure real economic benefits in respect of the (i) provision of high quality jobs; (ii) creation of training/skills initiatives in the energy sector and (iii) the provision of wider community benefits. 	<p>Noted, matters relating to the transfer from the National Grid to the local network, or the capacity of the local transmission network is beyond the Applicant's control. Orsted understands however that the project will assist with local power needs as UK Power Networks has demand feeder connections at Norwich Main which already supply the local area with power. Therefore, any power produced by Hornsea Three and injected into Norwich Main 400kV substation, will feed into both local demand (through these feeders) and the National transmission system, as this is the nature of electrical interconnection.</p> <p>The Applicant has established voluntary Community Benefit Funds (CBFs) for a number of previous projects, which are currently under construction. These funds can make a valuable contribution to the local area, by supporting projects such as community building improvements and recreation facilities, conservation and wildlife projects etc. The Applicant will review the interactions of Hornsea Three, as the proposal is refined, and consider an appropriate way to feed benefits back into the local community. However, any decision to establish a community benefit fund for Hornsea Three, and the mechanism and triggers for contributions to it, would be made post financial investment decision (FID).</p>

Relevant Representation Comment	Applicant's Response
	Furthermore, the Applicant has made a commitment to produce a skills and employment plan (Requirement 22 of the draft DCO) in consultation with New Anglia Local Enterprise Partnership and approved by the relevant planning authority.

1.2.58 Mr William Horabin on behalf of Friends of North Norfolk [RR No. RR-058]

Relevant Representation Comment	Applicant's Response
<p>1. We are concerned that HVDC Transmission has not been properly and fully considered. HVDC Transmission is used in transmission of high voltage current over land and sub sea for many continental interconnectors and in operational offshore wind farms in the North Sea off Germany where it has been specified by the German Gov't (Orsted-Dong have interests in these). Offshore Converter Platforms up to 950MW capacity have been constructed, installed and are operational.</p> <p>HVDC Transmission will need fewer cables, less disruption to the seabed, land and the ecology and eliminate the need for vast Compensator Booster Stations both offshore and within open countryside. Indeed HVDC Transmission is the single best solution to limit and mitigate against the significant effects of this vast project.</p> <p>2. Orsted have failed to evidence that they are truly committed and open to the full and proper consideration of HVDC Transmission within the Rochdale Envelope approach. The Consultation Report evidences a clear bias and assumptions that HVAC Transmission will be used - Orsted have used HVAC Transmission when they have been allowed the choice despite the significant advances and use of HVDC Transmission by others.</p>	<p>1. and 2. Please see Appendix 22 to the Applicant's response to Deadline I, which relates to the transmission system (HVAC or HVDC).</p>

Relevant Representation Comment	Applicant's Response
<p>3.Orsted have failed to provide proper details and visualisations of the onshore HVAC Booster Stations or give a sense of scale to all parts of the project to enable proper public consultation. Proper mapping and imaging including aerial photo surveys and more sophisticated photo montages / 3D imaging is warranted for a project of this scale.</p>	<p>3. The Applicant disagrees with this representation. A full assessment in line with appropriate guidance has been undertaken and reported on in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. Please see the Applicant's response to relevant representation RR-026 where it relates to the landscape and visual impacts of the onshore HVAC booster station.</p> <p>To provide further clarity, it is noted that within Volume 6, Annex 4.5: Photographic Panels, Wirelines and Photomontages of the Environmental Statement [APP-147], two types of visualisations have been provided to aid the assessment – wirelines and photomontages. The wirelines show the maximum potential design scenarios of the proposed HVAC booster station from the agreed representative viewpoints. The photomontages show illustrative design for the onshore HVAC booster station at years 1 and 15 and are provided for the benefit of the reader only and have not influenced the assessment undertaken in the LVIA.</p>
<p>4.Orsted have failed to properly identify the cumulative effects of other projects - existing or proposed - on the North Norfolk Coast, the AONB and Marine Environment/Ecologies and the socio/economic impacts on tourism, fishing etc. Other projects include the recent Sheringham Shoal, Dudgeon and Race Bank offshore wind farms/cablings works and the proposed Norfolk Vanguard and Boreas offshore wind farms.</p>	<p>4. The Applicant would refer to Volume 4, Annex 5.2: Cumulative Effects Screening Matrix [APP-097] which identifies the activities, projects or plans which have been scoped into the cumulative impact assessment for Hornsea Three.</p> <p>For those schemes scoped into the assessments, which includes Norfolk Vanguard and Boreas offshore wind farms, cumulative impacts with Hornsea Three are assessed in the relevant section of the topic specific chapters of the Environmental Statement. For those receptors listed in the relevant representation: impacts on the North Norfolk Coast and AONB are assessed in multiple chapters including Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]; impacts on marine environment and ecology are assessed in multiple chapters of Volume 2 of the Environmental Statement; and impacts on socio-economics, including tourism, are assessed in Volume 3, Chapter 10: Socio-Economics [APP-082].</p> <p>Projects which are operational (e.g. Sheringham Shoal and Dudgeon offshore wind farms) form part of the existing baseline and as such their combined impact the Hornsea Three are assessed as part of the 'Assessment of Significance' section of each topic specific chapter of the Environmental Statement.</p> <p>The Applicant there considers that cumulative effects have been appropriately and accurately assessed within the Application (for that point in time). Where cumulative projects have moved on since the point of Application, most notably the submission of the Norfolk Vanguard application, implications of changes are addressed in the Applicant's written response to Examiners Question 1.15.3.</p>

Relevant Representation Comment	Applicant's Response
<p>5.Orsted have failed to identify or understand the impacts of works and sediment disturbances - the Cromer Reef MCZ is an example. Trenching works carried out when there is a tidal stream running west to east (particularly on Springs) will cause pollution to the reef and sands/sediments will carry and damage it. Should the chalk reef continue under the sea bed and extend out then the cabling works will pull up chalk which can travel in suspension for many miles.</p>	<p>Effects of increases in suspended sediment concentrations and subsequent sediment deposition on benthic ecology, including features of the Cromer Shoal Chalk Beds MCZ, are assessed in Paragraphs 2.11.1.100 to 2.11.1.136 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. The assessment gives consideration to the impact of sediment disturbance during trenching (Paragraph 2.11.1.107 and 2.11.1.108 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]) and disturbance to subsurface chalk during offshore export cable installation (Paragraph 2.11.1.109 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]). In both cases, sediment plumes are expected to return to background concentrations within hundreds to a few thousands of metres from the point of release. Due to the levels of dispersion predicted from offshore export cable installation, sediment deposition is unlikely to occur to a measurable thickness beyond the immediate vicinity of the cable trench.</p> <p>Effects on benthic ecological receptors, including chalk reef features of the Cromer Shoal Chalk Beds MCZ, are not predicted to be significant in EIA terms (Paragraph 2.11.1.135 and 2.11.1.136 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]).</p>

1.2.59 Historical Railways Estate (representing the interests of structures belonging to the Secretary of State for Transport) [RR-059]

Relevant Representation Comment	Applicant's Response
<p>Historical Railways Estate manage former Railway structures on behalf of the Secretary of State for Transport. Several of these sit within the proposed route/boundary. As such we would like to ensure that we are contacted for our approval relating to any element of the proposal that affects or impacts on these bridges.</p> <p>Orsted have contacted us previously and been advised of this.</p>	<p>The Applicant is not aware of the Historical Railways Estate's interest in any land or structures along the route and would therefore request further information in that respect. The proposed route does not cross over or under any bridges.</p>

1.2.60 Maritime and Coastguard Agency [RR-060]

Relevant Representation Comment	Applicant's Response
<p>We intend to respond to the application for the Hornsea Three Project to ensure the safety of navigation is maintained during construction, operation and decommissioning, with appropriate risk mitigation measures in place, and to ensure we are able to maintain our search and rescue obligations. We would therefore expect developments to be undertaken in accordance with Marine Guidance Note (MGN) 543 and its supporting annexes.</p> <p>MCA's remit for Offshore Renewable energy development is to ensure that the safety of navigation is preserved, and our Search and Rescue capability is maintained whilst progress is made towards government targets for renewable energy. This includes our obligations under The United Nations Convention on the Law of the Sea.</p>	<p>The Applicant thanks the MCA for their representation on the DCO application for the Hornsea Three Project and acknowledges and shares the MCA's concern to ensure Offshore Renewable energy development preserves navigational safety in the marine environment.</p> <p>Marine Navigational Safety is addressed in the Environmental Statement under Volume 2, Chapter 7: Shipping and Navigation [APP-067] and has followed the methodology set out in Volume 1, Chapter 5: Environmental Impact Assessment Methodology [APP-060]. Specific to the shipping and navigation EIA, the following guidance documents were also considered:</p> <ul style="list-style-type: none"> • MCA MGN 543 (Merchant and Fishing) Safety of Navigation OREIs – Guidance on UK Navigational Practice, Safety and Emergency Response (MCA, 2016); • MCA Methodology for Assessing Marine Navigational Safety Risks of Offshore Wind Farms (2015); and • Guidelines for FSA – Maritime Safety Council (MSC)/Circular 1023/MEPC/Circular 392 (IMO, 2002).
<p>The Statement of Common Ground has not yet been agreed by MCA.</p>	<p>Since receipt of the MCA's relevant representation, a Statement of Common Ground (SOCG) has been drafted and consulted on with MCA which sets out areas where agreement has been reached, whilst capturing those issues which remain under discussion.</p>

Relevant Representation Comment	Applicant's Response
<p>We remain concerned regarding the sighting of surface infrastructure anywhere within the 300m development corridor (+/- 150m from the centre line) which could be detrimental to navigation safety and SAR capabilities. This principle is considered beyond microsighting, and more a determination on layout design, and therefore the MCA does not find this reasonable. Straight lines of orientation without obstructions are by far the best way to provide for safe navigation of aircraft and vessels.</p>	<p>It is noted that the MCA's relevant representation states that a 300 m Development Lane (± 150 m of the centreline) would result in 23% of the array not being searchable (Principle 8). In the Applicant's opinion the statement that a 300 m Development Lane (± 150 m of the centreline) would result in 23% of the array being detrimental to SAR capabilities is incorrect and takes neither account of the systems fitted to the MCA SAR helicopter nor the widely spaced infrastructure (spaced at least 1km apart). The Applicant's SAR specialist has provided information on the equipment available on SAR helicopters to allow a close approach and search of the area between the widely spaced turbines within the Development Lanes including:</p> <ul style="list-style-type: none"> - Star SAFIRE HD- The MCA SAR Helicopters use an Electro-Optical System made by FLIR Systems, the Star SAFIRE HD. Unlike previous systems, this product can combine visual and IR imagery onto a single screen which optimises the search in difficult conditions. This would permit a search of the Development Lanes from the SAR Lanes in all but the poorest visibility. The system can use Merlin software which cues the operator to possible survivors and so enhances the search capability. - Radar Honeywell Primus 701A - The S92 is equipped with the Primus 701 radar which has a minimum range of 137m (450 ft). This system enables ground/sea mapping and weather detection optimised for SAR operations. The Primus 701A has a variable pulse width that is automatically optimised for range and mode setting. The system also includes selectable sea clutter reduction and operator modified gain and tilt thereby allowing for optimum search capability. The radar is capable of discriminating between individual turbines and mapping an obstacle free track between turbines. - Automatic Identification System - The MCA SAR helicopters are equipped with AIS which will allow them to identify any equipped vessels or turbines fitted with AIS. <p>Navigation systems - The MCA SAR helicopters are equipped with integrated navigation and display systems which will show the crew all obstacles held in the database. As the turbines will be accurately mapped, the system will provide a clear display of the obstacles. There is the ability to add the turbines to the EGPWS database giving approximately 20 seconds of warning before an obstacle, but this should be balanced against the frequency of nuisance alerts</p>

Relevant Representation Comment	Applicant's Response
<p>We are aware that the volume of commercial and recreational vessel activity in the area is low. However, we need to consider the vessels which find themselves in the vicinity of the windfarm in bad weather e.g. poor visibility, or in an emergency situation, the offshore support vessels, and the recreational vessels who do decide to transit the site.</p>	<p>As noted in the MCA representation the level of vessel activity within the site is low. Marine Navigational Safety of all users including consideration of adverse weather is addressed within in the Environmental Statement under Volume 2, Chapter 7: Shipping and Navigation [APP-067]. This includes consultation with both commercial and recreation vessel representatives. No significant issues were identified as part of the risk assessment process with regards to recreational vessels, impacts on commercial vessel routing in adverse weather or emergency situations. It is also considered likely that the applicant will be the first responder to any incident on site, as part of the construction and operation of the windfarm emergency response plans and resources will be in place to deal with incidents and casualties. This will include a familiarity with the layout of the site and the location of structures.</p>
<p>Principle 8 - Infrastructure shall be sited within Development Lanes of up to 300m width whilst still maintaining Principle 2 along the length of the Development Lane. Infrastructure may then be sited at varying distances up to 150m from the centre line of that Development Lane.</p> <p>The MCA considers this excessive and it will likely create surface infrastructure which are not in line and/or curved. A 300m lane of surface infrastructure which is not in line effectively creates a 300m corridor, which is not searchable. This could result in 23% of the development with no SAR coverage (300m every 1300m). This principle is not considered to be microsighting but part of a determination on layout design, and as a result the MCA does not find this reasonable.</p> <p>Principle 11 - The position of Surface Infrastructure within a Perimeter Development Lane around the Hornsea Three Array Area or a Phase shall, so far as is practicable, be arranged in straight or curved lines (to a tolerance of $\pm 150m$) from the indicative boundary of the Hornsea Three Array Area or Phase whilst complying with Principles 1 and 2.</p> <p>As per comment on principle 8, the tolerance of 150m is excessive and would lead to non-linear surface infrastructure, which may have an adverse impact on SAR and navigation safety.</p> <p>We are concerned that the length of the lanes will be up to 22nm in length, which may take a SAR helicopter approximately 20 minutes to transit. Considering there is just one line of orientation, this would not allow a SAR aircraft to turn and manoeuvre down an adjacent lane, which is fundamental for SAR capabilities. In addition, the lack of a helicopter refuge area restricts access options. Annex 5 to MGN 543 states that these helicopter refuge areas may be required where developments are over 10nm in length.</p> <p>The MCA therefore strongly recommended that an assessment be made into the feasibility of one perpendicular helicopter refuge area, half way along the development.</p>	<p>The Applicant is committed to continue discussions with the MCA to reach agreement on these outstanding principles to ensure that the Project can retain the necessary level of design flexibility whilst ensuring safety in the marine environment. Principle 8 is considered above as part of the concerns rose as part of width of development lanes.</p> <p>For Principle 11 the Applicant believes curved boundary development lanes do not prevent search and rescue operations being undertaken, and given the additional restriction on exposed peripheral turbines do not create a risk to surface navigation and no other concerns have been raised by other stakeholders aside from the western peripheral boundary which has been addressed specifically in Principle 12 where by micro siting will not be more than $\pm 50m$ in order to mitigate the risk to vessel navigating within the proposed navigational corridor.</p> <p>The representation also mentions helicopter refuge areas, (Principle 5) this requirement does not appear to be necessary in the case of Hornsea Three due to the overall size of the wind farm and spacing of the turbines. It should be noted that the turbine spacing in Hornsea Three of $\geq 1km$ gives the helicopters sufficient space to manoeuvre within SAR lanes or between lanes. It has been suggested to the MCA that the conspicuousness of some turning points could be enhanced by installing AIS on key turbines as SAR helicopters are equipped with AIS. It is believed that the widely spaced turbines on Hornsea Three combined with the SAR helicopter equipment, which includes radar, AIS, moving maps, electro-optical sensors and a Terrain (and obstacle) Awareness Warning System will allow the SAR helicopters to clearly identify obstacles without the need for a dedicated refuge area.</p> <p>As noted above the Applicant is committed to continue discussions with the MCA to reach agreement on these outstanding principles.</p>

1.2.61 John Hurst on behalf of Morton on the Hill Parish Council [RR-061]

Relevant Representation Comment	Applicant's Response
<p>Morton Parish Council believe that the site chosen for a construction storage compound immediately to the south of the junction of Marl Hill with the A1067 is not a suitable site for the following reasons:</p> <p>1. Marl Hill is a particularly busy road which currently carries up to 4000 cars a day and this particular junction is both extremely busy and an accident black spot. The A1067 was closed due to an accident at this junction earlier this year and there are regular tail backs of traffic on Marl Hill caused by vehicles queuing to join the A1067.</p>	<p>Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] outlines the assessment of the impacts of Hornsea Three on driver delay, and accidents and road safety. As set out in paragraph 7.11.2.25, 7.11.2.72 respectively, it is concluded that no significant effects on driver delay and accidents and road safety will occur as a result of Hornsea Three construction, this assessment includes consideration of Marl Hill and the A1067.</p> <p>As indicated in the Works Plan - Onshore [APP-013], it is not proposed to locate either the main construction compound or any of the five secondary construction compounds at Weston Longville. A main construction compound was suggested within the PEIR at Weston Longville, but this is no longer proposed (see Volume 1, Chapter 4: Site Selection and Consideration of Alternatives, paragraph 4.12.6.2 which relates to site selection for the main construction compound). Therefore, there will not be any traffic associated with construction compounds in this area. Notwithstanding this, a storage area is proposed during construction as indicated on the Works Plan - Onshore [APP-013] sheet 21. The storage area will operate as an area where some limited additional storage can be provided in addition to that land provided for along the onshore cable corridor. It is envisaged that this storage location will be in place for a period of approximately one month per construction phase and the sites will be restored to their original condition when the work front has passed.</p> <p>Whilst the storage area is adjacent to the A1067, access for this site is further to the south on Marl Hill Road, away from the A1067 and also from the haul road. The Applicant would also highlight that the access from Marl Hill is only proposed to be used for a relatively short time (approximately three months), during the construction of the Hornsea Three onshore cable corridor between the A1067 and Ringland Lane. As identified on Figure 1.2 of Volume 6, Annex 7.8: Traffic and Transport Figures [APP-166] of the Environmental Statement, it is proposed that construction vehicles would route along Marl Hill and Ringland Lane only to/from the A1067. There is a regulatory vehicular restriction on Marl Hill and Ringland Lane that restricts vehicles that are in excess of 7.5 Tonnes except for loading; the construction HGVs would not be travelling through this regulatory restriction but be travelling to/from a destination point within it. It is not proposed for construction vehicles to route through Weston Longville (to the south of Ringland Road) where there is a regulatory width restriction of 6' 6" except for access.</p> <p>An Outline Construction Traffic Management Plan (CTMP) [APP-176] has been submitted with the application and Schedule 1, Part 3, Requirement 18 of the Draft DCO [APP-027] requires that a full CTMP, which is in accordance with the Outline CTMP, to be provided to and approved by the relevant local planning authority prior to any works commencing.</p>

Relevant Representation Comment	Applicant's Response
	<p>The full CTMP will include precise details of all measures to be adopted at various locations. This will include Marl Hill and its junction with the A1067, although specific measures would be developed in consultation with NCC as the local highways authority. It is anticipated that consideration would be given to the potential for temporary signage erected on the A1067 warning drivers of turning works traffic (HGVs) at the junction. Such signage would improve driver awareness along the A1067 past Marl Hill, thus improving safety and assisting vehicles turning both in and out of Marl Hill.</p>
<p>2. Marl Hill regularly floods at two points leading up to the junction with the A1067 and during the winter of 2017/2018 both areas were under two feet of water during the months of December and January.</p>	<p>2. The Applicant notes this comment and thanks the Parish Council for raising it. However, issues relating to existing water flow, restriction and drainage management issues in the highway are within the remit of the County Council and so beyond the control of the Applicant. The Applicant is able to state that, as outlined in Volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement [APP-074], impacts to Flood Risk as a result of Hornsea Three would not be significant.</p> <p>Appropriate drainage measures will also be implemented, as set out in the Outline CoCP (with details to be agreed during detailed design by the contractor) to ensure that the use of the storage area does not exacerbate the existing flooding issues leading up to the junction with the A1067.</p>
<p>3. There is an Anglian Water mains water pipe, constructed of the old weaker material, just under the entrance to the proposed compound. This water main has a history of bursting just further up Marl Hill and we are concerned that it will not take the pressure of continual lorry movement into and out of the proposed site.</p> <p>4. It will be much more difficult to reinstate this particular area owing to the amount of water that regularly flows down Marl Hill during wet weather. The overflow pipe from the road drain which passes under the proposed entrance is often blocked as it can only be cleared by pressure jetting the pipework.</p>	<p>3. and 4. The Applicant has held discussions with Anglian Water over protection of its infrastructure across the onshore cable route. As a result of this, appropriate protective provisions for inclusion in the draft DCO [APP-027] have been offered to Anglian Water, and will be subject to discussion with them (see the Applicant's response to RR-140). These protective provisions will cover a range of topics including obligations on the Applicant to repay Anglian Water the costs of repairs as a result of works to construct Hornsea Three. The Applicant is committed to reaching agreement with Anglian Water to ensure suitable protection of its assets and is continuing negotiations with a view to reaching final agreement of protective provisions soon.</p>
<p>Notwithstanding the fact that there is a vehicular width restriction at the top of Marl Hill this road is a very attractive short cut to the A47 for vehicles coming from the Norwich Northern Distributor Road. It is an extremely busy and fast road and there are regular tail backs of traffic leading up to the junction.</p> <p>For all the above reasons Morton Parish Council believes it is a most unsuitable site for HGV's turning into and out of a construction and storage compound.</p>	<p>The Applicant refers the Parish Council to its response to point 1 above which discusses the findings of the traffic and transport assessment for Hornsea Three, which utilises the existing baseline scenario.</p> <p>The proposed construction compounds, storage areas and associated access were identified as part of the design refinement process (see Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059]). The key principle, following consultation with stakeholders, was to keep to existing access routes and roads, where possible, to minimise environmental and social impacts (paragraph 4.12.8.1). Consideration was also given to suitability for heavy goods vehicles (HGVs), connection to the strategic road network and proximity to sensitive receptors. Based on this, the Applicant considers that the construction access identified at Marl Hill is appropriate to facilitate the construction phase.</p>

1.2.62 National Grid Electricity Transmission PLC and National Grid Gas PLC [RR-062]

Relevant Representation Comment	Applicant's Response
<p>Representation by National Grid Gas Plc and National Grid Electricity Transmission Plc (together 'National Grid') to the Hornsea Project Three Offshore Wind Application for a Development Consent Order.</p> <p>National Grid wishes to make a relevant representation to the Hornsea Project Three DCO in order to protect its position in relation to infrastructure and land which is within or in close proximity to the proposed Order limits. National Grid's rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or in close proximity to the Order limits should be maintained at all times and access to inspect and maintain such apparatus must not be restricted.</p> <p>The documentation and plans submitted for the above proposed scheme have been reviewed in relation to impacts on National Grid's existing apparatus and land interests located within this area, and National Grid will require protective provisions to be included within the DCO to ensure that its interests are adequately protected and to ensure compliance with relevant safety standards.</p> <p>National Grid Electricity Transmission: National Grid Electricity Transmission has high voltage electricity overhead transmission lines, a high voltage substation and high voltage underground cables within the onshore Order Limits.</p> <p>Substation:</p> <ul style="list-style-type: none"> • Norwich 400kV <p>Overhead Lines:</p> <ul style="list-style-type: none"> • 4VV (400kV) overhead line route - Norwich Main to Walpole 1 - Norwich Main to Walpole 2 • 4YM (400kV) overhead line route - Bramford to Norwich Main 1 - Bramford to Norwich Main 2 • PHC (132kV) overhead line - Norwich Main to Trowse 1 • PGG (132kV) overhead line - Norwich Main to Trowse 3 <p>Underground Cable:</p> <ul style="list-style-type: none"> • Norwich Main – PHC001 <p>Gas Transmission: National Grid Gas has high pressure gas transmission pipelines and above ground installations (AGI's) within or in close proximity to the onshore Order Limits:</p> <p>Above Ground Installations:</p> <ul style="list-style-type: none"> • Little Barning • Felthorpe <p>Gas Transmission Pipelines:</p> <ul style="list-style-type: none"> • Feeder Main 02 - Bacton to Brisley • Feeder Main 03 - Bacton to Roudham Heath 	<p>The Applicant has met and consulted regularly with National Grid Electricity Transmission PLC and National Grid Gas PLC (NG) both pre and post submission of the Application.</p> <p>Appropriate protective provisions for the benefit of NG have been included in the draft DCO [APP-027] in order to ensure suitable protection of their apparatus and access. The Applicant is committed to reaching agreement with NG and is continuing negotiations to ensure that all of NG's concerns are addressed.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • Feeder Main 04 - Bacton to Gt Ryburgh • Feeder Main 27 - Bacton to Kings Lynn <p>As a responsible statutory undertaker, National Grid's primary concern is to meet its statutory obligations and ensure that any development does not impact in any adverse way upon those statutory obligations.</p> <p>National Grid reserves the right to make further representations as part of the examination process but in the meantime is negotiating with the promoter with a view to reaching a satisfactory agreement.</p>	

1.2.63 Neptune E&P UK Ltd [RR-063]

Relevant Representation Comment	Applicant's Response
<p>Neptune E&P UK Ltd (Neptune) wishes to be registered as an Interested Party in the examination of the Hornsea Project Three Offshore Wind Farm. Neptune is the Operator of the Cygnus gas field which is located in blocks 44/11a and 44/12a of the UK sector of the Southern North Sea (SNS) approximately 150km northeast of Easington. There are two installations on the field; Cygnus Alpha and Cygnus Bravo. Cygnus Alpha, located in block 44/12a, is a processing and gas compression hub comprising: • Utilities-Quarters platform (UQ); • Production Utilities platform (PU); • Wellhead Platform (WHP). Cygnus Bravo, located in Block 44/11a, is a satellite wellhead platform and drilling centre.</p> <p>The co-ordinates of the platforms are:</p> <ul style="list-style-type: none"> - Cygnus Alpha Platform: 54° 34' 9.75" North / 02° 17' 28.29" East; <p>Cygnus Bravo platform: 54° 35' 59.77" North / 02° 11' 41.42" East</p>	<p>The Applicant acknowledges the information provided by Neptune E&P UK Ltd (Neptune). The Applicant notes that Neptune acquired Cygnus platforms through its acquisition in February 2018 of ENGIE E&P International SA (Engie). The Applicant notes that Neptune has subsequently acquired all former Engie assets and licences in the UK sector of the North Sea. Pre-application consultation with Engie was undertaken, during which it advised that it had no concerns in regard to Hornsea Three as noted in Table 11.4, Volume 2, Chapter 11: Infrastructure and Other Users [APP-071].</p> <p>Following the submission of the Application, the applicant has consulted further with Neptune to discuss the issues raised in their Relevant Representation (28 September 2018). Following this meeting, it has been agreed that all Neptune assets have been correctly identified.</p>

Relevant Representation Comment	Applicant's Response
<p>The manning of these installations is serviced by helicopters from Norwich International Airport. The flight path from Norwich to Cygnus is directly over the Hornsea Offshore Windfarm . Neptune has been advised by its helicopter operator, CHC , that the construction of Hornsea Project Three, in combination with the already sanctioned Hornsea Project One and Two, effectively places a navigational barrier across a wide stretch of the Southern North Sea with the potential to significantly disrupt normal flying operations</p>	<p>The Cygnus group of platforms comprise the Cygnus A (AUQ) platform, the Cygnus A (APU) platform, the Cygnus A (AWHP) platform and the Cygnus B (BWHP) platform. The platforms are located 64.6 km, 64.7 km, 64.7 km and 67.9 km respectively from the Hornsea Three array area, beyond the Hornsea Three Environmental Impact Assessment (EIA) study area which included airspace within 9 nm (16.7 km) of the Hornsea Three array area (see Section 8.3 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068]). As such, the Cygnus platforms were not specifically referenced in the assessment, however the assessment of effects of Hornsea Three on cross-zone helicopter transit and helicopters using Helicopter Main Routes (HMRs) (as presented from Paragraphs 8.11.2.3 to 8.11.2.21 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-113]) are applicable when considering the Cygnus group of platforms.</p> <p>This section provides assessments for the operational and maintenance phase for Hornsea Three alone and a cumulative assessment with other projects and plans (Section 8.13 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-113]).</p> <p>During post application consultation, all parties have agreed that the direct flight path from Norwich to the Cygnus group of platforms is not directly over the Hornsea Offshore Windfarm, but is directly over the Hornsea Project One and Hornsea Project Two wind farms, and that there was no effect from Hornsea Three alone on this flight path.</p> <p>When considering Hornsea Three cumulatively with other projects and plans, there is the potential for an effect on helicopter transit from Norwich to the Cygnus group of platforms. As described in Paragraph 8.13.3.5 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068].</p> <p>All parties agreed during post application consultation that flight over Hornsea Project One and Hornsea Project Two could proceed in VMC. When IMC (or icing levels) require flight at an MSA below 1,700 ft (the MSA required for flight over the Hornsea Project One and Hornsea Project Two turbines) a deviation around Hornsea Project One and Hornsea Project Two would be required.</p> <p>As described in Paragraph 8.13.3.7 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement, pre-application consultation for Hornsea Three has advised an alternative route could be flown along the corridor between Hornsea Project One, Hornsea Project Two and Hornsea Three (see Figure 8.13 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068]). This corridor would be able to be used in VMC however in low visibility, a deviation around the eastern edge of Hornsea Three may be required.</p>

Relevant Representation Comment	Applicant's Response
<p>The biggest risk to Neptune's operations is that it will raise the Minimum Safe Altitude (MSA) in the area to as much as 2500ft.</p>	<p>The parties have agreed during post application consultation that the direct flight path from Norwich to the Cygnus group of platforms is over Hornsea Project One and Hornsea Project Two which would require the MSA to be raised to 1,700ft.</p>
<p>At this altitude, freezing conditions, with the risk of the helicopter rotor blades icing up, would occur when the air temperature at sea level was 4 to 5 degrees. There is the potential for these conditions to occur, which would preclude helicopters flying over the turbines, for up to five months of the year. The only alternative would be for helicopters to deviate from their normal flight path and fly around the windfarm.</p>	<p>During post application consultation, the parties have agreed that the risk of icing conditions occurring when air temperatures at sea level were 4 to 5 degrees does not occur for up to five months of the year.</p> <p>During this consultation, CHC (the helicopter operator for Neptune) advised that the potential for icing conditions to occur would be between November and April and would equate to approximately 1 % of the time. Hornsea Three are in the process of obtaining and assessing further meteorological data to assess air temperature over the former Hornsea Zone to more robustly understand the frequency of occurrence of these conditions.</p>
<p>As the development is so large, the alternative route would be significantly longer. This would mean longer flying hours, increased fuel consumption, and reduced payloads which would add significant logistical costs to our operation.</p>	<p>This issue has been addressed in the response above.</p> <p>As discussed, a two-staged mitigation is proposed. The first stage mitigation would not involve a significant increase in flight time. This is anticipated to be required between October and April and for 1 % of this time. The second stage mitigation would result in an increase in flight time which would subsequently effect fuel consumption and the requirement for reduced payloads. This would be for a smaller percentage of time when the meteorological conditions required for the first mitigation occur, along with low visibility conditions. The Applicant is working to further refine the assessment of the frequency of these conditions occurring.</p>
<p>This would also be a problem for the safe operation of the Cygnus Platforms in terms of dealing with medical emergencies, emergency response and personnel evacuation as the response time would be significantly longer.</p>	<p>The parties have agreed during post application consultation that medical emergencies, emergency response and personnel evacuation are not considered as part of the routine operational helicopter assessments. Any such requirements would mobilise from the nearest and most direct location. The parties agreed that this is not an issue that requires further consideration.</p>
<p>As an existing operator already established close to the area where the Hornsea Three project is proposed, our understanding is that the DCO is required to take account of Neptune's operations and secure adequate mitigation measures. Neptune would therefore like to make a representation on the potential impact to its operation in the SNS and ensure that suitable mitigation (such as a safe corridor for helicopters to use between the Hornsea Two and Three projects) is assessed during the examination process.</p>	<p>As noted, the Applicant held a post application consultation meeting with Neptune and the helicopter operator CHC in September 2018, to discuss helicopter transit from Norwich to the Cygnus group of platforms with particular regard to the use of the corridor between Hornsea Project One, Hornsea Project Two and Hornsea Project Three. The Applicant has progressed a letter of comfort with Neptune (submitted as part of Applicants response to Deadline I)</p>

1.2.64 Nicola Tanner [RR-064]

Relevant Representation Comment	Applicant's Response
<p>I object as this is going to have a major impact on my life. Noise levels, heavy traffic passing my house, noise and light pollution, which will impact on my sleep as noise carries at night. It is unacceptable that I should have to put up with this disturbance for 8 years. We bought our property having been told that there would be no planning etc. The noise is bad enough now with all the tracked farm vehicles passing my house. Adding Heavy abnormal loads and Hgvs to the mix is going to affect my well being. The constant hum of generators will mean I cannot enjoy my garden.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I in respect of traffic, noise, and light impacts. Once an access strategy has been agreed (see Appendix 20), this work will be supported by noise and air emissions modelling based on the predicted construction traffic flows associated with the main construction compound and reported in a future Examination Deadline. This will inform the development of the Outline CoCP [APP-179], or Outline CTMP [APP-176] during the examination in respect to residential amenity.</p> <p>In respect to duration of impacts, it is correct that the Applicant has estimated that activities at the main construction compound associated with Hornsea Three would occur within an eight-year construction window; however, the active construction period associated with the onshore cable corridor would be limited to up to 30 months excluding mobilisation and demobilisation, whilst the landfall construction work which will have a duration of up to 32 months. This could be across a single construction phase, or two construction phases that may be separated by a "gap" period of reduced activity (as set out in Section 3.8 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-027]). Should Hornsea Three be delivered across two phases with a gap period, the contractor would be demobilised and no active construction activities would occur during the 'gap', unless otherwise agreed with the local planning authority. Therefore, in respect of the local roads around the main construction compound, the greatest volume of HGV construction traffic will occur during the 30 months of onshore cable corridor construction, as well as the 32 months of landfall works, which may or may not overlap.</p>

1.2.65 Andrew Hellewell [RR-065]

Relevant Representation Comment	Applicant's Response
<p>Concern with the large increase in the volume of HGV traffic through the village of Cawston during the cable laying phase of the project.</p> <p>My property is sited on the B1145 opposite the junction to Booton (Goosepie) Lane. The property lies approximately six feet from the road and is situated on a bend.</p> <p>The B1145 is narrows at this site and west bound HGV's encountering oncoming traffic mount the kerb causing heavy vibrations (wall shake). My concern is that the increase in HGV movements could result in structural damage to the property.</p> <p>Orsted have a duty of care to not only conduct a condition survey on my property, but on all properties that will be affected along the route through the village. These surveys should ensure that any damage occurring to properties due to increased HGV traffic will be rectified without prejudice.</p> <p>Orsted should also consider the effect that the increased HGV traffic will have on the main sewer that runs under the B1145 through the village. The sewer is of Victorian construction and could be susceptible to cracking or collapse.</p>	<p>Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] provides the traffic flows (both base traffic flows and construction traffic flows) for Link 89 and Link 90 to represent Cawston (including the B1145 east of Cawston, west of the B1149 crossroads which is of particular relevance to the location identified). Volume 6, Annex 7.2: Description of Network Links and Sensitivity of the Environmental Statement [APP-160] defines Link 89 (through Cawston) as medium sensitivity and paragraph 7.9.2.3 of Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] sets out that such classifications are deemed as not being sensitive, in accordance with the IEMA thresholds. Paragraphs 7.11.2.7 and 7.11.2.8 of Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] set out that the effects of the construction of Hornsea Three on these links would result in, at worst, a minor effect, which is not significant. The same conclusion was made for the cumulative effect of the construction traffic with other projects, whereby the effect was assessed as being not significant.</p> <p>However, it is noted by the Applicant that based on peak movements the capacity of the B1145 through Cawston may be exceeded individually by Hornsea Three or cumulatively as a result of shared road links during construction Hornsea Three and Norfolk Vanguard (including along the B1145 through Cawston). To address this, the Applicant is currently undertaking profiling of traffic flows through the construction period and continuing to work with Norfolk Vanguard to ensure alignment of highway threshold levels applied by each project, i.e. traffic capacity of each road link before significant impacts are expected, and alignment as to the scope of appropriate traffic management measures that may be required as thresholds are reached. Clarification information on construction traffic management at this location will therefore be submitted at a future Examination Deadline.</p> <p>Structural damage from vibration occurs at a much high vibration level and is associated with peak vibration rather than cumulative vibration levels. The increase in HGV levels from Hornsea Three would result in a nominal increase in peak vibration levels. Therefore, the risk of structural damage from vibration as a result of the HGVs from Hornsea Three is low. Notwithstanding this the Applicant is engaging with a working group set up with Cawston Parish Council in order to better understand existing baseline vibration levels at residential properties immediately adjacent to the main road through Cawston, to inform the need and nature of traffic management measures to be developed as part of the detailed CTMP post-consent.</p>

Relevant Representation Comment	Applicant's Response
	<p>As set out in updated paragraph 6.1.1.18 of the Outline CoCP [APP-179], video condition surveys will be undertaken before HGVs make use of a section of road and after the substantial completion of works on minor links used by HGVs to access the Hornsea Three onshore cable corridor. Damage to the highway caused by the passage of construction vehicles will be repaired or an appropriate financial contribution made to the asset owner. Updated paragraph 6.1.1.18 is as follows (new text shown in underline):</p> <p><i><u>"6.1.1.18 Video condition surveys will be undertaken before HGVs make use of a section of road and after the substantial completion of works on minor links used by HGVs to access the Hornsea Three onshore cable corridor. Damage to the highway caused by the passage of construction vehicles will be repaired or an appropriate financial contribution made to the asset owner. The roads to be surveyed will be agreed with the HA as part of the final CTMPs, this agreement will be in accordance with requirements under Section 59 of the Highways Act 1980."</u></i></p> <p>Protective provisions for the benefit of Anglian Water and its apparatus, including the main sewer under the B1145, are included in Part 6 of Schedule 9 of the draft DCO [APP-027].</p>

1.2.66 Strutt and Parker on behalf of Beckhithe Farms Limited [RR-066]

Relevant Representation Comment	Applicant's Response
<p>Insufficient consultation and engagement;</p> <ul style="list-style-type: none"> - Lack of compelling case for the requirement of compulsory acquisition rights; - HVAC and HVDC technology; - The location of the booster station; - Concerns regarding the construction and funding of the project; - The cumulative impact of multiple wind farm projects in Norfolk; - Insufficient information relating to Jointing Bays and Link Boxes; - Insufficient information regarding field drainage, soil protective, flood issues and dust control; - Insufficient information relating to access to the Order Limits; - Insufficient information relating to access for landowners to severed land; 	<p>This relevant representation reflects the summary provided by the National Farmer Union at RR-146. Therefore, please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response NFU (RR-146) of this document.</p>

1.2.67 Bidwells on behalf of Carl Baker & David Baker [RR-067]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in Carl and David Baker's Relevant Representation is provided below.</p> <p>Annex 4 to this document contains a full response to Bidwells on behalf of Carl Baker & David Baker (RR-067).</p> <p>Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker [RR-067]</p> <p>The issues raised by Bidwells representing Carl and David Baker are the same as those raised by the National Farmers Union in Relevant Representation RR-146.</p> <p><u>Carl and David Baker raised the following points:</u></p> <p>An alternative Hornsea Three onshore cable corridor has been suggested to take into account the following:</p> <ul style="list-style-type: none"> • Under the current emerging Greater Norwich Local Plan, the South West growth location will need to accommodate up to 1,500 new homes for the period to 2036. • Due to existing physical and planning policy constraints, land to the north of Hethersett is the logical location for development to take place (to accommodate up to 1,500 homes). • The Hornsea Three onshore cable corridor would result in approximately 9.8 hectares of residential development land being sterilised. At a typical density of 30 dwelling per hectare this would result in the loss of approximately 294 dwellings. 	<p>Please see the Applicant's full response to this Relevant Representation in Annex 4 of this document.</p>

1.2.68 Bidwells on behalf of Charles Watt [RR-068]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Bidwells on behalf of Charles Watt are the same as those raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.69 Cllr. Georgina Perry-Warnes [RR-069]

Relevant Representation Comment	Applicant's Response
<p>Choice of transmission system: should be DC technology</p> <p>Phasing of the Project and Associated Construction Timetable(s): one phase preferable to two</p> <p>Working Corridor of onshore cable route should be as small as possible</p> <p>Use of Horizontal Directional Drilling onshore: to reduce environmental and social impact</p> <p>Onshore HVAC Booster Station: if DC technology is not used, traffic and overall impact needs careful management.</p> <p>Mitigation measures to comply with minimum statutory requirements would not be enough.</p> <p>Impact of construction traffic: the impact on tourism and local businesses as well as the day to day life of the community needs maximum consideration.</p> <p>Landscape & Biodiversity Mitigation: measures should exceed minimum statutory requirements.</p> <p>Community Benefits: there needs to be local benefit to help compensate for the local disruption for a project undertaken in the national interest. There are many 'not spots' in the area, as well as slow broadband, so improvements to these would help local businesses and the wider community in the long term.</p>	<p>Transmission Technology: Please see Appendix 22 to the Applicant's response to Deadline I, which relates to the transmission system (HVAC or HVDC).</p> <p>Traffic and Transport Impacts: Regardless of the transmission system chosen, Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079] has concluded that no significant effects relating to traffic are anticipated during construction or operation under the maximum design scenario. Notwithstanding this, Hornsea Three will manage potential traffic impacts on the local road network through a Construction Traffic Management Plan which will be submitted for the approval of the relevant local planning authorities (Requirement 18 of the dCO [APP-027]) and developed in accordance with the Outline CTMP (document APP-176). Associated impacts on local businesses and tourism during construction are assessed in Volume 3, Chapter 10: Socio-Economics [APP-082]. This assessment concludes that there will be no significant negative effects, but there is potential to be some significant, in EIA terms, beneficial effects, for example on employment in the supply chain during construction [APP-082].</p> <p>Construction Logistics: Please see the Applicant's response to Relevant Representation RR-015 in respect of construction phasing.</p> <p>The Applicant has committed to the use of HDD at various locations, including all public roads, main watercourses and other sensitive locations (see newly added Appendix E to the Outline CoCP [APP-179])</p> <p>Landscape and Biodiversity impacts: Mitigation measures designed in to Hornsea Three relating to biodiversity and landscape and visual resources are set out in Table 3.19 of Volume 3, Chapter 3: Ecology and Nature Conservation [APP-075] and section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] of the Environmental Statement respectively. Hornsea Three has committed that, where hedgerows are removed within the Order Limits, they will be replaced and enhanced by using a species-rich mix appropriate to the area. Furthermore, subject to landowner approval, hedgerows will be enhanced along a 100m corridor which includes the working corridor (see paragraph 4.1.1.3 of the Outline LMP, APP-181). As stated in paragraph 3.11.1.11 of Volume 3, Chapter 3: Ecology and Nature Conservation [APP-075], the resulting effect of Hornsea Three on hedgerow habitat was assessed to be minor positive once the hedgerows have matured after completion of construction.</p>

Relevant Representation Comment	Applicant's Response
	<p>In addition to this, a replanting programme to provide screening will be implemented at the proposed HVAC booster station and onshore HVDC converter/HVAC substation sites in conjunction with mitigation measures considered as part of the landscape and visual impact assessment (Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]). Indicative landscaping proposals are presented in the Outline Landscape Management Plan [APP-181] and will be developed in a final Landscape Management Plan, which will be required to be approved by the relevant planning authority under Requirement 8 of the draft DCO [APP-027].</p> <p>Please see the Applicant's response to Relevant Representation RR-031 regarding community benefits.</p>

1.2.70 Eastern Inshore Fisheries and Conservation Authority [RR-070]

Relevant Representation Comment	Applicant's Response
<p>Eastern Inshore Fisheries and Conservation Authority (IFCA) has reviewed the application for a Development Consent Order for Hornsea Project Three Offshore Wind Farm and the associated documents and would like to raise the below comments regarding the inshore sections of the cable corridor which pass through our district (out to 6nm):</p>	<p>The Applicant acknowledges this Relevant Representation and is in the process of developing a Statement of Common Ground with the Eastern Inshore Fisheries and Conservation Authority (IFCA) to address the issues raised.</p> <p>Full details of the rationale for selection of the Hornsea Three offshore cable corridor is set out in paragraph 4.10.3.3 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059]. In the nearshore area, selection of the Hornsea Three offshore cable corridor route was influenced by a number of constraints and the overarching principles set out in section 4.9 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p>

Relevant Representation Comment	Applicant's Response
<p>- The change in routing of the cable corridor across the SAC and around the MCZ, rather than directly across the MCZ, significantly increases the footprint of the corridor and thus the impacts of works on the fishing industry, local and commercially important species and the habitats that they utilise. Whilst we support the decision to move the cable route away from the sensitive chalk features, we question why a more direct route that goes from Weybourne and crosses the north west corner of the MCZ has not been proposed. This would reduce the total footprint of the inshore section of the cable route, and thus reduce the impacts on the fishing industry and seabed habitats. It would also lie across more mobile coarse sediments (according to the existing habitat data), compared to mixed sediments which are known to have a higher sensitivity and a lower recoverability to disturbance, reducing ecosystem impacts.</p>	<p>Alternative routing options to minimise overlap with the Cromer Shoal and Chalk Beds MCZ further offshore, to the north west (as suggested by the Eastern IFCA) were considered but were not deemed feasible. This was because the Sheringham Shoal and Pollard Bank bathymetric features were considered to pose potential technical constraints and were avoided, particularly where alternatives would have meant crossing existing cables in close proximity to these (see Figure 4.8 in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059]).</p> <p>The re-routing of the Hornsea Three offshore cable corridor between Section 42 consultation through the PEIR and the DCO application has resulted in an increase in the overall length of the Hornsea Three offshore cable corridor. The reasoning for this change was due to concerns raised by key stakeholders about potential impacts on features of the Cromer Shoal Chalk Beds MCZ, particularly clay exposures and chalk reef. While the re-route does result in a greater footprint within The Wash and North Norfolk Coast SAC, the overall impact on designated sites was reduced overall.</p>

Relevant Representation Comment	Applicant's Response
<p>- To accurately assess seabed disturbance resulting from cable installation activities and the requirement for rock armouring cable protection, a better understanding of the habitats in the cable corridor is required and should be conducted through further habitat surveys.</p>	<p>The Applicant is of the view that appropriate surveys have already been undertaken. As outlined in paragraph 2.6.1.4 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the Hornsea Three offshore cable corridor re-route in the nearshore area coinciding with The Wash and North Norfolk Coast SAC was characterised using a combination of Hornsea Three site specific data and desktop data sources in this area. The desktop data sets which were used to extend the nearshore biotope maps generated from the Hornsea Three site specific benthic ecology data to provide a baseline characterisation for the purposes of the Environmental Impact Assessment, are outlined in paragraph 2.7.6.2 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. The desktop data showed that the sediment types were broadly similar across the area with sandy sediments inshore grading into coarse/mixed sediments further offshore within The Wash and North Norfolk Coast SAC. This consistency provided confidence in the extrapolation of biotopes into areas where there had been no site-specific sampling.</p> <p>Noting stakeholder comments (including EIFCA), the Applicant would highlight that, since the DCO application was submitted, the Applicant has undertaken site specific drop down video sampling within the part of the Hornsea Three offshore cable corridor that coincides with The Wash and North Norfolk Coast SAC, in order to validate the baseline and predictions made within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062].</p> <p>This validation survey data has validated the predictions made within the Environmental Statement, that there is no evidence of Annex I stony reef habitat, or any other Annex I reef habitat, within the parts of the Hornsea Three offshore cable corridor which coincide with The Wash and North Norfolk Coast SAC. The outputs from the validation survey are presented at Appendix 5 to the Applicants response to Deadline I.</p>
<p>- Eastern IFCA have concerns over the requirement for rock armouring cable protection, due to the potential impacts on soft-sediment habitats and on the fishing industry. Recent experience of Race Bank cable installation in The Wash and North Norfolk Coast Special Area of Conservation (SAC) have shown operation and maintenance requirements have increased considerably beyond initial predictions with subsequent increases in seabed disturbance and the potential for the exclusion of fishing activities within certain areas where cable cannot be buried. This raises the question of how realistic the predictions are for Hornsea Three cable installation, operation and maintenance activities and increases the potential for cumulative impacts and increased in-combination effects with other activities.</p>	<p>The Applicant acknowledges the concerns raised in relation to the use of cable protection measures in the nearshore area and within The Wash and North Norfolk Coast SAC. The assumptions in relation to cable protection measures within The Wash and North Norfolk Coast SAC (i.e. up to 10% of all cables within the SAC boundary may require cable protection) are considered to be conservative. This is based on the Applicant's experience from offshore wind projects in the UK and overseas, including recent experience on Race Bank.</p> <p>The Applicant is therefore confident that the impact assessments presented within the Environmental Statement consider the maximum design scenario for Hornsea Three. The Applicant has also submitted at Appendix 6 to its response to Deadline I a clarification note to demonstrate the evidence behind its assumptions on cable protection.</p>

Relevant Representation Comment	Applicant's Response
<p>- Following discussions with some of the local potting fleet, it is apparent that the proposed cable route lies within an important area for the fishery. The heaviest impacts are expected to be on those that fish out of Cley-next-the-Sea and Weybourne. There are also concerns regarding the displacement effects of another cable route on the fishery and the cumulative impacts on the local fishing fleet from cable installation, operation and maintenance works across the inshore areas of the district. The potting fishery represents a substantial contribution to both national and local economies, including the tourism section, and any detriment experienced by the fishing community would have wider repercussions on the local economy/community.</p>	<p>The Applicant acknowledges the comments raised in relation to the local potting fleet. Paragraphs 6.11.1.30 to 6.11.1.53 of Volume 2, Chapter 6: Commercial Fisheries of the Environmental Statement [APP-066], present an assessment of the effects of construction activities within the Hornsea Three offshore cable corridor on this fleet (and other fleets). It is acknowledged that the local potting fleet has increased sensitivity to this impact and that, unmitigated, the effect would be significant. As such, further mitigation measures have been proposed as outlined in Paragraphs 6.11.1.54 of Volume 2, Chapter 6: Commercial Fisheries of the Environmental Statement [APP-066]. These are also set out in the outline Fisheries Coexistence and Liaison Plan [APP-183]. This mitigation is secured via the dMLs, [APP-027], which require fisheries coexistence and liaison plan to be approved by the MMO prior to commencement of works (condition 11(3) of Schedule 11, Generation Assets dML, condition 12(3), Transmission Assets dML).</p>
<p>- Eastern IFCA suggest a wider assessment is required of the cumulative and in-combination impacts of offshore wind farm development (including Electro Magnetic Fields) and other licensed activities on fish and shellfish dependent on seabed habitat, particularly habitat that provides important spawning and nursery areas, given the increasing number of such developments off the East Anglia coast.</p>	<p>While the Applicant acknowledges the comments raised in relation to potential cumulative impacts, the Applicant's position is that the cumulative effect assessment as presented within the Environmental Statement is adequately robust. Cumulative effects on fish and shellfish populations, including those associated with electromagnetic fields, are fully assessed in Section 3.13 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement [APP-063]. These impact assessments concluded effects of minor adverse significance, which were not significant in EIA terms.</p> <p>The conclusions made were based on the relatively small proportion of these habitats potentially affected by cumulative impacts. For example, any potential effects of electromagnetic fields on fish and shellfish receptors may occur in close proximity to the cable, if these occur at all (see Paragraph 3.13.3.42 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement [APP-063]). For construction related impacts, any effects on fish and shellfish populations were predicted to be temporary and reversible and therefore were not predicted to result in significant cumulative effects.</p>

1.2.71 Brown & Co on behalf of Ebony Holdings [RR-071]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Brown & Co on behalf of Ebony Holdings are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.72 Edward Jones [RR-072]

Relevant Representation Comment	Applicant's Response
<p>I have concerns over the routing of the cables and the lack of information about what land is required. Also I have strong opinions about the 8 year build time.</p>	<p>Please see the Applicant's response to Relevant Representation RR-067 which relates to the route refinement for the onshore cable corridor. Further information pertaining to the route selection process is provided in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059]. Where possible, Hornsea Three has sought to minimise impacts to landowners, either through site selection/route refinement or through the identification of suitable mitigation measures.</p> <p>The extent of the land within the onshore Order Limits, and the proposed uses (as they relate to Works No's set out in the dDCO - APP-027), is provided in the Works Plan – Onshore [APP-013]. The extent of the land to be acquired, the land over which new rights will be acquired and restrictions imposed and the temporary use of land is shown on the Land Plan – Onshore [APP- 011].</p> <p>Please see the Applicant's response to Relevant Representation RR-031 relating to construction phasing and RR-064 in respect to the eight-year construction window.</p>

1.2.73 Environment Agency [RR-073]

Relevant Representation Comment	Applicant's Response
<p>This letter provides a summary of the relevant representations submitted on 20 July 2018</p>	<p>Please see the Applicant's full response to this Relevant Representation in Annex 5 of this document.</p> <p>It is noted that the Environment Agency have been engaged in consultation with Hornsea Three throughout the pre-application and post-application process. Although each point has been responded to in turn, these discussions are also reflected in the Statement of Common Ground between the Environment Agency and Hornsea Three which confirms that there are no outstanding issues under discussion within the Environment Agency's remit.</p>
<p>Code of Construction Practice (CoCP)</p> <p>We consider that the various undertakings in the Outline CoCP to consult with the Environment Agency should be reflected in the Requirements and we request that Requirement 17 in the Draft Development Consent Order includes a requirement that for each phase a code of construction practice and associated pollution control plans are submitted to and approved by the Environment Agency prior to works on that phase.</p>	<p>The Applicant has updated the dDCO [APP-027] to name the Environment Agency as an approver for the final CoCP in Requirement 17. Please see full response to Section 2: in Annex 5.</p>

Relevant Representation Comment	Applicant's Response
<p>Ecology and Biodiversity</p> <p>We request that the Development Consent Order includes a Requirement that the Environment Agency pre-approves methodologies proposed in the Ecological Management Plan to safeguard wetland habitats.</p> <p>We have suggested schemes where the applicant could work with the Environment Agency to satisfy the NPS EN-1, paragraph 5.3.4 which states 'The applicant should show how the project would take opportunities to conserve and enhance biodiversity conservation interests'.</p> <p>We have noted an error in naming an RBMP in the document Volume 6, Annex 2.5 – Water Framework Directive Surface Water Assessment</p>	<p>The Applicant has updated the dDCO [APP-027] to name the Environment Agency as an approver on the final Ecological Management Plan. Please see full response to Section 3 in Annex 5.</p>
<p>Groundwater</p> <p>We have advised of the need for the applicant to obtain a licence or an exemption for dewatering activity.</p> <p>We have advised that further detail, correction or amendment is required for the documents Environmental Statement (Addendum): Volume 7, Environmental Statement: Volume 6, Annex 2.4, Environmental Statement: Volume 6, Annex 1.2 and Environmental Statement: Volume 6, Annex 1.4.</p>	<p>The Applicant has addressed groundwater issues in a full response to Section 4 in Annex 5.</p>
<p>Contaminated Land</p> <p>We have advised that the abandoned MoD pipeline detailed in Environmental Statement: Volume 4, Annex 4.4, may still have the potential to cause contamination. The characteristics of the site and works should be identified so that risks are analysed, and measures put in place to manage any existing contamination or prevent it occurring. This should be referenced in the CoCP.</p>	<p>The Applicant has addressed contaminated land issues in a full response to Section 5 in Annex 5.</p>
<p>Environmental Permit</p> <p>We have noted that the applicant has not seeking to dis-apply environmental permits and have advised that these must be obtained prior to any works commencing. We have provided advice on how to apply for the relevant permits.</p>	<p>The Applicant has addressed environmental permitting issues in a full response to Section 6 in Annex 5.</p>

1.2.74 Gordon Fryett [RR-074]

Relevant Representation Comment	Applicant's Response
<p>Representation regarding the proposal to use Oulton Airfield as the main storage/operating compound for the project as follows:</p> <p>The inappropriateness of the scale of this proposal and its activities concentrated in this location when other options had been previously identified.</p> <p>The serious inadequacies of the immediate road network to cope with such large-scale activities. Local roads are predominantly very narrow, single-track country lanes with numerous very tight bends, small humpbacked bridges and fragile surfaces which can barely cope with current domestic traffic. The only road of any substance in the area is the B1149 and even that has many obstacles and shortcomings.</p> <p>Serious concerns and strong objection to any proposal which would bring traffic through Oulton Street from either direction. The roads (The Street and New Road) are not able to cope with lorries or large heavy vehicles. There are no footpaths on either side of the roads. Additionally, many houses have no front gardens and their external walls abut the road. Heavy traffic passing through the village would be extremely dangerous and damaging for local residents and other road users resulting in a very serious and unacceptable health and safety risk. This would be seriously detrimental to the health and wellbeing of the residents of Oulton Street and Oulton village.</p>	<p>Please see Appendix 20 Main Construction Compound Briefing Note to the Applicant's response to Deadline I, which has sections relating specifically to traffic and amenity impacts.</p>

1.2.75 Bidwells on behalf of Graham Makintosh [RR-075]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Bidwells on behalf of Graham Makintosh are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p> <p>In addition, Graham Makintosh raised the following point:</p> <ul style="list-style-type: none"> - Confirmation that roads can be constructed over/across the installed cables (the final lease area). 	<p>Please note the applicant believes that the correct spelling is Mackintosh however, we have followed the spelling given on the PINS website for this representation.</p> <p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p> <p>There is a need to impose restrictions on the use of land above the cables in order to ensure that they are protected from damage and can be accessed for maintenance. These are set out in Table 1 of the Statement of Reasons [APP-032] and include restrictions on erecting buildings or structures, altering ground levels, planting trees or carrying out operations or actions (including but not limited to blasting and piling) which may obstruct, interrupt, or interfere with the exercise of the rights or damage the authorised development. This type of restriction is standard for a nationally significant infrastructure project.</p> <p>It is possible for roads to be constructed over the cables if appropriate protective measures are put in place to prevent any damage to the cables and providing that such roads do not add significant restrictions in terms of accessing the cables for construction or maintenance. The detailed design and method statement for such works over the cables would need to be approved by Applicant.</p>

1.2.76 Bidwells on behalf of Great Melton Farms Limited [RR-076]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Bidwells on behalf of Great Melton Farms Limited are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.77 Great Yarmouth Borough Council [RR-077]

Relevant Representation Comment	Applicant's Response
<p>Thank you for notifying Great Yarmouth Borough Council. This letter has been written at Officer level in response to the Section 56 (Planning Act) consultation on the above Hornsea Project Three Offshore Wind Farm. Please note that no comments have been made in relation to the detail concerning the onshore project area (i.e. landfall and grid connections) as these lie outside of the borough of Great Yarmouth.</p>	<p>The Applicant notes Great Yarmouth Borough Council's comments on the scope of this relevant representation.</p>

Relevant Representation Comment	Applicant's Response
<p>General comments</p> <p>The principle of this offshore renewable energy proposal is supported, being broadly consistent with national policy and positively contributing to the Government's Renewable Energy targets and objectives.</p> <p>It is noted that the location of a future operation and maintenance (O&M) base for the Hornsea Project Three Windfarm proposal has yet to be agreed. It is felt that Great Yarmouth should be considered as a strong candidate for this role, the reasons for which have been summarised further below.</p> <p>Great Yarmouth is England's offshore sector capital with over 50 years of Southern North Sea offshore energy expertise. To date, the port of Great Yarmouth has been critical to the assembly of the Galloper and East Anglia ONE windfarm projects and is the current O&M base for other offshore windfarms at Scroby Sands and Dudgeon.</p> <p>Great Yarmouth is designated as a Centre for Offshore Renewable Engineering (CORE), recognised for its deep water port, skills, supply chain, and supported by strong leadership from both New Anglia LEP and Great Yarmouth Borough Council to procure rapid growth within the offshore wind sector. The town and key areas around the port have the benefit of Enterprise Zone and Assisted Area status, providing benefits and incentives to key supply chain businesses wishing to grow or start up in Great Yarmouth.</p> <p>In securing a possible O&M base for the Hornsea Project Three Windfarm at Great Yarmouth, there would be the significant potential to grow the local economy through the existing supply chain and utilise the deep water outer harbour that is already growing in stature in the energy industry, given its proximity and short steaming times to such projects.</p>	<p>Great Yarmouth has agreed this position in its Statement of Common Ground with Hornsea Three.</p> <p>Hornsea Three will certainly explore the ability to use port facilities along the East Coast. The project is likely to use more than one port during construction, and cannot yet ascertain where an operations and maintenance base would be sited. A decision on which port to use will not be made until detailed discussions have taken place with potential suppliers, at a stage where we have a greater understanding of where the various components will come from and port capabilities. This will likely be post consent.</p>

Relevant Representation Comment	Applicant's Response
<p>Further comments relating to the Environmental Statement</p> <p>The Borough Council has reviewed the submitted documents, in particular those matters relating to Offshore Ornithology as set out within Volume 2, Chapter 5 of the Environmental Statement (ES) which forms the basis of the following comments.</p> <p>Here, at Table 5.7 it is stated that the presence of Little Terns were not recorded during the aerial surveys in the Hornsea Three array area. It is concerning that the report does not go into further detail to clarify the implications of this statement, such as whether this is perhaps due to the scope or limitation of the site specific surveys (i.e. not being able to identify the Little Terns during the specific survey window(s)), or, whether this provides evidential proof that the Little Terns simply do not interact within the specified survey area in which case it could be interpreted that the likely impact on the species would be negligible as a result of the proposal. Further clarity on this point is sought through the DCO process.</p>	<p>Great Yarmouth has agreed this position in its Statement of Common Ground with Hornsea Three.</p> <p>No little terns were recorded during the site-specific aerial surveys undertaken for Hornsea Three. As part of the Report to Inform Appropriate Assessment [APP-051] the species was considered as a feature at the Greater Wash SPA and the North Norfolk Coast SPA. The additional screening exercise presented in RIAA Annex 2 – Additional Special Protection Areas Screening Exercise [APP-053] concluded no LSE for little tern at relevant SPAs:</p> <p><i>“The seaward extent of the Greater Wash pSPA was informed by a number of supporting studies including Parsons et al. (2015) which identified usage of the marine environment by little terns around a number of breeding colonies including those that form part of the North Norfolk Coast SPA. The maximum alongshore foraging extents of birds from colonies within the North Norfolk Coast SPA was 7 km east and west and seaward to a maximum distance of 2.13 km (Figure 1.1). This therefore strongly suggests no connectivity with the area in which the Hornsea Three export cable is to be located. When this is considered alongside the low vulnerability of little tern to disturbance impacts (Wade et al., 2016) there is considered to be no potential for LSE on the little tern feature of the Greater Wash pSPA as a result of impacts associated with the construction, operation and maintenance or decommissioning of Hornsea Three.”</i></p> <p>Little terns have one of the shortest foraging ranges of any UK breeding seabird as illustrated by the results of Parsons et al. (2015) and Thaxter et al. (2012). Parsons et al. (2015) did not record a foraging beyond 6 km with Thaxter et al. (2012) reporting a maximum foraging range of 11 km. Hornsea Three is located approximately 150 km from the nearest coastline and therefore the occurrence of breeding birds at Hornsea Three during the breeding season is considered to be extremely unlikely.</p> <p>There is potential for little terns to occur at Hornsea Three during migration, with traditional baseline characterisation survey methodologies used at offshore wind farms (e.g. boat-based and aerial surveys) unlikely to capture these movements. However, little terns migrate close inshore (Wernham et al. 2002) and therefore it is considered highly unlikely that birds would occur at the Hornsea Three array area.</p> <p>There is considered to be no pathway for impact between little terns and Hornsea Three in any season.</p>

1.2.78 Historic England [RR-078]

Relevant Representation Comment	Applicant's Response
<p>It is important to note that on 1st April 2015 Historic England was vested (retaining the formal title of the Historic Buildings and Monuments Commission for England) and is now the government service championing England's heritage and giving expert, constructive advice.</p> <p>There is potential for this development to impact upon the historic environment, and that without mitigation this impact will be significant in relation to some receptors.</p> <p>We are aware that the application includes a comprehensive Environmental Statement and that some amendments have been made to the ES since our letter of September 2017 in relation to the PEIR stage. A detailed discussion of our comments and the developer's responses is provided in Table 5.4, we have however noted that a number of specific points have not been fully considered and we will address these in our written submission.</p> <p>Likewise we have previously raised concerns in relation to the impact of the Mangreen substation on the significance of a number of designated heritage assets through development within their setting. We are pleased that a specific historic environment visualisations chapter has been produced (see Vol. 6 Annex 5.7) to work alongside the Historic Environment Chapter of the ES. Using this additional material we have been able to confirm that there are only limited views from some of the designated heritage assets we have previously mentioned. The visualisations have however also indicated that the development would erode the rural setting of a number of other highly graded heritage assets, which would result in a high degree of harm to their significance. In particular the three Grade II* listed buildings located close to the substation (Gowthorpe Manor House and Barn and Mangreen Hall). We also have concerns about the impact of the development upon the Grade II* registered park and garden and Grade II* listed church at Intwood, and on a number of Grade II listed buildings such as Keswick Hall and the local Conservation Areas which lie to the north of the development. We will explore these issues further in our written representation with reference to these assets.</p>	<p>Impacts of Hornsea Three (including the onshore HVDC converter/HVAC substation) on onshore heritage assets are assessed in Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077]. Section 5.11 of APP-077 states that significant effects may occur during construction as well as operational and maintenance as a result of the onshore HVDC converter/HVAC substation (including at paragraphs 5.11.1.36 (assessing Venta Icenorum), 5.11.1.60 (assessing Gowthorpe Hall), 5.11.1.69 (assessing Mangreen Hall) and 5.11.1.81 (assessing the Church of St Edmund)).</p> <p>Impacts on the Registered Park and Garden and Church at Intwood (including list entry numbers 100320, 1373136) are assessed in Volume 3, Chapter 5: Historic Environment paragraph 5.11.1.157 [APP-077]. This states that effects on the registered park and garden and associated components will be minor adverse, which is not significant. Impacts on Keswick Hall (list entry number 1306331) were also assessed and concluded to be not significant (paragraph 5.11.1.99). With regards to the parkland at Keswick Hall, the Applicant would direct the Examining Authority to its response to RR-054 for South Norfolk Council.</p> <p>Impacts on conservation areas both to the north of the onshore HVDC converter/HVAC substation and in other directions surrounding it are initially assessed in Volume 6, Annex 5.4: Screening Assessment – Onshore HVDC Converter/HVAC Substation [APP-152] and Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077] for those conservation areas screened for further assessment.</p> <p>Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077] provides mitigation measures for the onshore project landward of MHWS. This includes a programme of advance archaeological investigation following consent focussing on identified sites that will be adversely affected by Hornsea Three. Targeted geophysical survey and trial trenching will be undertaken in other areas of the onshore cable corridor as appropriate. A Written Scheme of Archaeological Investigation will be submitted and approved by the relevant authorities prior to commencement of the consented works in accordance with Schedule 1, Part 3, Requirement 16 of the draft DCO [APP-027].</p> <p>Furthermore, investigation of unexpected archaeological sites encountered during the construction phase will be undertaken in line with procedures (e.g. a chance find procedure) agreed in advance with the relevant authorities (see outline CoCP [APP-179]). This onshore WSI will also describe engagement measures to ensure that the results of archaeological work are made publicly available.</p>

Relevant Representation Comment	Applicant's Response
<p>The application includes an outline Offshore WSI which sets out how the proposed project might mitigate against impact to the historic environment. We will therefore require the draft DCO to include provision for delivery of a project specific WSI (should consent be granted).</p> <p>The WSI must enable the implementation of appropriate mitigation measures to avoid and reduce the impact from the development on the historic environment, and develop appropriate methodologies for further investigations conducted within the project area, which will be used to inform the development of mitigation measures. This will inform the delivery of the project in a timely way, by taking these matters into consideration prior to the commencement of construction activities. Therefore, the WSI must be produced and agreed pre-commencement – i.e. before the commencement of pre-construction surveys.</p>	<p>Volume 2, Chapter 9: Marine Archaeology of the Environmental Statement [APP-069] provides mitigation measures which are expanded on in Volume 5, Annex 9.2: Outline Written Scheme of Investigation (OWSI) of the Environmental Statement [APP-115]. The offshore OWSI provides a protocol for archaeological discoveries during construction works at Appendix A, including measures for discoveries within the intertidal zone below MHWS. It also describes the reporting procedures to ensure that the results of archaeological work are made publicly available.</p> <p>With regard to the offshore archaeological environment, the Applicant notes Historic England's acknowledgement of the draft OWSI and confirms that 14(2) of the draft DCO as submitted at Deadline I [APP-027] includes provision for delivery of a project specific WSI to be agreed prior to the commencement of construction activities.</p> <p>The Applicant has provided a draft SOCG to Historic England and HE have informed the Applicant that it plans to complete and submit an agreed SOCG as soon as practicably possible.</p>

1.2.79 Brown & Co on behalf of Honningham Aktieselskab (RR No. RR-079)

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Brown & Co on behalf of Honningham Aktieselskab are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.80 Irelands Arnolds Keys on behalf of John Innes Centre [RR-080]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Irelands Arnolds Keys on behalf of John Innes Centre are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.81 Brown & Co on behalf of Kelling Estate LLP [RR-081]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Brown & Co on behalf of Kelling Estate LLP are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.82 Irelands Arnolds Keys on behalf of Lady M A Prince Smith [RR-082]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Irelands Arnolds Keys on behalf of Lady M A Prince Smith are the same as those issues raised by the National Farmers Union Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.83 Irelands Arnolds Keys on behalf of Little Melton Parochial Charity [RR-083]

Relevant Representation Comment	Applicant's Response
The issues raised by Irelands Arnolds Keys on behalf of Little Melton Parochial Charity are the same as those issues raised by the National Farmers Union Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.84 Bidwells on behalf of Marie Lofty [RR-084]

Relevant Representation Comment	Applicant's Response
The issues raised by Bidwells on behalf of Marie Lofty are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.85 Marine Management Organisation [RR-085]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in the Marine Management Organisation's Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation Annex 6 of this document.</p> <p>General:</p> <ul style="list-style-type: none"> • The MMO does not consider that sufficient data has been provided to allow a full assessment of the impacts on the marine environment. • The MMO believes that this application does not comply with the 'Rochdale Envelope' approach due to the following reasons: <ul style="list-style-type: none"> ○ Discrepancies between figures in the Environmental statement and Draft Development Consent Order (DCO) (Document 3.1). ○ The incorporation of a high number of uncertainties in the assessment for cumulative effects. ○ The Environmental Statement has identified several impacts on the marine environment as 'negligible or minor' or 'minor or moderate' where the assessment conclusion was made for the lower impact. <p>DCO:</p> <ul style="list-style-type: none"> • Would have welcomed discussion of the content of a draft DCO and deemed marine licences (DMLs) prior to application submission to PINS. • Believes that the arbitration in accordance with the rules at Schedule 13 of the DCO should be removed from the DCO and DMLs. • Considers that offshore preparation works should be included in the interpretation of 'commencement'. • Considers that the eight weeks required by the DML's following receipt of all post-consent documentation would not provide sufficient time for consultation and subsequent comment. 	<p>The Applicant thanks the MMO for their Relevant Representation.</p> <p>Given the detailed nature of the relevant representation and the topic specific sections and to demonstrate how full regard has been given, the Applicant has provided a point by point response to each of the points raised in Annex 6 of this document.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • Recommends that figures for maximum sandwave levelling and boulder clearance should be included in the DCO and DMLs. • Recommends that the maximum number of offshore export cable crossings should be included in the DCO and DMLs. • Advises that the construction of temporary landing places and moorings are licensable activities and should therefore be included in the DMLs. • Recommends that a condition is included to restrict hammer energy to the maximum design scenario (5,000 kJ) assessed in the Environmental Statement. • J-Tube clearing and maintenance should be included in Schedule 11 for generation assets if this is likely to be required. • The design plan should be approved post-consent to allow for consideration as to whether the final project plan sits within the consented envelope. • Pre-construction archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific Written Scheme of Investigation. • Details of pre- and post-construction monitoring surveys to inform micro-siting around any features of ecological importance prior to the commencement of any licenced works should be included. • The post-construction monitoring condition explicitly includes a requirement to carry out three years of post-construction monitoring with the duration specified for these surveys. • The monitoring of Annex 1 reefs should not be restricted to the North Norfolk Sandbanks and Saturn Reef special area of conservation (SAC) but should be extended into the entire Hornsea Three offshore cable corridor. • A timeframe of six months would be more appropriate than the four months stated in the DMLs to address issues surrounding all pre-construction documentation. • The inclusion of a Site Integrity Plan, including detailed timings for consultation, suitable mitigation and the process for the condition to be updated is recommended. 	

Relevant Representation Comment	Applicant's Response
<p>Marine processes:</p> <ul style="list-style-type: none"> • All key impacts and associated impact pathways have been identified and mitigated. • Greater detail is requested but acknowledges that this request requires a detail which may not be available at this stage and would therefore recommend for this information to be included in the documentation for the pre-construction sign off. • The periodicity that the seabed will be disturbed by waves should be specified. • Further clarity on the local sediment transport pathways associated with changes in water depth and sediment type around the Markham Hole and the Outer Silver Pit is requested. • Clarification is sought on whether there are any bathymetric currents associated with the changing bathymetry in Markham Hole and Outer Silver Pit. • Clarification is sought on why there are gaps in the coverage along the Hornsea Three offshore cable corridor. • There are remaining concerns in relation to impacts from cable protection on sediment transport and coastal processes • Requests clarification as to what depth is proposed to be cut for the jacket foundations <p>Benthic ecology:</p> <ul style="list-style-type: none"> • Data collected within the Hornsea Three array area and Preliminary Environmental Information Report (PEIR) offshore cable corridor have been analysed appropriately. • The potential for old surface coating on turbines to enter the benthic environment while being removed should be considered in the Environmental Statement. • The revised Hornsea Three offshore cable corridor which crosses through the Wash and North Norfolk Coast SAC has limited/no survey data. • Recommends monitoring of the benthic habitats both within the Hornsea Three array area to determine impacts due to placement of the turbines and extended periods of suspended sediment concentrations, and along the Hornsea Three offshore cable corridor, particularly within SACs. 	

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • Reefiness at ECR04 has been classified as 'Low reef'. The MMO considers that this type of reef should be classified as Annex I reef. • Temporary loss of Habitat E in paragraph 2.11.1.20 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (Document A6.2.2) is predicted as ~30%. This should be considered as of greater than minor magnitude when assessing magnitude of impact. • The Environmental Statement needs to highlight that sandwave clearance may affect the integrity of the sandbank system. <p>Fish:</p> <ul style="list-style-type: none"> • If concurrent piling is proposed, then noise modelling should reflect this scenario and a revision of the mapped noise contours should be presented to identify any potential overlap with herring spawning grounds. • The use of bubble curtains to reduce noise propagation when piling could reduce the impact of underwater noise and vibration on fish is suggested. • Considerations to avoid construction activities during the sensitive spawning season of sand eels should be given where feasible. <p>Underwater noise:</p> <ul style="list-style-type: none"> • Unexploded Ordinance (UXO) clearance and Permanent Threshold Shift (PTS) from UXO clearance was assessed as negligible to low magnitude of impact. The magnitude of the impact should be as assessed as medium. • Noise reduction technologies such as big bubble curtains and acoustic barriers should be considered as the primary means of reducing the potential acoustic impacts. <p>In principle monitoring plan:</p> <ul style="list-style-type: none"> • As the degree of cable protection required in the subtidal area has not yet been identified, the MMO suggest that the bathymetry monitoring conditions for the less than 20 m contour should be transferred to Hornsea Three from Hornsea Project Two. 	

1.2.86 Ministry of Defence [RR-086]

Relevant Representation Comment	Applicant's Response
<p>The MOD has assessed the location and proposed layout of the offshore element of the development scheme proposed. Based upon the coordinates detailed in the application documentation, I can confirm that the scheme will not physically impact upon MOD offshore Danger and Exercise Areas or defence maritime navigational interests.</p> <p>The impacts of the proposed scheme upon defence aviation interests have been considered. The turbines and some of the tall ancillary offshore structures will affect military low flying training activities conducted in this area. As such it will be necessary for these structures to be fitted with appropriate aviation warning lighting to maintain the navigational safety of military aviation.</p>	<p>The Applicant thanks the Ministry of Defence (MOD) for their representation and acknowledges confirmation that the MOD has assessed the location and proposed layout of the offshore element of the development scheme and finds the scheme will not physically impact upon MOD offshore Danger and Exercise Areas or defence maritime navigational interests.</p>
<p>It is noted that in draft consent order at Schedule 11, section 6 (1): Aids to navigation and Section 8 (1) – Air Navigation define conditional requirements obligating the undertaker to exhibit such lights, marks, sounds, signals and other aids to navigation as directed by Trinity House in consultation with Defence Infrastructure Organisation (DIO) and to supply DIO with precise details of the location, dimension and commencement of construction of the offshore development.</p>	<p>The Applicant notes the MOD has reviewed and acknowledges the acceptance of the relevant draft dML conditions at Schedule 11 condition 6 (Generation Assets dML), Schedule 12 condition 7 (Transmission Assets dML), Schedule 11 condition 8 (Generation Assets dML), and Schedule 12 condition 9 (Transmission Assets).</p> <p>The Applicant will review in conjunction with the CAA the requirement in line with MOD's consideration that it is necessary to stipulate that aviation warning lighting is to be fitted to relevant offshore structures as identified as necessary for the duration of the construction and operation of the scheme as identified as necessary by DIO.</p>
<p>The MOD has also assessed the effects of the proposed wind farm development upon the effective operation of its air traffic and air defence radars. It has been confirmed that the proposed wind turbines will not be in line of sight or detectable to MOD air traffic radars and are not expected to impact upon the operation of air defence radars. However, the MOD has recently identified that in certain conditions the performance of air defence radars may be adversely affected by the proposed wind farm when it is operational. Based upon the technical evidence currently available the MOD does not identify a need for any form of mitigatory measures to address this potential issue to be implemented in relation to the scheme for which consent is currently sought.</p>	<p>The Applicant further acknowledges the confirmation that the proposed wind turbines will not be in line of sight or detectable to MOD air traffic radars and are not expected to impact upon the operation of air defence radars.</p>

Relevant Representation Comment	Applicant's Response
<p>In relation to the onshore element of the proposed development, the location where the cable comes ashore on the north Norfolk coast is in proximity to the MOD transmitters located at RAF Weybourne. Works no.5 (landfall connection works), works no.6 (onshore connection works), works no.7 onshore connections (transition joint bays and landfall construction compound) and works no.8 onshore connection works will partially occupy the MOD statutory technical safeguarding zones surrounding these transmitter facilities. The application identifies that the foreshore and onshore export cable will be buried along its entire route. It has therefore been determined that the installed onshore cable infrastructure will not impact upon the effective operation of this MOD transmitter facility. The remainder of the onshore cable route does not affect MOD safeguarding interests.</p> <p>I can therefore confirm that subject to the above provisions the MOD maintains no safeguarding objections to this application. I trust this clarifies our position on this consultation. Please do not hesitate to contact me should you wish to consider these points further.</p>	<p>The Applicant notes that the MOD have confirmed that the installed onshore cable infrastructure will not impact upon the effective operation of MOD assets or MOD safeguarding interests.</p>

1.2.87 Irelands Arnolds Keys on behalf of Mr & Mrs S Carman [RR-087]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Irelands Arnolds Keys on behalf of Mr and Mrs S Carman are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document</p>

1.2.88 Irelands Arnolds Keys on behalf of Mr B F Clark [RR-088]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Irelands Arnolds Keys on behalf of Mr B F Clark are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.89 Irelands Arnolds Keys on behalf of Mr R Harrold [RR-089]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Irelands Arnolds Keys on behalf of Mr R Harrold are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.90 Brown & Co on behalf of Mr Richard Gordon [RR-090]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of Mr Richard Gordon are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.91 Brown & Co on behalf of Mr Richard Youngs [RR-091]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of Mr Richard Youngs are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.92 Brown & Co on behalf of Mr Robin Buxton [RR-092]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of Mr Robin Buxton are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.93 Irelands Arnolds Keys on behalf of Mr T Cooper [RR-093]

Relevant Representation Comment	Applicant's Response
The issues raised by Irelands Arnolds Keys on behalf of Mr T Cooper are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.94 Mrs S B Longe [RR-094]

Relevant Representation Comment	Applicant's Response
I am a resident of Edgefield which is the location and the pipeline is going through part of the village. I am also a Parish Councillor and I have attended many of the meetings at North Norfolk District Council at Cromer regarding this development. Many thanks.	The Applicant notes the Councillor's representation.

1.2.95 Brown & Co on behalf of Ms K Paul, Mr D Brown & Mr W Barr (Trustees of Gurloque Settlement) [RR-095]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of Ms K Paul, Mr D Brown and Mr W Barr (Trustees of Gurloque Settlement) are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to the NFU (RR-146) of this document.

1.2.96 Brown & Co on behalf of Mrs R Watkinson [RR-096]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of Ms R Watkinson are the same as those issues raised by the National Farmers Union Relevant Representation RR-146.	Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.

1.2.97 Natural England [RR-097]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in Natural England's Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation in Annex 7 – Full response to Natural England [RR-097 of this document.</p> <p>General:</p> <ul style="list-style-type: none"> • The documents to support the application for Development Consent for Hornsea Three are not considered to be of sufficient quality and detail to enable a thorough assessment of the impacts. • Natural England advise that Development Consent Order (DCO)/Deemed Marine Licences (DMLs) should have been provided prior to application to allow for discussion and consideration within the pre-application process. <p>Evidence:</p> <ul style="list-style-type: none"> • Natural England has considerable issues with the standard of evidence provided. • It is unclear if the best available evidence is being used throughout the application, with a reliance on the modelling used in historic applications rather than the available post-construction monitoring information. • There are a number of instances where data is either not presented or incomplete. <p>Project proposals:</p> <ul style="list-style-type: none"> • There is a lack of clarity around the project parameters. • Descriptions are limited in detail in relation to the scale of the proposals included in particular for the marine environment. <p>Assessment of impacts:</p> <ul style="list-style-type: none"> • Sufficient precaution has not been built into the analysis to address the uncertainties arising from the lack of site specific data and detailed proposals. • Does not agree with the methodology used for the analysis in a number of cases. • Does not agree with the approach taken to the assessment of impacts over the lifetime of the project. 	<p>The Applicant thanks Natural England for their Relevant Representation.</p> <p>Given the detailed nature of the relevant representation and the topic specific sections, to demonstrate how full regard has been given, the Applicant has provided a point by point response to each of the points raised in Annex 7 – Full response to Natural England [RR-097 of this document.</p>

Relevant Representation Comment	Applicant's Response
<p>Cumulative/in-combination assessment:</p> <ul style="list-style-type: none"> • The three project phases have been considered in isolation thereby failing to consider cumulative impacts over time. • There are two other wind farms in the area that are at the Preliminary Environmental Information Report (PEIR) stage, but are on overlapping construction timeframes with Hornsea Three, that have not been included within the assessment. <p>Offshore ornithology:</p> <ul style="list-style-type: none"> • Having less than two years of data will increase the uncertainty around the offshore ornithology impact assessment. • Queries why only 10% of aerial data has been analysed when up to 20% could potentially have been analysed. • The Applicant's hierarchical data selection method for integrating densities/ numbers of species derived from digital aerial and boat-based survey data is flawed. • The Basic Band Model Option 2 should be used for the Collision Risk Model (CRM) for all species. • Does not agree with the way that nocturnal activity factors have been used in the CRM for some species. • Does not agree with seasonal definitions for several species, in particular gannet and puffin. <p>Marine process:</p> <ul style="list-style-type: none"> • Limited empirical evidence is presented to support the assumptions made in relation to the scale of impacts for sandwave clearance. • The removal of approximately 1,804,434 tonnes of material throughout the Hornsea Three array area and offshore cable corridor is significantly greater than the average annual aggregates licence which allow removal of around 250,000 to 400,000 tonnes. • Assumptions that offer flexibility do not enable a meaningful assessment due to a lack of information on the impacts of cable protection on specific sensitive habitats, species, sediment transport and coastal processes. Cannot rule out the potential for adverse effect on site integrity. 	

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • There is uncertainty in relation to the frequency at which the maximum reduction in magnitude of the wave height by 28% will occur. • The assessment states that <0.2% of the North Norfolk Sandbanks and Saturn Reef Special Area of Conservation (SAC) will be impacted, there is no real indication of what these impacts will be, particularly on a biological level. • If any sandwave clearance does take place, the material that is to be disposed of should remain within the overall sandbank system. Disposal should also avoid sensitive habitats such as Sabellaria spinulosa reef. • It is unclear how the figure of up to 10% of the Hornsea Three offshore cable corridor within designated sites may require some form of cable protection has been derived. <p>Benthic ecology:</p> <ul style="list-style-type: none"> • It is acknowledged at early stages of route refinement that Hornsea Three aimed to avoid impacts on The Wash and North Norfolk Coast SAC. • Acknowledges that in taking forwards the alternative Hornsea Three offshore cable corridor that the Applicant has reduced the known impacts to designated sites. • Pleased to note that the assessment has assumed 100% overlap of the Hornsea Three offshore cable corridor with The Wash and North Norfolk Coast SAC Annex I feature 'Sandbanks which are slightly covered by seawater all the time', for the purpose of defining the magnitude of impact. • Impacts to Annex I Reef have been potentially underestimated and therefore the proposed mitigation measures to avoid reef are not fit for purpose. • Strongly suggest re-analysis using the JNCC reef layer with 500 m buffers added to allow for change in reef extent and distribution. • One further Sabellaria data point and further area to be managed as reef has been added within the Hornsea Three offshore cable corridor since they last provided a data layer. • The Wash and North Norfolk Coast SAC Annex I feature has a number of sub-features associated with it. The reference to those sub-features as 'supporting habitat' is inaccurate. • They do not consider that the benthic analyses is appropriate for characterising Markham's Triangle proposed Marine Conservation Zone (pMCZ). 	

Relevant Representation Comment	Applicant's Response
<p>Marine mammals:</p> <ul style="list-style-type: none"> • It is noted that a Marine Mammal Mitigation Protocol will be provided to remove the risk of potential death and/or injury to marine mammals. • Agrees with the assessment that Hornsea Three alone will not adversely affect the North Sea candidate Special Area of Conservation (cSAC)/Site of Community Importance (SCI) site integrity given the relatively small disturbance footprint within the site. • No consideration has been given to at-source noise mitigation of piling noise, such as bubble curtains or isolation casing. • The maximum hammer energy assessed in the Environmental Statement should be detailed within the design parameters on the DCO/DML's. • Does not agree with the proposed approach to average the piling days across all seasons. <p>Onshore ecology:</p> <ul style="list-style-type: none"> • Request further detailed information and impact assessment for the Horizontal Directional Drilling (HDD). • There must be no incursion of surface water run-off and temporary construction works, including fencing, vehicles, storage of materials etc. onto the Kelling Heath Site of Special Scientific Interest (SSSI) during construction, operation or decommissioning. • Concerned that no bats are shown as present on Alderford Common SSSI. It is their understanding that they are present with a well-established roost. • Question why the Outline Code of Construction Practice (CoCP) (Document 8.5) does not address management of best and most versatile soils when it has been identified as a significant effect. 	

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • Key concerns with cumulative and in-combination assessments are: <ul style="list-style-type: none"> ○ Use of Extended Band Model collision figures for gannet and kittiwake for some project figures. ○ Application of Extended Band Model options to certain projects in the cumulative assessment for lesser black-backed gull and great black-backed gull. ○ Retrospective application of correction factors to existing collision figures for projects as a proxy for lower nocturnal activity levels than used in the original CRM. ○ Retrospective 'proportional' changes to collision figures for projects based on assumptions that consented turbine configurations represent a lower collision risk than the Rochdale Envelope defined. ○ Use of MacArthur Green (2017) ratio correction factors. ○ Exclusion of impacts from Tier 3 projects in the Cumulative Effect Assessment (CEA). ○ Conducting qualitative rather than quantitative in-combination displacement assessments for certain species. ○ The proportions of birds that have been apportioned to Flamborough and Filey Coast proposed Special Protection Area (pSPA) during the breeding season from the different North Sea projects. ○ Cumulative assessment of impacts under Environmental Impact Assessment (EIA) does not incorporate impacts across the whole annual cycle for a species at an appropriate scale. ○ The assessment of EIA impacts on a season by season basis, at varying population scales. Advise that assessment of impacts should be undertaken at an appropriate scale across the whole year. 	

Relevant Representation Comment	Applicant's Response
<p>Seascape and landscape:</p> <ul style="list-style-type: none"> • They expect to see a detailed analysis of the impacts on key landscape elements within the Norfolk Coast Area of Outstanding Natural Beauty (AONB) which contribute to biodiversity and landscape character, such as hedgerows and woodland and other semi-natural habitats. • Note that there are no details of what measures might be taken to mitigate for any adverse visual impacts and whether any footpath improvements might be required for the diversion. • There is no mention of whether the offshore HVAC booster station will be lit and visible at night. <p>Development Consent Order:</p> <ul style="list-style-type: none"> • A summary of the key comments on the DCO raised by Natural England are provided in the summary of comments on the DCO by the Marine Management Organisation (Relevant Representation number 85). 	

1.2.98 Strutt and Parker on behalf of Nethergate Farm Partnership [RR-098]

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - Impact of the project on planned irrigation installations; - Insufficient consultation and engagement; - Lack of compelling case for the requirement of compulsory acquisition rights; - HVAC and HVDC technology; - The location of the booster station; - Concerns regarding the construction and funding of the project; - The cumulative impact of multiple wind farm projects in Norfolk; - Insufficient information relating to Jointing Bays and Link Boxes; - Insufficient information regarding field drainage, soil protective, flood issues and dust control; - Insufficient information relating to access to the Order Limits; - Insufficient information relating to access for landowners to severed land; 	<p>Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.</p>

1.2.99 Bidwells on behalf of Nicholas E Evans-Lombe [RR-099]

Relevant Representation Comment	Applicant's Response
The issues raised by Bidwells on behalf of Nicholas E Evans-Lombe are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.

1.2.100 Norfolk Boreas Ltd [RR-100]

Relevant Representation Comment	Applicant's Response
<p>Norfolk Boreas Limited (Norfolk Boreas) has received notification that the Hornsea Project Three Offshore Wind Farm (Hornsea Project Three) has been accepted for examination. Please accept this letter as Norfolk Boreas' representation that it has an interest in the Hornsea Project Three application, and wishes to be treated as an interested party for the purposes of the examination process.</p> <p>Norfolk Boreas has notified PINS of its intention to submit an application for Development Consent for the Norfolk Boreas Offshore Wind Farm. Submission of the Norfolk Boreas DCO application is currently expected to be in June 2019, with section 42 consultation including publication of the Preliminary Environmental Information Report, anticipated to take place in October 2018.</p> <p>In principle, Norfolk Boreas supports Hornsea Project Three as it will provide an important contribution towards meeting the government's renewable energy targets, and will enable the UK to continue its growth in the offshore wind sector.</p> <p>Whilst the siting of the offshore array, export cable route and the onshore connection points differ between Norfolk Boreas and Hornsea Project Three, the onshore cable routes will cross at Reepham. In addition, Norfolk Boreas' sister project, Norfolk Vanguard, follows the same onshore cable route as Norfolk Boreas and therefore will also cross the Hornsea Project Three onshore cable route at Reepham.</p> <p>If consented, there is the potential for interaction between the projects and Norfolk Boreas is keen to ensure, where appropriate and to the extent necessary, that this is considered during the Hornsea Project Three examination.</p>	<p>A SoCG between the Applicant and Norfolk Boreas Ltd is attached at Deadline 1.</p> <p>In principle support is noted.</p> <p>Section 2 of the SoCG provides a summary of the cumulative assessment approach and conclusions as reported in the Hornsea Three and NV applications (application reference no. EN010079). Table 1 of the SoCG documents those topic chapters where the potential cumulative impact as a result of Hornsea Three, NV (EN010079) and NB in combination has been considered in the Hornsea Three application and the NV application. Table 2 of the SoCG documents those chapters where the potential cumulative effects between Hornsea Three, NV and NB are being considered further by Hornsea Three and NV. Notwithstanding the position reached on these matters, the parties reserve the right to make further representations throughout the forthcoming examination period.</p>

Relevant Representation Comment	Applicant's Response
<p>Norfolk Boreas has undertaken a preliminary review of the documents provided in support of the Hornsea Project Three application and its initial comments, focusing primarily on the cumulative effects as assessed in the Environmental Statement (ES) and the in-combination assessment contained in the Report to Inform Appropriate Assessment, are set out below.</p> <p>In general, Norfolk Boreas welcomes the findings of the cumulative and in-combination assessments between Norfolk Boreas and Hornsea Project Three where Norfolk Boreas has been included. However, it is noted that for a number of pertinent topics where Norfolk Boreas has been referenced by name within the relevant chapter, detailed assessment has not been included.</p> <p>Given the similarity of the nature of Hornsea Project Three and Norfolk Boreas, Norfolk Boreas is keen to continue to work collaboratively with Orsted, particularly in relation to the following topics in which cumulative effects with Norfolk Boreas have not been assessed in detail:</p> <ul style="list-style-type: none"> - Marine mammals - Offshore ornithology - Commercial fisheries - Traffic and Transport - Socio-economics - Aviation and radar - Noise and Vibration - LVIA - Historic Environment <p>In particular, and to the extent available, Norfolk Boreas would welcome sight of further detail from Hornsea Project Three on the assignation of its construction traffic to local road links, particularly in relation to the proposed cable crossing point at Reepham. Norfolk Boreas hopes that this additional data can be shared as part of the continued dialogue between the two projects.</p>	

1.2.101 Norfolk Coast Partnership [RR-101]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in the Norfolk Coast Partnership's Relevant Representation is provided below.</p> <p>Annex 8 – Full response to Norfolk Coast Partnership [RR-101] The current 2014-19 Norfolk Coast Area of Outstanding Natural Beauty (AONB) Management Plan has a Policy (PC5) to 'Support the development of renewable energy in the area...', however they have concerns regarding potential effects of Hornsea Three on the landscape quality of the Norfolk Coast AONB and North Norfolk Heritage Coast. Comments below only relate to the impact of Hornsea Three within the Norfolk Coast AONB boundary.</p> <p>Alternating Current (AC) v Direct Current (DC):</p> <ul style="list-style-type: none"> Suggest the use of High Voltage Direct Current (HVDC) transmission due to the impact of High Voltage Alternating Current (HVAC) on the local area and community. 	<p>The Applicant has responded to each of the detailed points from this Relevant Representation in</p> <p>Annex 8 – Full response to Norfolk Coast Partnership [RR-101] of this document. A summary of the points covered in Annex 8 is set out below:</p> <ul style="list-style-type: none"> Potential impacts on the AONB landscape and views from the AONB; Transmission technology; Site selection process for the location of the landfall; Confirmation of where landscape mitigation measures are identified within the Environmental Statement and the mechanism for securing these measures; Confirmation of where ecology mitigation measures are identified within the Environmental Statement and the mechanism for securing these measures; Confirmation of where public rights of way mitigation measures are identified within the Environmental Statement and the mechanism for securing these measures; The assessment of impacts of designated and sensitive sites; Hornsea Three construction traffic in the AONB, the use of approved routes and the final Construction Traffic Management Plan; The assessment of impacts on tourism; The assessment of impacts on historic environment and the commitment to prepare an outline written scheme of investigation; The effects of the offshore HVAC booster station on land based receptors on the Norfolk Coast (including the AONB); The potential effects of cable installation on the nearshore environment and operational cables on nearshore marine processes; The Applicant's commitment to continue dialogue with stakeholders and interested parties; Strategies for construction and permanent lighting and the mechanism for agreeing the strategies; The continued dialogue with the National Federation of Fishermen's Organisations and other local fishing stakeholders; and The preparation of a Skills and Employment Plan.

Relevant Representation Comment	Applicant's Response
<p>Onshore:</p> <ul style="list-style-type: none"> • Question the Hornsea Three landfall area given the long Hornsea Three onshore cable corridor. • Question why previous routes of Dudgeon cables or Hornsea Project One and Hornsea Project Two cannot be reused. <p>Landscape:</p> <ul style="list-style-type: none"> • Noted that a number of measures to reduce the landscape and visual impacts are proposed. • Requested that good communications are maintained to ensure that these measures remain appropriate and are effectively implemented. • Identified a number of sensitive landscapes and habitats and requests that the impact on these is minimised. 	
<p>Ecology:</p> <ul style="list-style-type: none"> • Noted that a number of measures to mitigate the effects on the area's ecology and nature conservation are proposed. • Requested that good communications are maintained to ensure that measures remain appropriate and are effectively implemented. <p>Access:</p> <ul style="list-style-type: none"> • Noted that The Applicant recognises the sensitive nature and high usage of the beach and the coastal footpath at Weybourne, and that measures are proposed for allowing continued access. • Requested that good communications are maintained to ensure that these measures remain appropriate and are effectively implemented. <p>Onshore HVAC booster station:</p> <ul style="list-style-type: none"> • Thank the Applicant for planning to site any onshore HVAC booster stations outside of the Norfolk Coast AONB. <p>Construction:</p> <ul style="list-style-type: none"> • Construction traffic should use carefully selected routes within the Norfolk Coast AONB to minimise disruption, damage and pollution. <p>Historic environment:</p> <ul style="list-style-type: none"> • Construction activity should be preceded by an agreement of an appropriate archaeological written scheme of investigation, submitted to and approved by Norfolk County Council. 	

Relevant Representation Comment	Applicant's Response
<p>Offshore infrastructure:</p> <ul style="list-style-type: none"> • Pleased that the Hornsea Three offshore cable corridor has been selected to avoid impacts on the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ) and its chalk reef habitat. • Suggest that the Hornsea Three offshore cable corridor should be brought ashore in a way which does not alter/impede the coastal processes. <p>Light pollution:</p> <ul style="list-style-type: none"> • Request details of light levels for the temporary works and for the permanent infrastructure. • Requests that careful consideration is given to the design and use of lighting to minimise any light pollution. 	
<p>Community:</p> <ul style="list-style-type: none"> • Notes that The Applicant has implemented a community funding schemes in an area at the western end of the Norfolk Coast AONB. • Suggest that any impacts on the local fishing industry, either those who are based at Weybourne itself or those who fish in the area affected by construction, is minimised. • Recommends use of local products, suppliers and contractors and hope that this is maintained throughout the lifetime of Hornsea Three. • Suggests several ways for local young people to receive information about the environmental importance of their local area. • Requests that it involved in exploring possibilities for community benefit. 	

1.2.102 Norfolk Vanguard Limited [RR-102]

Relevant Representation Comment	Applicant's Response
<p>Norfolk Vanguard Limited (Norfolk Vanguard) has received notification that the Hornsea Project Three Offshore Wind Farm (Hornsea Project Three) has been accepted for examination. Please accept this letter as Norfolk Vanguard's representation that it has an interest in the Hornsea Project Three application, and wishes to be treated as an interested party for the purposes of the examination process.</p> <p>In principle, Norfolk Vanguard supports Hornsea Project Three as it will provide an important contribution towards meeting the UK government's renewable energy targets, and will enable the UK to continue its growth in the offshore wind sector.</p> <p>As you will be aware, Norfolk Vanguard submitted an application for the Norfolk Vanguard Offshore Wind Farm on 26 June 2018. Whilst the siting of the offshore array, export cable route and the onshore connection points of the two projects differ, the onshore cable route for the projects will cross at Reepham, Norfolk. In addition, Norfolk Vanguard's sister project, Norfolk Boreas (which is due to submit a separate application for Development Consent in Q2 2019), will follow the same onshore cable corridor and therefore also cross the Hornsea Project Three onshore cable route at Reepham. In short, if consented, there is the potential for inter-action between these projects and Norfolk Vanguard is keen to ensure, where appropriate and to the extent necessary, that this is considered during the Hornsea Project Three examination.</p>	<p>A SoCG between the Applicant and Norfolk Vanguard Ltd is attached at Deadline 1.</p> <p>In principle support is noted.</p> <p>Section 2 of the SoCG provides a summary of the cumulative assessment approach and conclusions as reported in the Hornsea Three and NV applications (application reference no. EN010079). Table 1 of the SoCG documents those topic chapters where the potential cumulative impact as a result of Hornsea Three, NV (EN010079) and NB in combination has been considered in the Hornsea Three application and the NV application. Table 2 of the SoCG documents those chapters where the potential cumulative effects between Hornsea Three, NV and NB are being considered further by Hornsea Three and NV. Notwithstanding the position reached on these matters, the parties reserve the right to make further representations throughout the forthcoming examination period.</p>

Relevant Representation Comment	Applicant's Response
<p>Norfolk Vanguard have undertaken a preliminary review of the documents provided in support of the Hornsea Project Three application and initial comments, which focus primarily on the cumulative effects as assessed in the Environmental Statement (ES), and the in-combination assessment contained in the Report to Inform Appropriate Assessment, are set out below.</p> <p>In general, Norfolk Vanguard welcome the findings of the cumulative and in-combination assessments as they relate to the Norfolk Vanguard Offshore Wind Farm. It should be noted however, that as Norfolk Vanguard's design envelope has been refined from that presented in the Preliminary Environmental Information Report (PEIR), and new data based on a High Voltage Direct Current (HVDC) transmission solution is now included in the ES, some of the impacts and mitigations described by Hornsea Project Three in relation to cumulative effects may need to be revised accordingly.</p> <p>Given the similar nature and interaction between the projects, Norfolk Vanguard wish to continue to work collaboratively with Orsted, particularly in relation to the assessment of cumulative effects in respect of the following topics:</p> <ul style="list-style-type: none"> • Marine mammals; • Offshore ornithology; • Commercial fisheries; • Aviation and radar; • Onshore archaeology; and • Traffic and transport. <p>In particular, and to the extent available, Norfolk Vanguard would welcome sight of further detail from Orsted on the assignation of their construction traffic to local road links, particularly in relation to the proposed cable crossing point at Reepham. Norfolk Vanguard hope that this additional data can be shared as part of our continued dialogue with Orsted.</p>	

1.2.103 Brown & Co on behalf of S H Back [RR-103]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Brown & Co on behalf of S H Back are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.</p>

1.2.104 Carter Jonas LLP on behalf of Saltcarr Farms Limited [RR-104]

Relevant Representation Comment	Applicant's Response
<p>Saltcarr Farms are owners of the land at Oulton Airfield, which is the proposed location of the applicant's main construction compound for the project. As a landowner affected by the project, Saltcarr Farms wish to register as an interested party.</p> <p>The applicant is currently in discussions with Saltcarr Farms regarding the project and heads of terms have been issued by the applicant's agent, which we are considering.</p> <p>The Onshore Order Limits Plan No. 35 shows the area of land for which temporary possession is proposed to be taken for 'Works No. 13 Main Construction', and 'Works No. 14 Access'. Whilst Saltcarr Farms are willing to discuss terms for the temporary use of 7.5 acres of land, at present on these plans it is proposed to occupy land that will affect Saltcarr Farms ability to continue to farm their surrounding land. Saltcarr Farms require access to the straw barn on the western section of the old runway (included within the Onshore Order Limits) and require access to the fields immediately north and south, to be able to continue farming these areas, particularly given the occupation timescales that are proposed which we understand could be up to 10 years.</p>	<p>The Applicant continues to discuss the terms of a voluntary agreement with Saltcarr Farms Limited.</p> <p>The Applicant understands the landowner's concerns regarding access to the straw barn and to the fields to the north and south and will ensure that provisions are put in place to maintain access during construction.</p> <p>Please refer to Appendix 20 Main Construction Compound Briefing Note of the Applicant's response to Deadline I which provides information pertaining to the proposed use of the main construction compound during construction, including access along The Street.</p>

Relevant Representation Comment	Applicant's Response
<p>The Access to Works Plan No. 35 shows access off Oulton Street on to Oulton Airfield, which is Saltcarr Farms main access to their land. Saltcarr Farms would like to be consulted on potential traffic generation and any construction traffic management plan (CTMP) drafted for the site, as traffic will affect Saltcarr Farms continued use of their land and their relationship with the local residents.</p> <p>An outline CTMP accompanies the DCO application (document reference number A8.2), which includes reference to wheel wash facilities if deemed necessary. Saltcarr Farms has an 850 sow pig breeding unit on the land adjacent to the runways and access road, which house High Health Status Herd pigs. These pigs are a high value product and a key revenue for Saltcarr Farms that is worth over £1 million per annum, and biosecurity is of paramount importance for the herds to maintain their value and to comply with strict contractual requirements. The project will bring additional risks of disease transfer (e.g. via vehicular traffic) that will need to be proactively managed. Saltcarr Farms are in discussions with the applicant about possible biosecurity measures and this will need to be addressed and agreed in advance of the land being used by the applicant for construction purposes.</p> <p>If a suitable mitigation plan cannot be agreed with the applicant Saltcarr Farms will need to consider the re-location of the pigs elsewhere at considerable cost and may also have knock on impacts for its supply contract.</p> <p>There is a commercial solar farm development on the land immediately to the west, which is the subject of a lease and an option for an extension. The solar farm development land itself is not included in the Onshore Order Limits Plan but it does include the access to the solar farm development. It should be noted that the conditions of this lease and option for extension, including the occupier's rights, will be required to be maintained. The inclusion of the access road within the DCO Order Limits will need to ensure that all existing rights are maintained and are not extinguished by exercise of the DCO powers. Otherwise this will lead to a breach in the terms of the agreements with the solar farm operator.</p> <p>Saltcarr Farms reserve the right to amend or make further representations but in the meantime will continue negotiations with the applicant with a view to reaching a satisfactory agreement.</p>	<p>A biosecurity protocol has been prepared and is provided in Appendix D of the Outline CoCP [APP-179]. Site-specific biosecurity measures for the main construction compound will be prepared as part of the detailed CoCP secured by Requirement 17 of the dDCO, once a contractor has been appointed. Where biosecurity measures are agreed as part of the voluntary agreement with Saltcarr Farms Limited, these will be incorporated into the final CoCP.</p> <p>Access to the solar farm will be maintained as the Applicant is only proposing to use the access road for access in common with other permitted users.</p>

1.2.105 Scottish Power Renewables [RR-105]

Relevant Representation Comment	Applicant's Response
<p>This is a relevant representation submitted by ScottishPower Renewables (SPR) on behalf of East Anglia Two Limited and East Anglia One North Limited ("the Project Companies").</p> <p>SPR (on behalf of the Project Companies) may wish to participate in the Examination of the Development Consent Order (DCO) application for Hornsea Project Three. Specifically, SPR may wish to make representations in relation to cumulative and incombination issues. SPR reserve the right to make further comments through the Examination process including, but not limited to, seeking protective provisions within the Hornsea Project Three DCO.</p>	<p>The Applicant notes Scottish Power's position.</p>

1.2.106 Bidwells on behalf of Sir Edward Evans-Lombe [RR-106]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Bidwells on behalf of Sir Edward Evans-Lombe are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p> <p>In addition, Sir Edward Evans-Lombe raised the following point:</p> <ul style="list-style-type: none"> - As presently planned, the Orsted cable line will run about 55kms to the Swardeston National Grid receiving station and The Vattenfall Line will run about 60km to the Necton receiving station. These lines will actually cross each other at Salle. Vattenfall have 'booked' their Necton destination with the National Grid. - These arrangements appear to run contrary to common sense because Orsted's landing point is much closer to Necton than Vattenfall's and Vattenfall's landing point is much closer to Swardeston than Orsted's. - It is calculated that, if Orsted and Vattenfall swapped destinations, 22kms of cable would be saved. If both lines came ashore close to each other east of Cromer and then ran together to the closest National Grid receiving station, possibly Swardeston, or a new receiving station at or near North Walsham, up to 80km of cable line would be saved. - These savings of line would lead to substantial savings of installation cost and public amenity. If the "East of Cromer Solution" was adopted, these savings would be massive. Further, it appears it might be possible for Orsted to connect with The National Grid at Walpole to the west of Kings Lynn where loss of amenity would be minimal. - The making of a Development Consent Order as proposed should be made conditional on Vatenfall agreeing to give up it's "booking" of Necton, thus making it available to Orsted. The Applicants should be required to investigate the East of Cromer Solution and the Walpole Solution and report to the Planning Authority. - Plan showing 'Vattenfall Norfolk Vanguard/Boreas & Orsted - Hornsea Project Three Proposed Onshore Cable Routes, North Norfolk' to follow by separate email. 	<p>Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.</p> <p>Please see the Applicant's response to Relevant Representation RR-019 relating to the grid connection location.</p>

1.2.107 Brodies LLP on behalf of Spirit Energy Nederland B.V. [RR No. RR-107]

Relevant Representation Comment	Applicant's Response
<p>Spirit Energy' is the trading name used by Spirit Energy Limited and its subsidiaries which collectively as a group conduct European oil and gas operations.</p> <p>Spirit Energy ("Spirit") is headquartered in the UK and collectively operates and/or holds interests in 27 producing fields and more than 70 exploration licences across the UK, Norway, the Netherlands and Denmark.</p> <p>Spirit Energy North Sea Limited (UK Company Number: 04594558), Spirit Energy Resources Limited (UK Company Number: 02855151) and Spirit Energy Nedlerland B.V. (Company Number: 34081068) are each entities operating under the 'Spirit Energy' trading name. Each of these entities own and operate assets located in the Southern North Sea (on both sides of the UK/Netherlands median line) including platforms, pipelines, seabed infrastructure and licensed blocks. Spirit has interests that lie within or near to the application area.</p>	<p>The Applicant notes the comments by Spirit Energy.</p>
<p>Proximity</p> <ul style="list-style-type: none"> - Spirit has experience of operating near to the eastern Irish Sea Walney Wind Farms. The Hornsea Three array leading edge is significantly closer to Spirit's assets – at half the distance than Spirit currently experience in the Irish Sea. - The eastern leading edge is in close proximity to our operational Greater Markham Area interests; (gas platforms: Chiswick, Grove and J6A and subsea infrastructure: Kew and Grove G5). - Spirit consider safe and efficient gas production would be significantly hindered through access constraints affecting ability to undertake maintenance interventions and emergency repairs. Capacity to develop existing licences and decommission existing infrastructure would also be restricted. - The economic viability of the whole Greater Markham area assets in both UK and Netherlands waters are reliant on being able to operate without hinderance to the maximum possible capacity 	<p>The Applicant confirms that the operational assets noted have been identified within Section 11.7 of Volume 2, Chapter 11: Infrastructure and Other Users the Environmental Statement [APP-071] and within Section 8.7 of Volume 2, Chapter 8: Aviation, Military and Communications of the Environmental Statement [APP-068].</p> <p>The Applicant notes that the proximity of Hornsea Three to Spirit Energy's assets and licence blocks have been fully assessed within the Environmental Statement. All potential impacts were found to have an impact of negligible to minor adverse significance in EIA terms.</p> <p>The Applicant also notes that proximity in itself is not a potential impact, but instead has the potential to lead to a number of potential impacts on aviation, infrastructure and shipping and navigation. These potential impacts are addressed in Volume 2, Chapter 8: Aviation, Military and Communications [APP-068] of the Environmental Statement and Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement [APP-067]. The Applicant has provided a response against each of the potential impacts related to proximity, where Spirit Energy have raised a concern in their relevant representation, in the following sections of this response.</p>

Relevant Representation Comment	Applicant's Response
<p>Shipping and Navigation</p> <ul style="list-style-type: none"> - Vessels supporting Spirit platforms, subsea infrastructure and pipelines require sufficient sea room to operate. This includes setting up and being on standby outside of 500m safety zones, working in 'drift off' positions and being accessible by helicopter. - If the leading edge of Hornsea Three is too close to our existing assets, there is potential for our vessels to be in a 'drift on' situation with any Hornsea Three construction vessels/ wind turbines or for the windfarm vessels to be in a 'drift on' position to our assets creating a collision or allision risk with insufficient time to react. 	<p>The marine traffic in the vicinity of Hornsea Three is discussed in Section 15 of Volume 5, Annex 7.1; Navigational Risk Assessment of the Environmental Statement [APP-112].</p> <p>From experience of other oil & gas and wind farm projects on the UKCS, the vessels involved (which frequently work for both industries) are used to working in restricted sea room due to the presence of nearby offshore structures, for example, within a wind farm array or at an oil & gas field comprising multiple platforms, rigs and/or vessels. This proximity risk is managed through having a safety management system which covers elements such as chartering appropriate vessels (e.g., with redundancy in manoeuvring equipment), having suitably trained and experienced crew, and applying appropriate marine operating procedures for the area, taking into account any local restrictions and weather effects. Most activity tends to be within the 500 m safety zone.</p>

<ul style="list-style-type: none"> - Platform and vessel Radar Early Warning Systems (REWS) are identified as impacted by individual and cumulative wind turbine signatures, significantly reducing their effectiveness and leaving insufficient threat response time. - Access for the maintenance or decommissioning of subsea infrastructure and pipelines is not properly considered in the application. This may be for a short notice intervention of days or a managed campaign of several months. - Third party shipping is likely to be displaced more closely to Spirit assets if they track around the eastern leading edge of the array. Further displacement by fishing vessels would be caused by the Markham's Triangle MCZ. Vessels transiting around the south east tip of the proposed array are likely to be drawn toward the Grove platform as a fixed way point. There would be a cumulative impact of increasing vessel numbers (displaced shipping vessels and Hornsea Three vessels) along with hindered reduced effectiveness of REWS. - Proximate windfarm piling would interfere with safety of diving operations that may be required at any of our assets. This has not been considered as part of the application. 	<p>The Applicant advises that the information provided by Centrica (subsequently Spirit Energy) during the preparation of the Environmental Statement was that the J6A platform had a REWS system. The Hornsea Three Environmental Statement assessed the potential effect of Hornsea Three alone (paragraph 11.11.2.67 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]) and in combination with other projects and plans on the J6A platform REWS system (paragraph 11.13.3.50 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]). The Environmental Statement concluded an effect of minor adverse significance on the J6A platform.</p> <p>This information has been superseded by new information provided by Spirit Energy, in that the J6A platform has a Racon and AIS system and not a REWS. In light of this information, a technical note has been completed and has been included at Appendix 13 to the Applicant's response to Deadline I.</p> <p>Whilst the Environmental Statement also assessed the potential effect of Hornsea Three on vessel routes, and the subsequent effect of the route deviations on Closest Point of Approach (CPA) and Time to CPA alarms on the REWS on oil and gas platforms (paragraph 11.11.2.79 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]), it did not include the J6A Platform as the predicted shipping lanes are expected to either remain unchanged or move further away from these platforms (see Volume 5, Annex 11.1: Radar Early Warning Systems Technical Report of the Environmental Statement [APP-119]) and so has not been affected by the new information provided by Spirit Energy.</p> <p>Based on the revised assessment that considers the new information provided by Spirit Energy, no significant effects have been identified on the Racon and AIS installed on the J6A platform. Overall the effect is considered to be of minor adverse significance. This is the same significance of effect as predicted in Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The revised assessment has been presented to Spirit Energy during a post Application consultation meeting.</p> <p>The potential impact of Hornsea Three construction and maintenance activities restricting access to pipelines is assessed in paragraphs 11.11.1.14 to 11.11.1.22 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The Spirit Energy operated pipelines for which proximity issues have the potential to arise will be addressed within Crossing and Proximity Agreements which will be prepared between Spirit Energy and the Applicant post consent. The significance of effect was predicted to be of minor adverse significance, which is not significant in EIA terms. With respect to the risk to the Grove platform from passing shipping, based on the predicted re-routing within section 18.2.2 of Volume 5, Annex 7.1: Navigational Risk Assessment Technical Report of the Environmental Statement [APP-112], this is anticipated not to</p>
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Relevant Representation Comment	Applicant's Response
	<p>increase post Hornsea Three development as the wind farm will shield the Grove location from east-west shipping. Vessels bound for more northerly destinations were mainly predicted to re-route to pass north of the wind farm (well away from Grove) rather than deviating to the south of the wind farm before turning northwards.</p> <p>As noted the J6A platform does not have a REWS system and no significant effects have been predicted on the Racon and AIS system that is present on J6A to assist ship collision avoidance. The Grove platform does not have a REWS or a Racon and AIS system present.</p>
<ul style="list-style-type: none"> - Proximate windfarm piling would interfere with safety of diving operations that may be required at any of our assets. This has not been considered as part of the application. 	<p>The issue raised by Spirit Energy in regard to wind farm piling interfering with diving operations was discussed at a post application consultation meeting between the Applicant and Spirit Energy on 1 August 2018. Spirit Energy advised that they had experience of managing this issue through stakeholder engagement. It was agreed by all parties that this was an operational issue that could be managed through consultation at the appropriate time.</p>

Relevant Representation Comment	Applicant's Response
<p>Aviation</p> <ul style="list-style-type: none"> - The application indicates that due to the significant number of flights utilised by windfarm developers, available airspace may be affected. Whilst already hindered due to weather any additional constraint adds to the cumulative burden and has significant operational impacts. 	<p>The potential effect of Hornsea Three helicopter operations on the available airspace for other users, was assessed in the Environmental Statement at paragraph 8.11.1.3 Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068]. Hornsea Three have provided estimated numbers for helicopter movements (paragraph 8.11.1.3 Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068]) however, they are the maximum design scenario with regard to helicopter use and Hornsea Three will be considering alternative methods such as having up to three accommodation platforms to reduce transfer of personnel and the use of vessels for personnel transfer. The numbers are small none the less in comparison to the baseline figure.</p> <p>The North Sea offshore oil and gas industry is served by approximately 100 flights a day (equivalent to 36,500 flights a year). It is very difficult to predict how the baseline air traffic will change over the course of Hornsea Three.</p> <p>Helicopter flights in the UK are highly regulated through the Civil Aviation Authority (CAA) and there is a mature air traffic control system provided by National Air Traffic Services (NATS). Flights to and from Hornsea Three would have the same services available to them. Such services ensure a safe separation distance between aircraft. The provision of a helicopter service by one service provider to Hornsea Three is not considered to affect the provision of a service by that provider or another provider, to another user of the airspace. Overall, the effect is considered to be of minor adverse significance.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - Flights from Humber to the Spirit Greater Markham Area would be made logistically difficult due to the collective effect of the Hornsea projects. Flights from Norwich would need to be routed around Hornsea Three adding around 10km to each Chiswick flight. 	<p>Any potential effects of cross zone transit to Spirit operated platforms in the Markham area has been assessed for Hornsea Three and considered cumulatively with Hornsea Project One and Hornsea Project Two (Wind turbines and hoist operations will form an aerial obstruction resulting in disruption to cross – zone transit helicopter traffic, and Hornsea Three infrastructure will form an aerial obstruction resulting in disruption to helicopters using HMRs, paragraph 8.13.3.1 Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068]).</p> <p>Cross-zone transit flights can be flown in Visual Meteorological Conditions (VMC) or in instrument meteorological conditions (IMC) when the icing level is high enough.</p> <p>When flying in instrument flight rules a 1,000 ft vertical separation distance is required from obstacles. The presence of the Hornsea Project One and Hornsea Project Two and Hornsea Three turbines will require helicopters that are transiting to fly at an MSA of 2,100 ft (considering the potentially tallest of the three projects' turbines, that being Hornsea Three). When flight below an MSA of 2,100 ft is required (in certain weather conditions, e.g. due to icing) a deviation around Hornsea Project One, Hornsea Project Two and Hornsea Three will be required.</p> <p>Consultation advice from CHC helicopter operators is that icing conditions may occur from November to April for up to 1 % of the time.</p> <p>Consultation advice from Spirit Energy is that the Markham group of platforms is predominantly serviced by flights from Den Helder in the Netherlands which will not be affected by Hornsea Three. For flights from Norwich to the Markham group of platforms there will be no cumulative effect from Hornsea Project one and Hornsea Project Two. For flights from Humberside to the Markham group of platforms there will be a cumulative effect from Hornsea Project One, Hornsea Project Two and Hornsea Three. The overall effect is considered to be of minor adverse significance for Spirit Energy.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - In poor flying conditions and in the event of missed approach landings, a safe distance in all directions is required before obstacles are encountered. - Helicopter operations supporting J6A, Chiswick and Grove gas platforms are identified as having constrained airspace. Access is needed at all times when the platforms are manned and helicopters are considered the primary means of escape. 	<p>The proximity of Hornsea Three to Spirit Energy existing platforms in regard to aviation access has been assessed (Wind turbines will form a physical obstruction and may disrupt helicopter access including requirements for decommissioning to oil and gas platforms) in paragraph 8.11.2.29 of the Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068].</p> <p>The Applicant carried out an assessment on helicopter access to the Spirit Energy operated platforms using aviation specialists Osprey, following guidance presented in CAA Publication (CAP) 764 (paragraph 1.2.1.2 of Volume 5, Annex 8.1: Aviation, Military and Communication Technical Report [APP-113]).</p> <p>The outcome of the assessment indicates that the impact of the Hornsea Three array area would be to prevent instrument approaches in instrument meteorological conditions to the Chiswick platform for up to approximately 3.5 days per year; to the J6/J6a-CT platform for up to approximately 0.5 days per year) and to the Grove platform for up to approximately 2.2 days per year.</p> <p>The Applicant notes that alternative means of access to the Grove and Chiswick platforms is also possible in suitable weather conditions as low level shuttle from the J6A platform.</p> <p>The Environmental Statement concluded that the effect will be of minor adverse significance, which is not significant in Environmental Impact Assessment terms (paragraph 8.11.2.64 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-068]).</p>

Relevant Representation Comment	Applicant's Response
<p>- Helicopter operations supporting mobile rigs undertaking maintenance and decommissioning activities for platforms, pipelines and subsea infrastructure have not been appropriately evaluated in the application. These may need to be located anywhere Spirit has infrastructure including closer to the turbines and supporting infrastructure than the application has considered</p>	<p>The proximity of Hornsea Three to sub-sea infrastructure and vessels and rigs supporting Spirit Energy operations, in regard to aviation access has been assessed in the Environmental Statement (Wind turbines will form an aerial obstruction and may disrupt helicopter access to helideck equipped drilling rigs and vessels conducting operations at subsea infrastructure and well locations, paragraph 8.11.2.67 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-113]).</p> <p>The Applicant understands that subsurface infrastructure and wells, that have not been permanently decommissioned or plugged and abandoned, may at some time, require access from a rig or vessel with a helideck. In line with CAA guidance (CAP 764), a 9 nm consultation zone, exists around offshore helicopter operations. All licences which overlap the 9 nm buffer around Hornsea Three have been identified as the study area for this assessment. The assessment of this potential impact is complicated by the fact that future oil and gas plans have varying degrees of certainty associated with them (for example whether or not an exploitable resource will be found and if so, where any infrastructure associated with this will be located). As an example, since the date of the application Spirit Energy has surrendered licence P2286 which was coincident with the Hornsea Three array area. For this reason, as noted in paragraphs 8.9.2.7 to 8.9.2.10 of Volume 2, Chapter 8: Aviation, Military and Communication of the Environmental Statement [APP-113], the assessment has only been able to consider those licenced blocks with potential for spatial and temporal interactions, which are licenced beyond the start of the Hornsea Three operation and maintenance phase (i.e. assumed to be 2030 and beyond) and:</p> <ul style="list-style-type: none"> • The licence operator has the appropriate licences and consents needed to undertake the specific activity which is being assessed; and/or • There is sufficient information in the public domain (available either through consultation or publicly available documents) regarding the future activity for an assessment to be undertaken. <p>The overall significance of effect for the Spirit Energy licenced blocks was considered to be minor adverse significance.</p>

Relevant Representation Comment	Applicant's Response
<p>Development</p> <ul style="list-style-type: none"> - A number of licences held by Spirit are wholly or largely within the application area or proposed exclusion zones that would be difficult if not impossible to progress if windfarm construction commenced. - An incorrect assumption has been made that licences are not developed in their later terms. Whilst one operator may relinquish a licence they may be relicenced by the Oil and Gas Authority. The proposal would have the effect of impeding future exploration and production; sterilising UK hydrocarbon resource. - It is not clear within the application what proportion of the windfarm development would be possible without constraining existing oil and gas infrastructure. This would allow valuable discussion on compromise. 	<p>As noted above, the Applicant notes that Spirit Energy held a licence P2286 which was wholly coincident with the Hornsea Three array area and which they have recently surrendered. The surrendering of this licence significantly reduces the overlap of licences held by Spirit Energy and Hornsea Three, referred to in Spirit Energy's Relevant Representation.</p> <p>The Applicant has identified the approach taken for oil and gas assessments with uncertainty associated with future activities (paragraph 11.9.2.6 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]).</p> <p>The Environmental Statement has only been able to consider those licenced blocks with potential for spatial and temporal interactions, and specific activities for which the licence operator has the appropriate licences and consents needed to undertake the specific activity which is being assessed; and/or there is sufficient information in the public domain (available either through consultation or publicly available documents) regarding the future activity for an assessment to be undertaken.</p> <p>Where this criteria does not apply, the potential operational activity within that licence or any future licence, is outside the scope of the Environmental Statement.</p>
<p>Risk assessment methodology</p> <ul style="list-style-type: none"> - Throughout the Hornsea Three application, risk assessment assumptions have allowed issues to be screened out, whereas Spirit consider many of the same issues as important and requiring additional scrutiny and active management 	<p>The Environmental impact Assessment methodology used is described in Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement [APP-060] and satisfies the requirements of the Environmental Impact Assessment regulations.</p> <p>Spirit Energy shared a copy of their risk assessment matrix used within their organisation during a consultation meeting (10 April 2018).</p> <p>The Hornsea Three Environmental Impact Assessment methodology evaluates and interprets the likely impacts, and subsequent effects, of the development on a range of physical, biological and human receptors. The overall significance of an effect is determined by correlating the magnitude of the impact alongside the sensitivity of receptor.</p> <p>The Applicant notes that Spirit Energy use a risk assessment matrix which is a commonly used method for assessing operational risk looking primarily at the probability of an unintended event occurring.</p> <p>The Applicant's position is that both methodologies are relevant and applicable for the intended purpose.</p>

Relevant Representation Comment	Applicant's Response
<p>Engagement</p> <ul style="list-style-type: none"> - Spirit continues to be fully committed to engaging with Orsted throughout the planning, development and operation of their projects. - Spirit is liaising directly with OPRED as regulator and Oil & Gas UK as industry body to ensure they remain fully informed as to the potential implications on its activities 	<p>The Applicant thanks Spirit Energy and acknowledges this commitment.</p> <p>The Applicant has continued to consult with Spirit Energy to discuss the concerns raised in their Relevant Representation. The Applicant and Spirit Energy have an agreed Engagement Plan to guide ongoing consultation during the examination phase. The two parties are also engaged in the development of a proposed commercial cooperation agreement, which sits outside of the Environmental Statement.</p>

1.2.108 Brodies LLP on behalf of Spirit Energy North Sea Limited. [RR-108]

Relevant Representation Comment	Applicant's Response
<p>Details of the key issues raised by Brodies LLP on behalf of Spirit Energy North Sea Limited is provided in the Brodies LLP (Brodies LLP) on behalf of Spirit Energy Nederland B.V. response above (Relevant Representation number 107).</p>	<p>The party has identical representations across three of its organisations. Please see the Applicant's response to Relevant Representation (RR-107).</p>

1.2.109 Brodies LLP on behalf of Spirit Energy Resources Limited. [RR-109]

Relevant Representation Comment	Applicant's Response
<p>Details of the key issues raised by Brodies LLP on behalf of Spirit Energy Resources Limited is provided in the Brodies LLP (Brodies LLP) on behalf of Spirit Energy Nederland B.V. response above (Relevant Representation number 107).</p>	<p>The party has identical representations across three of its organisations. Please see the Applicant's response to Relevant Representation (RR-107).</p>

1.2.110 Swannington, Alderford and Little Witchingham Parish Council (RR No. RR-110)

Relevant Representation Comment	Applicant's Response
<p>Traffic concerns and the 8 year build length.</p>	<p>Please see Applicant's response to Relevant Representation RR-001 in respect to traffic and transport impacts.</p> <p>Please see the Applicant's response to Relevant Representation RR-015 in respect to the construction window.</p>

1.2.111 Strutt and Parker on behalf of The Honourable Henry Thomas Unthank Darling [RR-111]

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - Insufficient consultation and engagement; - Lack of compelling case for the requirement of compulsory acquisition rights; - HVAC and HVDC technology; - The location of the booster station; - Concerns regarding the construction and funding of the project; - The cumulative impact of multiple wind farm projects in Norfolk; - Insufficient information relating to Jointing Bays and Link Boxes; - Insufficient information regarding field drainage, soil protective, flood issues and dust control; - Insufficient information relating to access to the Order Limits; - Insufficient information relating to access for landowners to severed land; 	<p>This relevant representation reflects the points raised in relevant representation RR-146. Therefore, please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.</p>

1.2.112 Bidwells on behalf of The Rampton Property Trust C/o Matthew Rampton [RR-112]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Bidwells on behalf of The Rampton Property Trust C/o Matthew Rampton are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.113 Royal Society for the Protection of Birds [RR-113]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in The RSPB's Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation in Annex 9 – Full response to Royal Society for Protection of Birds [RR-113]</p> <p>Annex 2 – Full response to CPRE [RR-037 of this document.</p> <p>Onshore ornithology:</p> <ul style="list-style-type: none"> Further inexpensive measures can be undertaken by the Applicant to ensure that the construction of Hornsea Three export cable avoids adverse effects on the pink-footed goose population. <p>Offshore ornithology methodology:</p> <ul style="list-style-type: none"> Concerned that the survey effort across the Hornsea Three array area and offshore cable corridor has been inadequate with only 20 months being undertaken. Welcomes the work undertaken at the recommendation of the RSPB and Natural England. Agree that it is unlikely that birds recorded within the Hornsea Three array area and offshore cable corridor are breeding birds from the Flanborough and Filey Coast potential special protection area (pSPA). However, it is likely that a large proportion of these birds are associated with the Flanborough and Filey Coast pSPA colony. Do not agree that herring gull, guillemot and razorbill should be screened out of the Environmental Impact Assessment (EIA). Concerned about the manner in which biological seasons have been defined. Do not agree with the use of the Band Extended Model and Avoidance Rates to calculate the likely collision risk impacts for gannet and kittiwake. 	<p>Given the detailed nature of the relevant representation and the topic specific sections and to demonstrate how full regard has been given to the RSPB's concerns, the Applicant has provided a point by point response in Annex 9 – Full response to Royal Society for Protection of Birds [RR-113 of this document.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • Do not agree with the changes in Nocturnal Activity Factor for kittiwake and gannet. The supporting analysis does not include all available data and, does not account for the distinction between the definition of daylight as used in the Band Model and with the official concept of 'twilight' and 'night'. • Concerns with the correction factors applied to in-combination assessment estimates of mortality. • Disagree with the apportioning rates used to evaluate the proportion of the guillemot, kittiwake and razorbill populations in the Hornsea Three area that will have come from the Flamborough and Filey SPA/ pSPA. • The Population Viability Analysis (PVA) model used to evaluate the impacts of Hornsea Three on the gannet and kittiwake populations has been run over 25 years, whereas the Applicant is seeking approval for the scheme to run for 35 years. 	

1.2.114 Strutt and Parker on behalf of The Trustees of the BE Brooks 1983 Settlement [RR-114]

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - Incorrect information contained within the Compulsory Acquisition Statement of Reasons document; - Insufficient consultation and engagement; - Lack of compelling case for the requirement of compulsory acquisition rights; - HVAC and HVDC technology; - The location of the booster station; - Concerns regarding the construction and funding of the project; - The cumulative impact of multiple wind farm projects in Norfolk; - Insufficient information relating to Jointing Bays and Link Boxes; - Insufficient information regarding field drainage, soil protective, flood issues and dust control; - Insufficient information relating to access to the Order Limits; and - Insufficient information relating to access for landowners to severed land. 	<p>This relevant representation reflects the points raised in relevant representation RR-146. Therefore, please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.</p>

1.2.115 Bidwells on behalf of The Trustees of the H G Back Settlement [RR-115]

Relevant Representation Comment	Applicant's Response
The issues raised by Bidwells on behalf of The Trustees of the H G Back Settlement are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.

1.2.116 The Wash and North Norfolk Marine Partnership [RR-116]

Relevant Representation Comment	Applicant's Response
<p>The Wash and North Norfolk Marine Partnership (WNNMP) delivers a Management Scheme (under The Conservation of Habitats and Species Regulations (2017) - Regulation 39) that supports Relevant Authorities in meeting statutory duties to The Wash and North Norfolk coast European Marine Site (EMS). The WNNMP supports synergistic working between coastal and marine managers and enables stakeholder and local community participation in the management of the coast through three geographically distinct Advisory Groups. It is, therefore, considered appropriate that the WNNMP provide comment on the proposal.</p> <p>As the offshore cable corridor approaches the 6 nm coastal boundary, it takes a westward trajectory avoiding the North West corner of the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ) and passes through the North East corner of the EMS, as shown in the Plan to Accompany the Section 56 Notice. This change in trajectory will result in a significant increase in the footprint of the offshore cable corridor, increasing disturbance to natural features and interference with industry and economy, compared to a continuous near-linear trajectory from the windfarm site through the NW corner of the MCZ. It is questioned why such a significant diversion is made, given that a near-linear MCZ cable corridor would lie predominantly over coarse sediments, the biota of which are less sensitive to physical disturbance than that associated with fine sand and mixed sediments that dominate the proposed cable corridor through the EMS. It is, however, recognised that the cable corridor avoids the chalk reef feature within the MCZ, which is supported.</p> <p>It is recommended that the significant change in nearshore cable corridor trajectory is reconsidered in favour of a route that passes directly through the North West Corner of the MCZ, minimising damage to the sea-bed, industry and economy.</p>	<p>The Applicant notes the position of the WNNMP.</p> <p>Full details of the rationale for selection of the Hornsea Three offshore cable corridor is set out in Section 4.10.3 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059]. In the nearshore area (paragraph 4.10.3.3 of APP-059), selection of the Hornsea Three offshore cable corridor route was influenced by a number of constraints and the overarching principles set out in section 4.9 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p> <p>Please see the Applicant's response to Relevant Representation RR-070 regarding the reroute of the cable corridor around the Cromer Shoal MCZ.</p>

1.2.117 Brown & Co on behalf of Trustees of the Educational Foundation of Alderman John Norman [RR-117]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Brown & Co on behalf of Trustees of the Educational Foundation of Alderman John Norman are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's full response to Relevant Representation RR-146 in Annex 12 – Full response to NFU (RR-146) of this document.</p>

1.2.118 UK Power Networks Plc [RR-118]

Relevant Representation Comment	Applicant's Response
<p>Eastern Power Networks plc is the occupier of premises in the land to be used under the above Order. It is also entitled to the benefit of rights in, over, on or under such land and is the owner of Electric Lines and/or Electrical Plant (as those terms are defined in Section 64(1) of the Electricity Act 1989) in, on, over or under the land to be acquired and/or temporarily used under the above Order. These premises, rights and apparatus have been acquired for and are used for the purposes of its statutory undertaking.</p> <p>Eastern Power Networks plc objects to the making and confirmation of the Order unless at the cost of the acquiring authority there are first provided to it on no less favourable tenure suitable alternative sites and suitable alternative rights in, on, over or under land in substitution to those to be acquired and/or temporarily used under the above Order and in, on over or under which there are first installed and commissioned Electric Lines and Electrical Plant in substitution for those in the land to be acquired and/or temporarily used under the above Order, before that land is acquired and/or temporarily used so that my client can carry out its statutory functions and contractual obligations no less efficiently than previously.</p> <p>Please treat this letter as an objection by Eastern Power Networks plc to the relocation/extinguishment of rights and apparatus mentioned above because their relocation will be detrimental to the carrying on of its undertaking. No alternative land, rights and apparatus for those proposed to be acquired under the above Order are in place.</p> <p>Eastern Power Networks plc reserves the right to amend or supplement its objections in the light of any information that later becomes available.</p> <p>The above objection(s) will be deemed to be withdrawn upon signature of an appropriate deed of Undertaking by an authorised signatory of the Acquiring Authority.</p>	<p>The Applicant has met and consulted regularly with UK Power Networks & Eastern Power Networks both pre and post submission of the Application.</p> <p>The Applicant is not aware of any land which is owned or occupied by Eastern Power Networks plc (EPN) within the order limits. The Applicant is aware of EPN's interests in land as listed in the Book of Reference where EPN benefit of rights associated with the use and maintenance of, and access for, apparatus.</p> <p>The Applicant considers that the land and rights can be acquired without serious detriment to the carrying on of EPN's undertaking.</p> <p>Where diversion of apparatus is required, the Applicant acknowledges that it will need to supply suitable alternative rights in the land where the diversion takes place. Where the diversion of apparatus is required at the proposed onshore substation, suitable rights for the diversion of Eastern Power Networks assets are being sought as part of the order and apply to the following land plots: 33-015, 323-014, 33-016, 33-018, 33-019, 33-021 & 33-023.</p> <p>The Applicant has included draft protective provisions in Part 1 of Schedule 9 of the dDCO [APP-027] for the benefit of a licence holder under the Electricity Act 1989 which the Applicant considers provides adequate protection of EPN's interests.</p> <p>The Protective Provisions in the dDCO [APP-027] ensure that EPN's apparatus will be protected and access maintained during construction.</p> <p>The Protective Provisions also ensure that (if necessary) no rights will be extinguished without EPN's agreement and no apparatus removed until alternative apparatus has been constructed.</p> <p>However, the Applicant is also in discussions with EPN in respect of a side agreement to regulate the interaction between Hornsea Three and EPN's apparatus</p> <p>The Applicant will continue to engage further with Eastern Power Networks to address their concerns in relation to its apparatus. .</p>

1.2.119 Irelands Arnolds Keys on behalf of William Gaymer [RR-119]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Irelands Arnolds Keys on behalf of William Gaymer are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.120 Brown & Co on behalf of William Young Dereham Limited [RR-120]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of William Young Dereham Limited are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.121 Brown & Co on behalf of WJF Ross Limited [RR-121]

Relevant Representation Comment	Applicant's Response
The issues raised by Brown & Co on behalf of WJF Ross Limited are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.122 Strutt and Parker on behalf of Woodlands Farm Partnership [RR-122]

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - Insufficient consultation and engagement; - Lack of compelling case for the requirement of compulsory acquisition rights; - HVAC and HVDC technology; - The location of the booster station; - Concerns regarding the construction and funding of the project; - The cumulative impact of multiple wind farm projects in Norfolk; - Insufficient information relating to Jointing Bays and Link Boxes; - Insufficient information regarding field drainage, soil protective, flood issues and dust control; - Insufficient information relating to access to the Order Limits; - Insufficient information relating to access for landowners to severed land; 	<p>This relevant representation reflects the points raised in relevant representation RR-146. Therefore, please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.123 Savills (UK) Ltd on behalf of DN Gray & Co [RR-123]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of D N Gray & Co are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.124 Cawston Parish Council [RR-124]

Relevant Representation Comment	Applicant's Response
<p>Traffic In Cawston</p> <p>We have concerns regarding the traffic impact through the village of Cawston. This relates to the fact that Link 89 through Cawston does not appear to have been fully assessed and therefore the sensitivity the village has not been addressed and appropriately mitigated.</p> <p>In particular, we feel that the impact of increased traffic movements on buildings, infrastructure, underground services, the environment and road safety, has not been given adequate consideration.</p>	<p>Please see response to Relevant Representation RR-065.</p>

1.2.125 David Brooks [RR-125]

Relevant Representation Comment	Applicant's Response
<p>We have already expressed our concerns about this potential major construction project (see Consultation Report Annex 2) and hope these will be taken into account.</p> <p>However we would like to strongly re-iterate the following points:</p> <ol style="list-style-type: none"> 1) Such a huge project installing 80 metre wide cable corridors, and massive cables, will mean major disruption to all roads, businesses and amenities in the area surrounding Weybourne, Kelling and beyond for many years to come. 2) The vehicles transporting these huge cables, plant and machinery will cause constant disruption and damage to the narrow country roads, inconveniencing local residents and workers. 3) People will be put off visiting the area, thereby affecting the thriving tourist trade. 4) The unique wildlife, eco-systems and environment are bound to be adversely affected by such a major intrusion. 	<p>With respect to the points 1, 2 and 3, please see the Applicant's response to Relevant Representation RR-012 which discusses traffic and transport impacts in this area, as well as associated impacts to amenity and tourism.</p> <p>With respect to point 4, impacts on ecological receptors are assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. The Applicant has sought to minimise impacts on ecological receptors through design, including avoidance of designated sites and the use of trenchless technologies (i.e. HDD) to avoid direct impacts on woodland. The effects were assessed to be not significant with the implementation of mitigation measures.</p> <p>Mitigation measures in respect of ecological receptors are secured through Requirement 17 (Outline Code of Construction Practice [APP-179]) and Requirement 10 (Outline Ecological Management Plan [APP-180]) of the dDCO [APP-027] and these documents must be approved by the relevant planning authority (in consultation with the Environment Agency in respect of Requirement 17, and Natural England in respect of Requirement 10) prior to the commencement of construction. Details of the proposed mitigation measures are set out in the Outline Code of Construction Practice [APP-179] and the Outline Ecological Management Plan [APP-180].</p>

1.2.126 Savills (UK) Ltd on behalf of Diocese of Norwich [RR-126]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Savills (UK) Ltd on behalf of Diocese of Norwich are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.127 Savills (UK) Ltd on behalf of Easton and Otley College [RR-127]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Easton and Otley College are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.128 Savills (UK) Ltd on behalf of H Jones (Farms) Ltd [RR-128]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of H Jones (Farms) Ltd are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.129 Savills (UK) Ltd on behalf of Mr and Mrs Nigel Darling [RR-129]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Mr and Mrs Nigel Darling are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.130 Mr R H Peaver [RR-130]

Relevant Representation Comment	Applicant's Response
As a resident of Edgefield, I am keen to preserve as far as possible the unspoilt, rural, light-pollution free and noise-free environment of the surrounding countryside, and am therefore grateful for the opportunity to keep informed about possible planning decisions.	Please see the Applicant's response to Relevant Representation RR-141 which addresses these general concerns.

1.2.131 Savills (UK) Ltd on behalf of Mrs Julie Dacre [RR-131]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Mrs Julie Dacre are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please note the applicant believes that the correct spelling is Julia Dacre however, we have followed the spelling given on the PINS website for this representation Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.132 Savills (UK) Ltd on behalf of Mrs S Bulwer-Long [RR-132]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Mrs S Bulwer-Long are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.133 North Norfolk District Council [RR-133]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in the North Norfolk District Council's Relevant Representation is provided below. Please see the full Relevant Representation in Annex 10 – Full response to North Norfolk District Council [RR-133] of this document.</p>	<p>Please see the full Applicant's response to this Relevant Representation in Annex 10 to this document.</p>
<p>General:</p> <ul style="list-style-type: none"> • North Norfolk District Council is fully supportive of the principle of renewable energy and Hornsea Three, and recognise the national importance of the project. • Choice of transmission system: • Clarification is sought on whether high voltage alternating current (HVAC) transmission will require an onshore HVAC booster station. • High voltage direct current (HVDC) transmission would result in the need for fewer buried cables and would have the least damaging impact on the district of North Norfolk. • Note that there is uncertainty as to whether the onshore HVAC booster stations are required with the reference that these components 'may be required'. 	<p>The Applicant has responded to each of the detailed points from this Relevant Representation in Annex 10 – Full response to North Norfolk District Council (RR-133). A summary of the points covered in Annex 10 is set out below:</p> <ul style="list-style-type: none"> • Transmission technology including the potential location of the HVAC booster station if the HVAC transmission option is selected; • Construction phasing and the use of ducting; • Landscape mitigation measures, the mechanisms to secure the measures and the Applicant's commitment to undertake planting at the onshore HVDC converter/HVAC substation and HVAC booster station at the start of the construction process; • Construction techniques at landfall and the implications for the marine environment; • Construction timeframes for HDD and open cut techniques at landfall and the implications for beach access; • The use of the maximum design scenario approach for the assessment; • Site selection process, the refinement of onshore cable corridor and the use of HDD to avoid ecological habitats; • Mitigation measures to be used where sections of hedgerows of high bat activity are removed; • Design of the onshore HVAC booster station and consultation of viewpoints for the wirelines and photomontages; • Lighting during the construction and operational stages and the agreement of a detailed lighting strategy; • Construction traffic including the maximum design scenario and traffic data used in the assessment, traffic management measures and the development of the Construction Traffic Management Plan; • Landscape and biodiversity mitigation measures and the relevant management plans; and • Community benefits.

Relevant Representation Comment	Applicant's Response
<p>Phasing of Hornsea Three:</p> <ul style="list-style-type: none"> Request clarity over construction timetabling. They seek a reduction of the maximum construction duration down to an acceptable level, which may include specifying a maximum gap between the end of the first phase and commencement of the second phase. Request clarity on which components will be installed within each phase on construction and suggest that the majority of trench works in phase one would also allow time for soils to recover and reduce the length of time taken out of agricultural production. 	
<p>Method of bringing cables onshore at Weybourne:</p> <ul style="list-style-type: none"> Believe that that Horizontal Direct Drilling (HDD) techniques should be used to bring the export cables onshore as this will have the least damaging impact on the nearshore. Notes that the Preliminary Environmental Information Report (PEIR) seems to be making progress in covering the impact of the Hornsea Three on coastal sediment transport. Disappointed that open cut trenching techniques to bring the export cable onshore is a possibility and note the possible six months of beach closure this could necessitate. <p>Working corridor of Hornsea Three onshore cable corridor:</p> <ul style="list-style-type: none"> Would like to understand the likely layout for the HVDC onshore cable corridor solution. Believe that there is currently a lack of clarity about the 'best-case scenario' which it is hoped will be made clearer. Use of HDD onshore: Welcomes the use of the HDD techniques, but would like to ensure the correct methods and locations have been chosen. 	

Relevant Representation Comment	Applicant's Response
<p>Onshore HVAC booster station:</p> <ul style="list-style-type: none"> Disappointed that the design of the onshore HVAC booster stations has not been refined further so that there is greater clarity about what is proposed. Note the lack of photomontages for areas where wirelines indicate that views of the onshore HVAC booster station would be limited was consulted on before the finalisation of this report. However, the time given for response was insufficient and not properly discussed. 	

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • They key issues they believe are still outstanding are: <ul style="list-style-type: none"> ○ Best-case for the onshore HVAC booster station; ○ Maximum design scenario for the onshore HVAC booster station; ○ Likely external form of any buildings to be sited; ○ External colours for any building(s) to be erected with the purpose of reducing the visual impacts; ○ Establishing what any solution without buildings would look like (including colour); ○ Establishing the specification and maintenance/management of mitigation planting necessary to achieve the minimum screening of the buildings set out in the photomontages for Years 1 and 15; ○ Understanding expected growth rates for mitigation planting; ○ Understanding the impact of a two-phase project on the onshore HVAC booster station site and associated landscape mitigation; ○ Understanding the likely visual impact of any external lighting needed on site. <p>Impact of construction traffic:</p> <ul style="list-style-type: none"> • Has particular concerns in respect of access north of the A148 from the point at which cables come onshore, with evidence submitted suggesting a significant increase in heavy goods vehicle (HGV) traffic. • Would like to understand how commitments on traffic levels and mitigation strategies can be secured in any subsequent consent to minimise adverse effects on sensitive receptors. 	

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> • Would like to understand whether delivery of equipment and cables should be outside of daytime hours when traffic volumes on these routes are highest. • Believe that it is important to understand the highway implications for the best-case scenario (assumed HVDC transmission) and the maximum design scenario (assumed HVAC transmission) so that residents and businesses can properly understand the impact of construction traffic. • Consideration will need to be given to construction phasing and what will happen in the event of significant delay between first and second phases. 	
<p>Landscape and biodiversity mitigation:</p> <ul style="list-style-type: none"> • Recognise that desktop studies and Phase 1 Habitat Surveys together with site specific surveys in accordance with best practice recommendations have been undertaken. • Welcome the ecology and nature conservation measures to be adopted as part of Hornsea Three. • It will be important for the Applicant to set out and quantify landscape mitigation to offset the loss of hedgerows and trees. • Believe that consideration will need to be given to the timing of enhancement/mitigation works. <p>Community benefits:</p> <ul style="list-style-type: none"> • Recognises that, once built, Hornsea Three is likely to be relatively benign. • Seek to secure a range of benefits for the wider community of North Norfolk. 	

1.2.134 Savills (UK) Ltd on behalf of Simon Moores [RR-134]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Savills (UK) Ltd on behalf of Simon Moores are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.135 Savills (UK) Ltd on behalf of Sir John White and Kyle White [RR-135]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Simon Moores are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.136 Savills (UK) Ltd On behalf of Trustees of J S Mott Will Trust being Lady Emma Suffield and William Edwards [RR-136]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Trustees of J S Mott Will Trust being Lady Emma Suffield and William Edwards are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.137 Savills (UK) Ltd on behalf of Trustees of Salle Park Trust being Sir David Chapman, Grant Pilcher, Michael Dewing and William Edwards) [RR-137]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Trustees of Salle Park Trust being Sir David Chapman, Grant Pilcher, Michael Dewing and William Edwards are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.138 Savills (UK) Ltd on behalf of Trustees of Sir Charles Mott Radcliffe Will Trust being Lady Emma Suffield and William Edwards [RR-138]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Trustees of Sir Charles Mott Radcliffe Will Trust being Lady Emma Suffield and William Edwards are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.139 Savills (UK) Ltd on behalf of Trustees of Stinton Hall Trust being Sir David Chapman, Grant Pilcher, Michael Dewing and William Edwards [RR-139]

Relevant Representation Comment	Applicant's Response
The issues raised by Savills (UK) Ltd on behalf of Trustees of Stinton Hall Trust being Sir David Chapman, Grant Picher, Micheal Dewing and William Edwards are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.	Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.

1.2.140 Anglian Water Services Ltd [RR-140]

Relevant Representation Comment	Applicant's Response
<p>Anglian Water is considered to be a statutory consultee for nationally significant infrastructure projects as identified in the Planning Act 2008 and associated regulations. The following representations are submitted on behalf of Anglian Water as water and sewerage undertaker for the above site:</p> <p>Anglian Water is in principle supportive of the above project.</p> <p>Impact on existing assets: We have been in dialogue with the applicant regarding the location of proposed crossings of Anglian Water's existing water and water recycling assets within the onshore cable route.</p> <p>Groundwater sources: There are existing boreholes for a public water source in the vicinity of the proposed cable route at Marlingford. It is essential to protect the aquifer and Anglian Water's existing assets from contamination from any activities that might cause pollution.</p> <p>We would expect mitigation measures to be put in place to prevent any pollution of the Chalk aquifer from surface activities.</p> <p>Protective provisions: We have previously requested the inclusion of specific wording for the benefit of Anglian Water as part of the Section 42 consultation conducted in 2017. It is noted that specific protective provisions have been included in the current version of the DCO (Schedule 6, Part 9 of the Draft DCO) as requested. The wording as proposed differs somewhat from that sought by Anglian Water and we would ask for clarification of what is the purpose of the intended changes before the DCO is finalised.</p> <p>Connections to water supply/public sewerage networks: Anglian Water is not aware of any water supply or wastewater requirements made upon them for the above project. Should a water supply or wastewater service be required and once agreement has been reached, there are a number of applications required to deliver the necessary infrastructure as outlined in the Water Industry Act 1991.</p>	<p>The Applicant has met and consulted regularly with Anglian Water Services Ltd (Anglian Water) both pre and post submission of the Application.</p> <p>The Applicant has consulted further with Anglian Water regarding its concerns about potential impacts on groundwater sources within the vicinity of Marlingford and have agreed with Anglian Water that suitable protection measures are included within the dDCO.</p> <p>Protective provisions have been agreed with Anglian Water which provide suitable protection of its assets. The final protective provision wording has been submitted in the updated dDCO (Part 6: For the protection of Anglian Water Services Limited) in the Applicant's Deadline 1 submission to the Examining Authority.</p> <p>Where the Applicant requires connections to Anglian Water's water supply/public sewerage networks, it will follow the necessary standard procedures outlined under the Water Industry Act 1991.</p>

1.2.141 Elizabeth Ward [RR-141]

Relevant Representation Comment	Applicant's Response
<p>As a resident of Edgefield village which is in the area that this project will effect I am concerned that the environmental impact of this project is fully explored and understood before development is undertaken. I want to see that this impact is minimized as much as possible and that the local wildlife is disturbed as little as possible and the local residents are not blighted by noise or light pollution from the booster station. The planning of this project needs to take into account the disruption of large vehicles on small lanes and time frames need to be set to reduce this with the local population in mind rather than Orsted's costs. Similarly, it is vital that environmentally friendly means of excavating for the cable are a priority in order to keep the integrity of the top soil and drainage systems that are within the cable corridor are appropriately moved.</p>	<p>The Environmental Impact Assessment undertaken for Hornsea Three takes an evidence-based approach in order to evaluate and assess the likely effects of the project across a wide range of relevant topic areas. The outcomes of this assessment are presented in Volumes 2 and 3 of the Environmental Statement, including Volume 3, Chapter 3: Ecology and Nature Conservation [APP-075]; Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]; and Chapter 8: Noise and Vibration [APP-080].</p> <p>In respect to lighting, the lighting at the onshore HVAC booster station will be short term and temporary during the onshore construction phase, used only when required (and generally limited to certain working hours) and designed to avoid unnecessary illumination (as set out in the outline CoCP [APP-179]). Impacts from permanent lighting at the onshore HVAC booster station (such as security lighting during operation to ensure a safe working environment), will be minimised through design, in particular through the use of action operated and directional lighting.</p> <p>The detailed lighting strategy for construction (i.e. temporary lighting) will be submitted as part of the final CoCP for the approval of the local planning authority under Requirement 17 of the dDCO. Construction lighting in the vicinity of bat roosts and hedgerows where high levels of bat activity have been recorded will follow best practice guidelines produced by the Bat Conservation Trust. This commitment is provided in updated paragraph 6.5.1.6 of the Outline CoCP (APP-179):</p>

Relevant Representation Comment	Applicant's Response
	<p><i>"6.5.1.6 Night working will be avoided where practicable. Where night working is unavoidable, light fixtures will be directed away from habitat of value to protected or otherwise notable species including badgers, birds and bats, to minimise likely disturbance effects of light spillage. Lighting will be kept to an absolute practicable minimum where located nearby to any active badger setts. Construction lighting in the vicinity of bat roosts and hedgerows where high or very high levels of bat activity have been recorded will follow best practice guidelines produced by the Bat Conservation Trust (Bat Conservation Trust, 2011)"</i></p> <p>As well as updated paragraph 4.3.6.5 of the Outline EMP [APP-180] as follows (new text shown in underline):</p> <p><i>"4.3.6.5 Hedgerow restoration will take place immediately following each cabling phase. However, replacement planting will take time to mature after each phase of construction. Therefore, artificial hedgerows will be provided in locations where hedgerows supporting high or very high levels of bat activity have been recorded in the locations shown on Figure 10.1. This will ensure that connectivity will be maintained across gaps created by the hedgerow until the second phase restoration planting matures. <u>Construction lighting in the vicinity of hedgerows where high or very high levels of bat activity have been recorded will follow best practice guidelines produced by the BCT (BCT, 2011)</u> Where lighting is required, light spillage onto adjacent areas of retained habitat of value to bats will be minimised."</i></p> <p>The detailed lighting strategy for the operation and maintenance phase (i.e. permanent) will be submitted for the approval of the relevant local planning authorities under Requirement 7 Detailed design approval onshore.</p> <p>Based on the mitigation and management measures in place, no significant light spill is anticipated during construction or operation.</p>

Relevant Representation Comment	Applicant's Response
	<p>Please refer to the Applicant's response to Relevant Representation RR-050 relating to traffic and transport at Edgefield.</p> <p>On the basis of the onshore mitigation measures identified within the documents referenced above, the Environmental Assessment did not assess effects from traffic and transport, or associated effects relating to noise and air quality impacts on residential receptors (Volume 3, Chapter 8: Noise and Vibration [APP-080] and Chapter 9: Air Quality [APP-081] of the Environmental Statement respectively) to be significant. Although, as set out in section 3.8 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], the onshore construction works will have a maximum duration of eight years, this assumes a maximum design scenario of construction across two phases, with a gap of inactivity in between (as a result of staggered construction of the components). Furthermore, the greatest intensity of traffic will be associated with the earthworks at any given location, which will occur for only a portion of this maximum duration.</p>
	<p>Impacts on land use, including soil quality and the best agricultural land, are assessed within Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078]. Given the potential for significant effects, the Applicant has committed to a number of mitigation measures in order to minimise the potential for impacts on soil (see Table 6.28 of the same chapter). These measures will be captured in a Soil Management Strategy to be developed post-consent (as part of the final CoCP) to provide suitable guidance on soil handling that can be implemented effectively on-site. To further minimise impacts, the Applicant has committed to restoring land after construction has been completed for that phase in a given location (including the demobilisation and restoration of secondary compounds and storage areas). As stated in paragraph 6.8.1.6 of the Outline CoCP [APP-179], existing water supplies and drainage systems will be maintained and reinstated wherever reasonably practicable during the construction process.</p>

1.2.142 Sarah Butikofer on behalf of Holt County Division (RR No. RR-142)

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in Sarah Butikofer on behalf of Holt County Division's Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation in Annex 11 – Full response to Sarah Butikofer on behalf of Holt County Division [RR-142 of this document.</p> <p>General:</p> <ul style="list-style-type: none"> Holt County District are not fundamentally opposed to the principle of renewable energy development if the project can be managed and delivered in a way that does not result in significant adverse impacts on local communities and businesses. 	<p>Please see the full Applicant's response to this Relevant Representation in Annex 11 – Full response to Sarah Butikofer on behalf of Holt County Division [RR-142 of this document.</p>
<p>Choice of transmission system:</p> <ul style="list-style-type: none"> Note that not defining High Voltage Alternating Current (HVAC) or High Voltage Direct Current (HVDC) transmission presents a very wide project envelope and increases the level of uncertainty for affected parties. Note that there is uncertainty as to whether the onshore HVAC booster stations are required with the reference that these components 'may be required'. The HVDC transmission option would result in the need for fewer buried cables and would have the least damaging impact on the district of North Norfolk. 	
<p>Phasing of Hornsea Three:</p> <ul style="list-style-type: none"> Request clarity on the construction timetabling. Oppose any extended construction window that would impact the local tourism economy. Request a specified maximum gap between the end of the first phase and commencement of the second phase. Request clarity on which components will be installed within each phase of construction. Request certainty around the benefits of any landscape mitigation works planned in phase one not being damaged or undermined by a protracted phase two timetable. 	

Relevant Representation Comment	Applicant's Response
<p>Method of bringing cables onshore at Weybourne:</p> <ul style="list-style-type: none"> Request that construction works on the beach are done 'out of season' as far as possible to mitigate the impacts on the local tourism industry. Disappointed that open cut trenching techniques to bring the export cable onshore is a possibility and note the possible six months of beach closure this could necessitate. Believe that that Horizontal Directional Drilling (HDD) techniques should be used to bring the export cables onshore as this will have the least damaging impact on the nearshore. <p>Working corridor of Hornsea Three onshore cable corridor:</p> <ul style="list-style-type: none"> Would like to understand the likely layout for the HVDC onshore cable corridor solution. Believe that there is currently a lack of clarity about the 'best-case scenario' which it is hoped will be made clearer. 	
<p>Impact of construction traffic:</p> <ul style="list-style-type: none"> Concerned about the impact of traffic and associated vibrations on their infrastructure. Believe that it is important to understand the highway implications for the best-case scenario (assumed HVDC transmission) and the maximum design scenario (assumed HVAC transmission) so that residents and businesses can properly understand the impact of construction traffic. Consideration will need to be given to construction phasing and what will happen in the event of significant delay between first and second phases. 	
<p>Landscape and biodiversity mitigation:</p> <ul style="list-style-type: none"> Recognises that desktop studies and Phase 1 Habitat Surveys together with site specific surveys in accordance with best practice recommendations have been undertaken. Welcome the ecology and nature conservation measures to be adopted as part of Hornsea Three. It will be important for the Applicant to set out and quantify landscape mitigation to offset the loss of hedgerows and trees 	

1.2.143 Mr C Carter [RR-143]

Relevant Representation Comment	Applicant's Response
<p>(1) Concern re. the proposed positioning of the HVDC Converter / HVAC Substation in a completely different site instead of adjoining the Norwich Main National Grid Substation for the Norwich area, which has easy access from the main A140 Norwich to Ipswich Road. The proposed siting is adjacent to a country "B" road, and would therefore necessitate numerous HGV movements during the construction phase on this local road.</p> <p>(2) The height of the proposed HVDC Converter / HVAC Substation would dominate the surrounding areas and could lead to an industrial complex in a country area, instead of siting it adjoining the Norwich Main National Grid Substation which already has mature screening masking it from the surroundings.</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to the HVDC converter/HVAC substation.</p>

1.2.144 Savills (UK) Ltd on behalf of Mrs C Barratt [RR-144]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Savills (UK) Ltd on behalf of Mrs C Barratt are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p> <p>In addition, Mrs C Barratt has raised the following points:</p> <ul style="list-style-type: none"> - Since purchasing the farm over 25 years ago, it has transformed it into a working, conservation and environmental farm. - Too much weight has been placed on the potential short term disturbance to residential dwellings in the vicinity (most being some distance from Hornsea Three) compared to mitigation of long term damage and impact to the environment and the farming business. - There has been no account of some of the infrastructure across the farm. - Further consultation is required to understand the requirement, visual impact and noise etc., as well as the length of time needed on site. - Savills (UK) Ltd on behalf of Mrs C Barratt's full Relevant Representation, together with the Applicant's response to each of the issues raised is provided in Annex 12 – Full response to National Farmers Union [RR-146 of this document. 	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p> <p>The Applicant is in discussions with the respondent in respect of a voluntary agreement and has visited the respondent's farming business to assess the impact and the comments raised in this relevant representation. The Applicant is hopeful that an agreement can be reached on a voluntary basis and will continue to consult with the respondent.</p> <p>The Applicant would refer to the Applicant's response to Examiners Written Questions Q1.10.6 in respect to short and long term impacts likely to arise for farm holdings, and the associated economic impacts. This confirms that the Applicant considers there to be no short or long term economic impacts likely to arise for farm holdings, nor aggregate economic impact for agriculture in Norfolk.</p> <p>In respect to the landscape and visual impacts, temporary impacts of construction works along the onshore cable corridor are assessed in paragraphs 4.11.1.11 and 4.11.1.20 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. This concludes that effects would range from negligible to moderate adverse which is not considered significant in EIA terms. Following completion of the onshore cable installation, the working area will be reinstated to a state commensurate with condition prior to the commencement of works (see paragraph 4.1.6.3 of the Outline CoCP, APP-179) such that any visual effects experienced during the construction phase along the onshore cable corridor would be temporary.</p> <p>In respect to noise, temporary impacts of construction works along the onshore cable corridor are assessed in paragraphs 8.12.1.2 and 8.12.1.9 of Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement [APP-080]. The assessment concludes that effects would be negligible to minor adverse, which is not significant. Measures to manage potential noise during construction are set out in paragraphs 6.2 and 6.3 of the Outline CoCP [APP-179] which will form the basis of the final CoCP to be submitted and approved by the local planning authority under Requirement 17 of the draft DCO [APP-027].</p>

1.2.145 Mrs Susan N Lowther [RR-145]

Relevant Representation Comment	Applicant's Response
<p>I would like consideration to be given to the proposed substation being built adjacent to the Norwich substation that already exists in Mangreen. Any obstacles can be overcome with a little extra financial input. Then the small but beautiful hamlet of Mangreen would not be blighted on both sides, and destruction of the natural habitat of wildlife here would be kept to a minimum.</p> <p>Considerable attention be paid to minimising the visual impact of the site (e.g. low buildings, surrounding mounds, trees etc) and avoiding the destruction of old hedgerows, trees etc</p>	<p>Please see the Applicant's response to Relevant Representation RR-001 relating to the HVDC converter/HVAC substation.</p>

1.2.146 National Farmers Union [RR-146]

Relevant Representation Comment	Applicant's Response
<p>A summary of the key issues raised in the National Farmers Union's and the Hornsea Three Agent's (Land Interest Group) Relevant Representation is provided below.</p> <p>Please see the full Relevant Representation in Annex 12 – Full response to National Farmers Union [RR-146] of this document.</p> <p>General:</p> <ul style="list-style-type: none"> • There has been a lack of constructive and proactive face to face meetings with the Applicant and their agents. • The Applicant has not sent out a draft option and lease to the agents or landowners. <p>Compulsory acquisition:</p> <ul style="list-style-type: none"> • No meaningful negotiations have taken place alongside the formal procedures for compulsory purchase. • High Voltage Alternating Current (HVAC) v High Voltage Direct Current (HVDC): • HVDC transmission would greatly reduce the impact on land operations and farm businesses as the width of the area required will be less and it is likely that no link boxes will be required. • Vattenfall are using HVDC transmission on Norfolk Vanguard. <p>Onshore HVAC booster station:</p> <ul style="list-style-type: none"> • Request clarification as to why the onshore HVAC booster station is not being built on a brown field site. 	<p>Please see the full Applicant's response to this Relevant Representation in Annex 12 of this document.</p>

Relevant Representation Comment	Applicant's Response
<p>Construction and funding:</p> <ul style="list-style-type: none"> Concerns that funding to deliver the second proposed phase of Hornsea Three is not in available and so should not be applying for this phase within this current Development Consent Order (DCO) application. The Applicant has not confirmed whether they will be ducting the cables, but that their preference is to lay the onshore export cables in open trenches. 	
<p>Cumulative impacts:</p> <ul style="list-style-type: none"> A cumulative effect assessment (CEA) has been included in the Preliminary Environmental Information Report (PEIR) but the detail is exceedingly broad with no mention of the Vattenfall Boreas scheme only Norfolk Vanguard. <p>Jointing bays and link boxes:</p> <ul style="list-style-type: none"> No clarification has been received on how many link boxes will be needed at the end of every run. Further design information on link boxes and the siting of them is required, including any link boxes to be located in a cluster and how will they be marked/identified/fenced. The preference is that all link boxes are located within fence boundaries. <p>Field drainage:</p> <ul style="list-style-type: none"> Insufficient detail has been received in regard to how reinstatement of field drainage will take place. Soils: Request information on what measures will be put in place to bring the soil back to its condition and quality before the works take place. An aftercare plan should be included in the code of construction. Flood issues: No details have been provided to landowners and occupiers on how any increase in surface run off of water from the haul road or the construction compounds will be dealt with during construction. Dust/irrigation: Request clarification on how dust will be controlled during construction and how can the effect on irrigation be minimised. 	

Relevant Representation Comment	Applicant's Response
<p>Access routes to the order limits:</p> <ul style="list-style-type: none"> • Request information in regard to how access to the order limit will be gained. • Question whether access may be needed along private access roads and/or to create access. • Access to land and the Haul Road: • Insufficient detail has been provided as to how landowners and occupiers are to access land severed by the construction works. • No detail has been provided on how the haul road may be constructed and if it is possible to use tracking for the haul road which can be laid on the surface of the land and taken up. • No specific detail has been given on the time the haul road will be down for severing land, the full eight year construction period would be unacceptable 	

1.2.147 Savills (UK) Ltd on Behalf of Taylor Wimpey (East Anglian) Ltd [RR-147]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Savills (UK) Ltd on behalf of Taylor Wimpey (East Anglian) Ltd are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please note the Applicant believes that the correct company entity is Taylor Wimpey (UK) Limited however, we have followed the company name given on the PINS website for this representation.</p> <p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.148 Savills (UK) Ltd on behalf of The Trustees of the B E Bulwer-Long Settlement being Alexander G Lane and Mills and Reeve Trust Co. Ltd [RR-148]

Relevant Representation Comment	Applicant's Response
<p>The issues raised by Savills (UK) Ltd on behalf of The Trustees of the B E Bulwer-Long Settlement being Alexander G Lane and Mills and Reeve Trust Co. Ltd are the same as those issues raised by the National Farmers Union in Relevant Representation RR-146.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146 in Annex 12 of this document.</p>

1.2.149 Highways England [RR-149]

Relevant Representation Comment	Applicant's Response
<p>Highways England as highway authority has responsibilities for the operation and management of the Strategic Road Network (SRN). With respect to this application, the A11 and A47 trunk roads are affected by the onshore cabling corridors being proposed and the construction of the substation which links the cabling to the national grid.</p> <p>Highways England is in ongoing discussions with the applicant and their consultants RPS on the detailed impacts of the proposals. In particular these relate to:</p> <ul style="list-style-type: none"> - Traffic impact from any construction traffic including any abnormal load routing on the SRN due to installation of the cabling and construction of the substation and any consequent mitigation. - Design and delivery of cable crossing points across the A11 and A47. - Coordination with and impact on the delivery of the A47/A11 Thickthorn Interchange Road Investment Scheme. <p>It is expected that any arising matters from the above will be addressed in the next few months and the outcomes will be presented in a Statement of Common Ground.</p> <p>It is not expected that there are any fundamental show-stoppers to the proposals.</p>	<p>The Applicant is in ongoing discussions with Highways England as recorded within the SoCG. The account presented by Highways England is an accurate representation of discussions and progress to date.</p> <p>In response to the particular points raised:</p> <ul style="list-style-type: none"> • The Applicant would note that the proposed compound off the B1113 is remote from the Strategic Road Network and the use of its access point will have no direct impact on the A11 or A47; • During detailed design, further information will be provided with respect to the design and delivery of crossing points across the A11 and A47; and • The scheme will be coordinated to minimise the impact on any forthcoming improvement scheme at the A47/A11 Thickthorn Interchange. <p>Those few outstanding matters have been addressed in Appendix A to the Statement of Common Ground between Highways England and the Applicant.</p> <p>In summary, the Applicant would agree with Highways England's Relevant Representation that the scheme is not expected to result in any show-stoppers (with respect to the Strategic Road Network) that should hinder the authorised development from proceeding.</p>

1.2.150 Shell U.K Limited [RR-150]

Relevant Representation Comment	Applicant's Response
<p>Shell UK Limited has considered the documents for the proposed project and wishes to continue an interested party to take part in the examination of the application for Development Consent of Hornsea Project Three Offshore Windfarm. Following a review of the documents and within Volume 2, Chapter 11 – Infrastructure and Other Users, are comments are as follows:</p>	<p>The Applicant thanks Shell UK Limited for their response to the Hornsea Three DCO application.</p>
<p>1. On page 12, the response is that pipelines are listed in table 11.16 and assessed in 11.11.1.14. This table is should be labelled 11.15 instead of 11.16.</p>	<p>The Applicant acknowledges this error and it has been addressed in Appendix 18 of the Applicant's submission to Deadline I: Errata to the Application.</p>

Relevant Representation Comment	Applicant's Response
<p>2. On page 58, Table 11.29 and further explanations show that impact is either minor or negligible – please could you provide the evidence for this including any investigatory reports that have been undertaken.</p>	<p>The assessment of effects on the "Safety zones around the offshore HVAC booster stations and advisory safety distances associated with activities underway along the offshore cable corridor may restrict potential seismic survey activity" is a qualitative assessment applying the EIA methodology detailed in Section 11.9 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The specific impact referred to in Table 11.29 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071] for the Shell licences of "negligible and minor" is in regard to the extent of overlap of the Shell licence blocks 48/19a and 48/20a, with the Hornsea Three offshore cable corridor. The explanation to support this is presented in paragraph 11.11.1.64 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The criteria used in this assessment for the magnitude of impact is discussed in paragraph 11.11.1.65 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071] and considers the extent of the physical overlap as listed in Table 11.29 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071] and the duration and frequency and reversibility of any potential impact.</p>
<p>3. On page 67, clause 11.11.2.66 – "The presence of new wind turbines may cause interference with performance of REWS", We will require Shell operated REWS to be taken into account. Details of these can be provided when required.</p>	<p>The oil and gas platforms which have REWS located on them, within a distance of 60 km from Hornsea Three, have been identified through consultation with the platform operators. These platforms are listed in Table 11.17 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071] and shown on Figure 11.7 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. REWS systems which may be within line of sight of the Hornsea Three array area are considered to be a distance out to 30 km (16 nm) however the REWS on one platform sometimes works in combination with the REWS on another platform to provide coverage to a range of platforms, and so platforms with REWS were considered out to 60 km.</p> <p>Pre-examination consultation with Shell advised that there was no REWS on the Cutter and Carrack platforms which are considered to be within the range of Hornsea Three, and did not advise of REWS on any other platforms. The Applicant is seeking to understand from Shell if REWS are located on any Shell platforms platforms which are potentially within the range of the Hornsea Three array.</p>

Relevant Representation Comment	Applicant's Response
<p>4. In our letter dated 20 September, we requested that the 10 pipelines and the pipeline corridor (200m either side) are avoided. We have assumed that in point 11.11.1.14, the assumption is that there are no plans to avoid the pipeline corridors and the matter will be resolved by proximity and crossing agreements. If this is correct and Hornsea Project 3 are unable to avoid Shell pipelines and the 200m pipeline corridor. We will require consultation to be carried out with us before any sampling, investigations or works within the pipeline corridor or 300m either side thereof are undertaken. If crossing agreements are necessary, these will need to be agreed before any works take place.</p>	<p>Consideration has been taken in the offshore cable corridor route selection to reduce interference with existing infrastructure, however there remains a requirement for certain pipeline crossings and proximities. All pipeline crossings are listed in Table 11.15 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. The Applicant intends to consult with Shell in regard to all crossing and proximity agreements for all Shell operated pipelines as detailed in paragraph 11.11.1.17 of Volume 2, Chapter 11: Infrastructure and Other Users of the Environmental Statement [APP-071]. Where required, the Applicant will enter into crossing and/or proximity agreements.</p>

1.2.151 Joseph Cook [AS-006]

Relevant Representation Comment	Applicant's Response
<p>I am writing to express my objection to any disruption to my land named <text blacked out ></p> <p>This development will render my land worthless and I don't just mean financially, I mean in use for me and my family. The land is only 125m x 25 m and the cable will be routed directly across it. I do not wish for my children to play over the cable area, my horse to graze over the area as the long-term exposure to what radiates from these cables has not been properly tested. I wished to have water connected so my horses could graze the field, but I will not be able to dig a trench for a water pipe as I will have a major power line going through my field. Myself and my children camp up the field in the summer months to view the varied and plentiful wildlife. I will not allow myself or my children to sleep over these cables. It's not even certain the wildlife will even return so please do not allow this project to go under the label of "green" as it is anything but. I had hoped to put a stable up on the field but I understand you cannot put structures above. This is an area of outstanding natural beauty, please keep it that way.</p>	<p>Please see the Applicant's response to Relevant Representation RR-017 in respect of EMF and impacts on public health.</p> <p>There is a need to impose restrictions on the use of land above the cables in order to ensure that they are protected from damage and can be accessed for maintenance. These are set out in Table 1 of the Statement of Reasons [APP-032] and include restrictions on erecting buildings or structures, altering ground levels, planting trees or carrying out operations or actions (including but not limited to blasting and piling) which may obstruct, interrupt, or interfere with the exercise of the rights or damage the authorised development. This type of restriction is standard for a nationally significant infrastructure project. It is possible for certain works to be constructed over, or in proximity, to the cables if appropriate protective measures are put in place. The detailed design and method statement for such works over the cables would need to be approved by Applicant.</p> <p>Impacts on the area of natural beauty (AONB) are assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. Based on the mitigation set out in Section 4.10 of the same chapter, no significant effects have been assessed as a result of the construction or operation of the onshore cable corridor. The Applicant has provided a clarification note on the impacts to the AONB at Appendix 23 Impacts to the Qualities of the Norfolk Coast AONB to the Applicant's submission to Deadline I.</p>

1.2.152 Amanda Cook [AS-007]

Relevant Representation Comment	Applicant's Response
<p>I'm writing to object to the disruption of my land. I have spent time and money making this a beautiful environment for wildlife – bats, bees, owls, deers, newts and for my children and horses. I am worried about possible radiation given off from the cables will kill my wildlife and make my children sick and no one can guarantee me it won't!</p> <p>This is our Sanctuary – our safe place to get away from the world.</p> <p>Why should anyone have right to take that away from us.</p>	<p>Please see the Applicant's response to Relevant Representation RR-017 in respect of EMF and impacts on public health.</p> <p>The Applicant has sought to minimise impacts on ecological receptors through design, including avoidance of designated sites and the use of trenchless technologies (e.g. HDD) to avoid direct impacts on woodland, rivers and other ecological receptors and the implementation of mitigation measures. Impacts on ecological receptors are assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. The effects were assessed to be not significant with the implementation of mitigation measures.</p> <p>Mitigation measures in respect of ecological receptors are secured through Requirement 17 and Requirement 10 of the draft DCO [APP-027], which requires a final CoCP and EMP to be prepared and approved by the relevant planning authority (in consultation with the Environment Agency in respect of Requirement 17, and with Natural England in respect of Requirement 10) prior to the commencement of construction. Details of the proposed mitigation measures are set out in the Outline CoCP [APP-179] and the Outline EMP [APP-180].</p>

1.2.153 The Coal Authority [AS-008]

Relevant Representation Comment	Applicant's Response
<p>I have reviewed the site location plan against the information held by the Coal Authority and can confirm that the proposed development site is located outside of the defined coalfield. Accordingly, the Coal Authority has no issues that it would wish to see considered as part of the above Order.</p>	<p>The Applicant notes this response.</p>

1.2.154 Richard Cubbitt [AS-009]

Relevant Representation Comment	Applicant's Response
<p>The only acceptable method of construction of the onshore cable infrastructure is by Horizontal Directional Drilling along the whole onshore route.</p> <p>There is a cumulative impact from Hornsea Project Three to connect to a substation at Norwich and Norfolk Vanguard Offshore windfarm Project to connect to a substation at Necton.</p> <p>These are two separate developments by two separate developers.</p> <p>There will be no joined up thinking or consideration between the two operators so far as construction methods or timing is concerned unless the Planning Inspectorate impose restrictions and conditions.</p> <p>Reepham (within the Broadland District Council area) is particularly adversely affected where the cable lines for both Projects cross.</p> <p>The countryside nor the inhabitants of this rural community cannot be allowed to suffer such adverse impact of two separate Open trench construction methods over the long projected construction periods envisaged in the application data.</p> <p>The scar on the landscape during the construction periods of both projects can be overcome without any additional cost to the Developer and that is by the Inspectorate dictating by condition that the only construction method Onshore shall be Horizontal Directional Drilling.</p> <p>Paragraph 2.60 of the scoping opinion for the Hornsea Project highlights the fact that the scoping report identifies Open cut trenching AND horizontal directional drilling as options for the installation of the onshore cables.</p> <p>Accordingly the developer accept that HDD is an acceptable method but has loaded its scheme towards Open Cut Trenching.</p> <p>Cutting through the countryside by Open Trench construction method is not acceptable for this Project (nor Norfolk Vanguard Project) and the Inspectorate must condition any consent so as to restrict only HDD as an acceptable construction method Onshore.</p>	<p>As set out in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059], the onshore cable corridor route selection process has sought to minimise direct impacts on sensitive receptors, for example, through the avoidance of designated sites and use of trenchless technologies (i.e. HDD). Volume 4, Annex 3.5: Onshore Crossing Schedule of the Environmental Statement [APP-089] provides a summary of the obstacles along the onshore cable corridor and how they are proposed to be crossed. The Applicant has committed to using HDD to cross multiple sensitive receptors including, watercourses, public roads, railways, woodland area and designated sites. It would not be financially viable to construct the full length of the onshore cable corridor using HDD.</p> <p>Where open cut is maintained as a construction methodology along the onshore cable corridor, mitigation measures have been identified to minimise potential impacts. In the Outline EMP [APP-180] the Applicant has committed to reinstating damaged or cleared terrestrial habitat as soon as practicable following the completion of a phase of construction works and as soon as it can be confirmed that ongoing works for that phase will not result in the damage or disturbance of reinstated or enhanced habitats. This will mitigate potential ecological impacts as well as minimise landscape impacts along the onshore cable corridor. In this regard, the assessment presented in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] concluded that no significant effects would occur.</p> <p>Hornsea Three are in regular contact with Norfolk Vanguard and Boreas promoters, Vattenfall, at all levels of the project and have sought and will continue to seek to liaise on environmental matters.</p>

1.2.155 Network Rail (RR No. AS-010)

Relevant Representation Comment	Applicant's Response
<p>We are instructed by Network Rail Infrastructure Limited (Network Rail) in relation to the Hornsea Project Three Offshore Wind Farm (Scheme) Development Consent Order (Order) application.</p> <p>Network Rail has an interest in Plots 3-018 and 30-028 (Plots) referred to in the book of reference.</p> <p>Network Rail objects to the grant of compulsory acquisition powers in respect of the Plots and Network Rail also objects to all other compulsory powers in the Order to the extent that they affect, and may be exercised in relation to, Network Rail's property and interests.</p> <p>Network Rail notes that there are protective provisions in the Order for its benefit. It will provide detailed comments on, and any amendments it requires to, those provisions as well as other submissions about the Order, in its Written Representation in due course.</p> <p>Network Rail requests that the Examining Authority treat Network Rail as an Interested Party for the purposes of the Examination.</p>	<p>The Applicant has met and consulted regularly with Network Rail Infrastructure Limited (Network Rail) both pre and post submission.</p> <p>The Applicant considers that the land and rights can be acquired without serious detriment to the carrying on of Network Rail's undertaking.</p> <p>The Applicant has included draft protective provisions for the benefit of Network Rail in Part 5 of Schedule 9 of the draft DCO [APP-027].</p> <p>The Protective Provisions in the draft DCO ensure that Network Rail's apparatus will be protected and access maintained during construction.</p> <p>The Applicant is not intending to extinguish any rights belonging to Network Rail.</p> <p>The Applicant acknowledges Network Rail's objection to the compulsory acquisition powers in respect of the plots which it has an interest in. The Applicant is engaged with Network Rail to agree appropriate terms so it can acquire the new rights for the cables by voluntary agreement. However, the Applicant will continue to seek compulsory acquisition powers over Network Rail's land so that Hornsea Three can be delivered in the event that it is not possible to acquire the rights by voluntary agreement.</p>

Annex 1 – Full response to Norfolk County Council [RR-035]

Annex 1 – Full response to Norfolk County Council (RR-035)

Relevant Representation Comment	Applicant's Response
<p>(1) Supports the principle of this offshore renewable energy proposal, which is consistent with national policy, subject to the detailed comments set out in this report being resolved satisfactorily through the DCO process;</p> <p>(2) Has a series of holding highway objections to the proposed onshore infrastructure (see detailed comments in Appendix);</p> <p>(3) Seeks a number of / "Requirements" (conditions) relating to highway; flood risk; and archaeological matters being agreed and attached to any final DCO decision (see detailed comments in the Appendix); and</p> <p>(4) Considers that the applicant should ensure that the proposal brings real socio-economic benefits to both (a) the individual communities directly affected by the planned infrastructure works and (b) the County as a whole.</p>	<p>1: The Applicant notes NCC's support.</p> <p>2, 3, 4: The Applicant notes these overarching points. Responses are provided to the detailed comments below.</p>
<p>1. Substantive comments</p> <p>Over-arching Comment</p> <p>1.2. The principle of this offshore renewable energy proposal should continue to be supported as it is consistent with national renewable energy targets and objectives, subject to the detailed comments, holding objections; and proposed planning conditions below being resolved.</p>	<p>The Applicant notes NCC's support of the principle of offshore renewable energy subject to the detailed comments responded to below.</p>
<p>Transmission Alternatives</p> <p>1.3. Comment – the County Council's preferred option would be for Orsted to pursue a HVDC solution which would overcome the need for a HVAC Booster Station, but recognises that the HVDC convertor station at Swardeston would have a greater height than the HVAC option.</p>	<p>Please see Appendix 22 to the Applicant's response to Deadline I in respect to the inclusion of both HVAC and HVDC transmission systems in the project envelope.</p>
<p>Grid Connection</p> <p>1.4. Comment – welcome the flexibility within this application to allow for electricity generated to feed into the local network (from Norwich Main) but consider that Orsted should pursue with National Grid and UKPN the opportunities for a secondary interconnection along the cable route in order to supply electricity where it may potentially be required to support housing and employment growth.</p>	<p>The transfer from the National Grid to the local network and the capacity of the local transmission network is beyond the Applicant's control. The Applicant understands however that the project will assist with local power needs as UK Power Networks has demand feeder connections at Norwich Main which already supply the local area with power. Therefore, any power produced by Hornsea Three and injected into Norwich Main 400kV substation will feed into both local demand (through these feeders) and the National transmission system, as this is the nature of electrical interconnection.</p>

Relevant Representation Comment	Applicant's Response
<p>Socio-Economic Issues</p> <p>1.5. It is felt that the County Council should continue to work pro-actively with Orsted to demonstrate the economic benefits of using the Port facilities at Great Yarmouth for:</p> <ul style="list-style-type: none"> - Construction; assembly and manufacture of windfarm components; and - Operations and maintenance. 	<p>The Applicant will explore the ability to use port facilities along the East Coast. We are likely to use more than one port during construction and cannot yet ascertain where Hornsea Three would site an operations and maintenance base. A decision on which port to use will not be made until detailed discussions have taken place with potential suppliers, at a stage where the Applicant has a greater understanding of where the various components will come from and port capabilities. This will likely be post consent.</p> <p>Although a decision on which port to use has not yet been made, the potential economic impacts of Hornsea Three, which includes economic benefits, is presented in Section 10.11 of Volume 3, Chapter 10: Socio-economics of the Environmental Statement [APP-082]. The assessment concluded that no significant adverse effects would occur, whilst positive impacts ranged from negligible to major beneficial which is significant.</p>
<p>Wider Community Issues and Impact on business</p> <p>1.6. Comment – welcome the commitment towards establishing a Community Benefit Fund and would ask Orsted to ensure all stakeholders/communities are made aware of such funds and have the opportunity to make appropriate bids.</p> <p>1.7. Comment – while welcoming the reduction in construction duration, it is felt that Orsted should commit to providing appropriate compensation for businesses and communities adversely affected by the construction works.</p> <p>Comment - The Committee also agreed that there should be penalties imposed on the developer of Hornsea Three in the event that the project over-runs beyond the timetable set out in the Environmental Statement accompanying the DCO application. Such penalties should include financial compensation to be paid into a Community Benefit Fund.</p>	<p>1.6 Please see the Applicant's response to Relevant Representation RR-031 regarding community benefits.</p> <p>1.7 Landowners who are directly affected by having the onshore elements of Hornsea Three on their land will be compensated. Any compensation will be for freehold depreciation of the land affected by the easement and for all reasonable and substantiated losses arising from construction of Hornsea Three.</p>
<p>Commercial Fishing</p> <p>1.8. Welcome the proposed mitigation and compensation measures set out in the ES and would ask that Orsted continue to work closely with the fishing community in order to minimise any potential impacts particularly during construction and decommissioning.</p>	<p>The Applicant notes NCC's support for this mitigation.</p>
<p>Local Highway Issues</p> <p>1.9. As a consequence of a number detailed outstanding highway access issues (see detailed comments below in the Appendix) the County Council will need to raise a series of holding highway objections; and require a condition (known as a "requirement") be imposed on the DCO requiring an up to date Construction Traffic Management Plan.</p>	<p>The Applicant notes these comments. Please see detailed response to highways issues below.</p>

Relevant Representation Comment	Applicant's Response
<p>Wider Strategic Highway Issues</p> <p>1.10. Comment – It is felt that Orsted should continue to work closely with both Highways England and Norfolk County Council as Highway Authority to ensure that the proposed cable route does not fetter any future plans for the strategic highway network to the west of Norwich.</p>	<p>The Applicant notes these comments.</p> <p>The Applicant has agreed with both NCC as the local highway authority and Highways England as strategic highways authority that future meetings to review and discuss Hornsea Three impacts on the Strategic Road Network will be held jointly, with both NCC and HE in attendance. Where relevant, the SoCG between the Applicant and NCC, and the Applicant and HE reflect common issues.</p>
<p>Minerals and Waste</p> <p>1.11. While the County Council does not have any minerals and waste planning concerns at this stage it is felt that the applicant should continue to work closely with the County Council as the application is progressed through to Examination.</p>	<p>The refinement of the onshore cable corridor, has resulted in a reduction in the area of Mineral Safeguarding Area that would be occupied by Hornsea Three. Impacts on Mineral Safeguarding Areas are assessed in Environmental Statement Volume 3, Chapter 1: Geology and Ground Conditions [APP-073] and concludes a minor adverse effects during construction which is not significant in EIA terms. No effects are predicted during operation and maintenance or decommissioning.</p> <p>The Applicant will continue to consult with Norfolk County Council Mineral Planning Authority regarding the Mineral Safeguarding Areas located along the Hornsea Three onshore cable corridor and the onshore HVAC booster station area during the detailed design phase. The Applicant has agreed this position with NCC through the SoCG.</p>
<p>Flood and Drainage Issues –Lead Local Flood Authority (LLFA)</p> <p>1.12. Comment – the LLFA welcome that Sustainable Drainage Systems (SuDS) have been proposed for the project where permanent above ground infrastructure is proposed to mitigate against additional impermeable surfaces creating an additional risk of flooding. Having considered the submitted documents, the LLFA are pleased to see that strategies have been supplied for the HVAC booster station and the HVDC converter / HAVC substation study areas. The cable corridor has not been considered in the drainage strategy due to the fact that the cable would be below ground and reinstatement to pre development state would mitigate the potential for increased runoff.</p> <p>1.13. Construction compounds - It is noted that stockpiled material and construction compounds are proposed to be located outside of the floodplain (where possible), and as such have not been included in the study areas. Comment - it is suggested that additional information regarding these areas is provided in the flood risk assessment and drainage strategy.</p>	<p>1.12 The Applicant notes NCC's support for SuDS.</p> <p>1.13 Impacts on flood risk during construction, including at construction compounds, along the haul road, construction accesses and the Hornsea Three onshore cable corridor, are managed through designed-in measures (as set out in Table 2.17, Volume 6, Chapter 3: Hydrology and Flood Risk of the Environmental Statement [APP-074]). Furthermore, principles of surface water management at construction compounds and storage areas, are set out in the Outline CoCP [APP-179]. Additionally, details of surface and foul water drainage must be approved for each phase of development by the relevant planning authority under requirement 13 of the DCO [APP-027]. With these in place, no likely significant effects are assessed in respect to flood risk.</p> <p>The Applicant has agreed with NCC through the SoCG that the details of drainage management for the construction compounds and storage areas will be provided at the detailed design stage. The wording of the specific requirement remains under discussion.</p>

Relevant Representation Comment	Applicant's Response
<p>Watercourses</p> <p>1.15. Comment - Norfolk County Council appreciates that these are initial drainage proposals, however ideally the matters above (infiltration testing and drainage design) should be clarified prior to determination, to ensure that the site has a deliverable surface water drainage strategy. In particular there is no maintenance or management strategy supplied with the application and the LLFA have to assume that the applicant will take responsibility for maintaining the drainage for the lifetime of development.</p> <p>1.16. Comments continued – The LLFA will require a series of issues to be resolved ahead of commencement, including, for example: detailed infiltration testing; detailed design modelling calculations; design of drainage structures; a maintenance and management plan etc. These issues can be addressed through a pre-commencement condition/requirement (see detailed comments below in the Appendix).</p>	<p>1.15 The Applicant has undertaken initial infiltration testing in line with BRE 365. Please see Appendix 25 and 26 to the Applicant's response to Deadline I. These summaries have been shared with NCC as lead local flood authority, and the Environment Agency. Detailed infiltration testing will be undertaken as part of the detailed drainage design process (if required).</p> <p>The Applicant has agreed with NCC through the SoCG that the following can form part of the detailed drainage design to be provided post-consent: detailed infiltration testing; detailed design modelling calculations; design of drainage structures; and details of maintenance and management.</p> <p>This is secured under Requirement 13 of the dDCO [APP-027] which requires details of surface and foul water drainage to be approved for each phase of development by the relevant planning authority prior to commencements. The Applicant will develop the detailed drainage strategy in consultation with the NCC. The wording of the specific requirement remains under discussion (see NCC SoCG).</p>
<p>Public Health</p> <p>1.17. The County Council would expect detailed matters relating to construction noise and local environmental health to be addressed by the relevant District Councils. Providing the District Councils are satisfied with the proposal in relation to the above matters, the County Council would not wish to raise any public health concerns at this time.</p>	<p>The Applicant notes NCC's position. The position of the District Councils in respect to public and environmental health matters are identified in the relevant SoCG.</p>

Relevant Representation Comment	Applicant's Response
<p>Local Member Views</p> <p>1.18. The Local County Council Member for Melton Constable has made the following comments:</p> <p>1.19. • Welcomes the fact that an experienced and respected developer has invested significant time and money preparing this proposal, which will help the UK reduce its reliance on carbon energy;</p> <p>1.20. • Considers it is vital that local people's concerns are listened to, in terms of the effects of the proposed development on their lives, and the steps that could be taken to mitigate them;</p> <p>1.21. • Mitigating the impact on work, life and the environment must be paramount, and no expense spared;</p> <p>1.22. • It is essential that any application for which consent is granted must contribute strategically to the local area as well;</p> <p>1.23. • Would like to see the developer propose ways in which the proposed development will benefit the local community in terms of infrastructure in the long term - be that through improved transport, digital infrastructure or otherwise.</p>	<p>1.19. The Applicant notes this comment.</p> <p>1.20. The Applicant has undertaken extensive consultation with local communities with feedback informing the site selection and route refinement process as set out in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059]. The Consultation Report [APP-035] provides a summary of the statutory and non-statutory consultation undertaken for Hornsea Three and how this consultation has been taken into consideration.</p> <p>1.21. Mitigation measures designed in to Hornsea Three are outlined in the relevant topic specific chapters of the Environmental Statement.</p> <p>1.22. In the context of socio-economics, Hornsea Three has identified measures focused on activities to maximise the socio-economic benefits associated with the construction, O&M and decommissioning phases of Hornsea Three, and to boost the amount of socio-economic benefit which is captured in the local economic development study area. Should consent for Hornsea Three be granted, Hornsea Three would assess, in partnership with the LEPs, the need for additional actions to support local economic benefit. Effective communication between Hornsea Three and relevant stakeholders as local opportunities become clear will help local businesses and authorities to plan for the supply chain and skills demand associated with Hornsea Three. In this regard, Requirement 22 of the dDCO (APP-027) requires that a skills and employment plan shall be prepared in relation to the authorised development and submitted to the relevant planning authority for approval.</p> <p>1.23. Please see the Applicant's response to Relevant Representation RR-031 regarding community benefits.</p>
<p>Detailed Highway and Environment Comments</p> <p>Highway Comments</p> <p>(a) Access Issues</p> <p>1.24. During construction safety at the temporary accesses can be controlled and managed, however, these access points need to be removed upon completion of the project. The applicant has stated they will be removed "where appropriate" and "where agreed with landowners" which is not acceptable.</p> <p>Comment – A condition is needed requiring an update to the Construction Traffic Management Plan (CTMP) whereby it includes written confirmation these accesses will be removed unless otherwise agreed by the Local Highway Authority (LHA) and that the highway verge will be re-instated to the satisfaction of the LHA together with timescales for</p>	<p><u>1.24. Temporary Access Issues</u></p> <p>Hornsea Three has committed (in paragraph 4.1.6.1 of the Outline Code of Construction Practice (APP-179) and paragraph 3.2.1.4 and 4.2.1.5 of the Outline Construction Traffic Management Plan (APP-176)) to remove temporary construction site accesses and any works within the highway, and the highway returned to its original condition, or standard commensurate to prior to the commencement of works respectively. Timescales for reinstatement would be identified in the detailed CTMPs to be developed in consultation with the HA post-consent.</p> <p>The Applicant has amended paragraph 3.2.1.4 and 4.2.1.5 of the Outline CTMP (APP-176) is amended as follows to reflect this (new text underlined):</p> <p><i>Paragraph 3.2.1.4 "Once <u>Within 28 days of a construction site access is being no longer required for the purpose of Hornsea Three construction, or written notice being served unto the Applicant by the HA, the access will be removed</u></i></p>

Relevant Representation Comment	Applicant's Response
<p>completion of the works.</p> <p>1.25. The applicant intend to design the proposed permanent accesses to the onshore HVAC Booster Station and HVDC converter stations / HVAC substation prior to the commencement of any construction works. This raises a serious issue as the applicant still needs to demonstrate that safe access points can be provided. As an absolute minimum, the application needs to include details of the proposed visibility splays for the permanent access points. If safe visibility cannot be achieved then it calls into question the viability of the project.</p> <p>1.26. Comment – It is felt that a holding objection on highway safety grounds should be raised until safe visibility at the permanent access points in respect of the above onshore infrastructure works is clarified.</p> <p>1.27. The main compound for the project is located at a completely different location to that included within the pre-application discussions. It is now located on the former Oulton Airfield and seeks to utilise an access and HGV route which the Planning Inspectorate identified in 2014 as being unsuitable for HGV's to use (PINS Appeal ref – APP/K2610/A/14/2212257).</p> <p>1.28. Comment – it is felt that the applicant needs to find a different site for their main compound. However, if they wish to pursue their chosen site then they will need to:</p> <ul style="list-style-type: none"> (i) provide a scheme of permanent off-site highway improvement works comprising carriageway widening along the entire route from the compound to the main road; and (ii) demonstrate that such a scheme is capable of overcoming the issues previously identified by PINS. <p>In the meantime it is felt that a holding objection on highway safety grounds should be raised to the inclusion of this site.</p> <p>1.29. (b) Damage to the highway</p> <p>The applicant will undertake video condition surveys of the proposed routes before being used by HGV's. A legal agreement between the applicant and the Highway Authority will ensure the applicant repair any damage caused.</p>	<p><i>and the highway returned to its original condition (including verges), unless otherwise agreed with the HAs. The details of and timescales for the reinstatement will also be agreed with the HAs. It is anticipated that the HAs will inspect the reinstatement works to ensure that there meet appropriate standards."</i></p> <p><i>Paragraph 4.2.1.5 "Any works within the highway will be reinstated to a standard commensurate to prior to the commencement of the works and, unless otherwise agreed with the HAs. The details of and timescales for reinstatement will also be and agreed with the HAs. It is anticipated that the HAs will inspect the reinstatement works to ensure that they meet appropriate standards."</i></p> <p>If work is carried out in phases, the commitment to remove temporary construction accesses between phases unless otherwise approved with the HA, as set out in paragraph 4.1.6.2 of the Outline Code of Construction Practice [APP-179], is appropriate.</p> <p>The Applicant has agreed the above commitments, and associated amendments to the Outline CTMP with NCC through the SoCG.</p> <p><u>1.25 and 1.26:</u> The Applicant provided permanent access drawings relating to the onshore HVAC booster station and onshore HVDC converter/HVAC substation to NCC (drawing numbers JNY8772-72A and JNY8772-81A, both dated 12 August 2018). The permanent access to the HVDC converter/HVAC substation indicated in drawing JNY8772-72 Revision A was considered acceptable by NCC in principle, although the Applicant notes that minor updates are required following the conclusions of the Stage 1 Road Safety Audit which will be submitted to NCC and the Examination as Appendix 29 to the Applicant's response to Deadline I.</p> <p>The Applicant has received comments from NCC regarding the permanent access to the HVDC converter/HVAC substation indicated in drawing JNY8772-81A and has submitted revision B as Appendix 30 to the Applicant's response to Deadline I.</p> <p>This engagement is documented within the SoCG, and engagement between the Applicant and NCC as LHA is ongoing regarding these designs.</p> <p>In the absence of any agreement at this stage, the Applicant would note that the draft DCO contains a requirement (Requirement 11 of the dDCO (APP-027)) to provide for approval details of highways accesses prior to commencement of construction of those accesses.</p> <p>1.27 and 1.28 The main construction compound is proposed to be located at the former Oulton Airfield which was identified within the S42 consultation, although it was</p>

Relevant Representation Comment	Applicant's Response
<p>Comment – welcome this approach</p> <p>1.30. (c) Abnormal Loads The number of abnormal loads is low in number, less than 20 in total and will be managed under separate consent from the Police and the County Council.</p> <p>Comment – the County Council is satisfied the impact from abnormal loads will be insignificant and falls outside the current assessment.</p> <p>1.31. (d) Travel Plans It is recognised that the linear nature of the works; the absence of a fixed permanent work site along the cable route; and the rural nature of much of the cable corridor make it difficult to implement a standard travel plan (TP) for the onshore cable corridor working.</p> <p>Comment – the County Council is satisfied that a TP has not been submitted with the current application.</p> <p>1.32. The assembly of components for the off-shore wind turbines and also maintenance of the off-shore facilities does not form part of the current application. Accordingly, the County Council will review TP requirements in relation to the off-shore works at a later date.</p> <p>(e) Cumulative Impact 1.33. The proposal has been satisfactorily assessed against the cumulative impact from construction traffic associated with other currently committed development.</p> <p>Highway Summary 1.34. Subject to additional information of a quality sufficient to remove the above holding objections set out above, the County Council anticipate being able to agree with the overall conclusion that there would be no severe impact on highway safety or congestion.</p>	<p>not assessed within the accompanying PEIR. Please see Appendix 20 to the Applicant's response to Deadline I for information regarding the access strategy to the main construction compound, including the consideration of the previous appeal decision (APP/K2610/A/14/2212257).</p> <p>1.29. Noted, this commitment is captured in paragraph 6.1.1.18 of the Outline CoCP (APP-179). The Applicant has agreed with NCC through the SoCG to amend the wording of paragraph 6.1.1.18 of the Outline CoCP and paragraph 6.1.1.1 of the Outline CTMP as follows (new text shown in underline):</p> <p><i><u>"6.1.1.18 Video condition surveys will be undertaken before HGVs make use of a section of road and after the substantial completion of works on minor links used by HGVs to access the Hornsea Three onshore cable corridor. Damage to the highway caused by the passage of construction vehicles will be repaired or an appropriate financial contribution made to the asset owner. The roads to be surveyed will be agreed with the HA as part of the final CTMPs, this agreement will be in accordance with requirements under Section 59 of the Highways Act 1980."</u></i></p> <p><i><u>"6.1.1.1 Video surveys will be undertaken of those local roads where it is considered that the passage of construction HGVs may cause deterioration of highways. These roads will be agreed with the HAs as part of the final CTMPs. The schedule of highways to be surveyed will be agreed with the HAs. This agreement will be in accordance with requirements under Section 59 of the Highways Act 1980."</u></i></p> <p>The Applicant has agreed the above commitments, and associated amendments to the Outline CTMP and Outline CoCP with NCC through the SoCG.</p> <p>1.30. The Applicant notes NCC's acceptance of the current Abnormal Indivisible Load Assessment within the submitted Environmental Statement. The Applicant highlights that it intends, through the development of the Outline CTMP (APP-176), to continue to monitor and consider the impact of Abnormal Indivisible Loads associated with the delivery of cable drums to both the main construction compound and to secondary compounds, as well as direct to the onshore cable corridor via temporary construction accesses in order to demonstrate safe access can be achieved.</p> <p>1.31. The Applicant notes NCC's position. However, through the SoCG, NCC have suggested that a voluntary Travel Plan is prepared, the Applicant will provide this at</p>

Relevant Representation Comment	Applicant's Response
	<p>Deadline 2.</p> <p>1.32. The Applicant notes NCC's position.</p> <p>1.33. The Applicant notes NCC's acceptance of the Cumulative Effect Assessment (CEA) within Volume 3, Chapter 7:Traffic and Transport of the Environmental Statement (APP-079). The Applicant also notes that since NCC's RR was submitted, the application for Vattenfall's Norfolk Vanguard project has been accepted by PINS. In order to pre-empt any concerns from stakeholders including NCC, the Applicant would highlight that it and Vattenfall, the applicant for Norfolk Vanguard, are in regular dialogue and are working towards providing an update to the CEA and Transport Assessment undertaken for the two projects to demonstrate the CEA as submitted remains robust. The intention is that this will be circulated to PINS and stakeholders – including NCC as LHA, and Highways England - during the early part of the examination. <u>The work in respect to the Main Construction Compound Access Strategy (Annex A and B to Appendix 20 of the Applicant's response to Deadline 1) is also ongoing as set out in the SoCG with NCC.</u></p> <p>1.34 – The Applicant notes and welcomes NCC's position.</p>

Relevant Representation Comment	Applicant's Response
<p>Ecology and Nature Conservation</p> <p>1.35. The involvement of the County Council with regards to ecology has been with onshore works only. Representatives from the Natural Environment Team have been involved in the On-shore Ecology Expert Group meetings and have had the opportunity to contribute to the scoping and methodology of ecological survey work, and have previously seen many of the results of the ecology surveys. The Ecology Chapter of the ES describes the ecological baseline and makes a robust assessment of impacts resulting from the onshore infrastructure requirements.</p> <p>1.36. Construction of the onshore elements of Hornsea Three has the potential to cause damage to designated sites (including County Wildlife Sites) and habitats such as watercourses and woodland. However, with a cable corridor that avoids most important wildlife areas, and the inclusion of "designed-in" mitigation measures (most notably the use of horizontal directional drilling (HDD) techniques to avoid ecologically sensitive areas noted above), the effects on CWS and habitats is considered to be of negligible to minor adverse significance i.e. not significant in EIA terms.</p> <p>1.37. In managing potential impacts on terrestrial ecology, the delivery and implementation of two documents will be key: the Construction Code of Practice (Code of Construction Practice) and the Ecological Management Plan.</p> <p>1.38. An Outline Construction Code of Practice includes a chapter on ecology with specific measures relating to: an Ecological Clerk of Works, biosecurity, invasive species, protective buffer zones, trees and hedgerows, amphibians and reptiles, water voles, otters, badgers, bats, and wintering birds (notably pink-footed geese in functionally-linked habitats to the North Norfolk SPA).</p> <p>Comment - The County Council acknowledge that this is a live document and will be updated post-submission of the DCO as required. In addition the County Council welcome the above approach and agree the content of the outline Code of Construction Practice.</p> <p>1.39. An Outline Ecology Management Plan (EMP) has the aim of providing "a single document that describes the ecology and nature conservation mitigation measures that will be implemented prior to, during and post construction of the onshore elements of Hornsea Three, and the long-term management measures to be set in place for reinstated and enhanced habitats". It is noted that the outline EMP is a 'living' document that will be updated as required post submission of the DCO, during the Examination Period and during the detailed design process as necessary prior to implementation. At this point, it is felt that the Outline EMP is appropriate. It is noted that the reference to the possible district licensing for great crested newts that may be in operation prior to commencement of works, and the potential need of a pink-footed goose mitigation strategy if construction work occurs within certain time periods.</p> <p>1.40. Comment - It is stated that the Outline EMP will be "prepared in consultation with the Local Planning Authority". It is assumed that the reference to "the LPA" in this context actually means all three district planning authorities through which the cable route passes (North Norfolk, Broadland and South Norfolk). The County Council will be consulted</p>	<p>1.35 -1.39 – The Applicant notes NCC's position on these points.</p> <p>1.40 - The final Ecological Management Plan (EMP), secured under Schedule 1, Part 3, Requirement 10 of the draft DCO [APP-027] will incorporate management measures identified in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) as well as the Outline Ecological Management Plan (APP-180). Requirement 10 within the draft DCO [APP-027] requires that the final EMP is submitted to and approved by the relevant planning authority (which includes NCC, SDC, BDC and NNDC as defined in Part 1, Article 2: Interpretation of the draft DCO [APP-027]) in consultation with Natural England.</p> <p>The Applicant notes that based on RR-073, Requirement 10 (1) of the draft DCO [APP-027] has been amended as follows (new text shown in underline):</p> <p>"No phase of the connection works may commence until for that phase a written ecological management plan (which accords with the outline ecological management plan) reflecting the survey results and ecological mitigation and enhancement measures included in the environmental statement has been submitted to and approved by the relevant planning authority in consultation with Natural England, and (where works have the potential to impact <u>wetland habitats</u>) the Environment Agency."</p> <p>The wording of Requirement 10 therefore requires that the Applicant consult and gain approval from NCC for the EMP.</p>

Relevant Representation Comment	Applicant's Response
<p>Landscape</p> <p>1.41. It is noted that the Landscape and Visual Impact Assessment has been conducted using the Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd Edition and other industry best practice guidance. The included visualisations using photomontages and wireframes are useful in viewing the likely effects of proposed development and change over time.</p> <p>1.42. It is apparent that the construction of the onshore elements of Hornsea Three has the potential to impact on landscape and visual amenity, however it is noted that “designed-in” mitigation measures, such as the use of HDD techniques will minimise these impacts. This is further supported by measures suggested within the Outline Landscape Management Plan (LMP).</p> <p>1.43. The Outline LMP is intended to provide a “framework to agree detailed masterplans and operations for the management and maintenance of the soft landscape proposals (planting and seeding) for the onshore HVAC booster station (if required) and onshore HVDC converter/HVAC substation, and management and maintenance of hedges and trees replaced and additional planting along the onshore cable corridor to ensure that the design and mitigation intent is realised.” It is noted that the Outline LMP has been produced in conjunction with, and should be read in conjunction with the Outline EMP.</p> <p>Comment - Overall the Concept and Design Justification, as detailed within the Outline LMP, includes suitable measures to reduce the landscape and visual impacts, retain landscaping where possible and enhance and compliment landscape features going forward.</p>	<p>1.41-43 – The Applicant notes NCC's comments on these points.</p>

Relevant Representation Comment	Applicant's Response
<p>Public Rights of Way</p> <p>1.44. In relation to the County Council as the Highways Authority, it is felt that the communication plan that will be developed as part of the Outline Code of Construction Practice is very necessary and will be an important document. It should ensure local authorities are kept informed of when and where works will be taking place. It is noted that the communications plan intends to ensure appropriate media (signage/leaflets/notices) will be used to inform residents, parish councils and visitors of temporary changes to the PRow network arising from the onshore construction works for Hornsea Three.</p> <p>Comment – the County Council welcome the need for advanced warning notices that would be erected at key points where PRow would be affected by the onshore cable laying works to make users aware of the construction working area and associated construction noise. This will be important in reducing the burden on NCC in managing matters relating to the PRow network with regards to the cable laying works</p> <p>1.45. The County Council welcomes the intention of the applicant to liaise with the PRow Officers over short-term temporary diversions of PRow.</p>	<p>1.44. The Applicant notes NCC's position on this.</p> <p>1.45. The Applicant has engaged with NCC (as detailed within the SoCG) regarding the design of temporary diversions to the PRow. These discussions are ongoing and will inform the preparation of a Public Rights of Way Management Plan, to form part of the final CoCP (schedule 1, Part 3, Requirement 22 of the draft DCO [APP-027]. This will be submitted for the approval of the relevant local planning authority in consultation with the relevant highway authority, i.e. NCC.</p>
<p>Norfolk Trails</p> <p>1.46. It is noted that where the cable laying works cross the Marriott's Way Norfolk Trail HDD will be used. This should result in negligible disruption to users of this Trail.</p> <p>1.47. The location of greatest concern for NCC is the landfall location at Weybourne where there will be disruption to users of the Norfolk Coast Path. It is accepted that the documentation in the ES recognises the sensitive nature and high usage of the beach and the coastal footpath. The Draft Code of Construction Practice states that in the event that access along the beach is to be restricted or the coastal path needs to be temporarily diverted, the principal contractor for the landfall works will "submit a PRow Management Plan to be approved by North Norfolk District Council as the relevant planning authority, developed in consultation with Norfolk County Council".</p> <p>1.48. Comment - The Norfolk Trails Team have had some discussions with the Hornsea Three team on this matter but are yet to be convinced that the initial proposals for managing users of the Trail at Weybourne are workable. As such it is felt that Orsted should continue discussions with the County Council and an appropriate plan be drawn up.</p>	<p>1.46. The Applicant notes NCC's position.</p> <p>1.47. and 1.48 The Applicant notes NCC's position and hopes to assuage its concerns. As requested in this paragraph, the Applicant has engaged with NCC (as detailed within the SoCG), as well as the North Norfolk Trails Partnership regarding the design of temporary diversions to the PRow including the Norfolk Coast Path. These discussions are ongoing and will ultimately inform the preparation of a Public Rights of Way Management Plan, to form part of the final CoCP (schedule 1, Part 3, Requirement 22 of the draft DCO [APP-027]. This will be submitted for the approval of the relevant planning authority in consultation with NCC as highways authority, therefore any outcome from the discussions with NCC will be able to be monitored and signed off appropriately before being implemented.</p>

Relevant Representation Comment	Applicant's Response
<p>Archaeology</p> <p>1.49. The Historic Environment implications of the onshore cable route and infrastructure of the Hornsea Three Offshore Windfarm have been assessed in the ES in respect of the buried archaeological remains and the setting of designated heritage assets.</p> <p>Comment</p> <p>1.50. The following Planning Conditions / Requirements are sought in relation to buried archaeological remains:</p> <p>1.51. (A) No development shall take place until an archaeological written scheme of investigation has been submitted to and approved by Norfolk County Council in writing. The scheme shall include an assessment of significance and research questions; and 1) The full programme and methodology of site investigation and recording, 2) The programme for post investigation assessment, 3) Provision to be made for analysis of the site investigation and recording, 4) Provision to be made for publication and dissemination of the analysis and records of the site investigation, 5) Provision to be made for archive deposition of the analysis and records of the site investigation and 6) Nomination of a competent person or persons/organization to undertake the works set out within the written scheme of investigation.</p> <p>1.52. (B) No development shall take place other than in accordance with the archaeological written scheme of investigation approved under (A).</p> <p>1.53. (C) The development shall not be operated until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the archaeological written scheme of investigation approved under (A) and the provision to be made for analysis, publication and dissemination of results and archive deposition has been secured.</p>	<p>1.49. – The Applicant notes NCC's position.</p> <p>1.50 – 1.53. A similar requirement has been included in the draft DCO [APP-027]. Requirement 16 states that a Written Scheme of Archaeological Investigation (WSI) must be submitted to and approved by the relevant planning authority (which would be NCC) prior to commencement of the consented onshore works. Furthermore, investigation of unexpected archaeological sites encountered during the construction phase will be undertaken in line with procedures (e.g. a chance find procedure) agreed in advance with the relevant authorities (see outline CoCP (APP-179)). On this basis, the Applicant considers the requirements proposed by NCC to have been incorporated sufficiently into the dDCO.</p> <p>The Applicant continues to engage with the NCC Archaeologist over the detail of a draft onshore WSI, with a view to this being agreed through the SoCG between NCC and Hornsea Three.</p>
<p>Flood Risk – Proposed Condition / Requirement</p> <p>1.54. Prior to commencement of development, in accordance with the submitted Environmental Statement for Application for Development Consent - The proposed Hornsea Project Three Offshore Wind Farm Order Application ref: EN010080, detailed designs of a surface water drainage scheme incorporating the following measures shall be submitted to and agreed with the Secretary of State or his delegated approving body. The approved scheme will be implemented prior to the first use of the development. The scheme shall address the following matters:</p> <p>I. Detailed infiltration testing to be undertaken in accordance with BRE Digest 365 within the study areas for the converter / booster station and sub-station for the design of SuDs features.</p>	<p>Outline drainage strategies for the onshore HVAC booster substation and the onshore HVDC converter/HVAC substation have been prepared and are provided in Volume 6, Annex 2.1: Onshore Infrastructure FRAs [APP-124] The proposed drainage strategies have been developed in accordance with the NPS, NPPF, PPG ID7 and the SuDS Manual, whereby sufficient attenuation storage is provided for 1 in 100 year plus climate change worst case storm event.</p> <p>The Applicant acknowledges the proposed requirements set out in NCC's Relevant Representation. Detailed infiltration testing and detailed drainage design (in accordance with the principles agreed with NCC through the SoCG) will be undertaken and provided to NCC during the detailed design stage (post-consent). This will also include details of maintenance and management of drainage systems. This is</p>

Relevant Representation Comment	Applicant's Response
<p>II. If infiltration is not possible surface water runoff rates will be attenuated to the pre development 1 in 1 year rate as stated within Annex 2.1 of Volume 4 of the Environmental statement (or 2 l/s/ha). Where applicable confirmation should be sought from the Internal Drainage Board that the proposed rates and volumes of surface water runoff from the development are acceptable.</p> <p>III. Provision of surface water infiltration / attenuation storage should be sized and designed to accommodate the volume of water generated in all rainfall events up to and including the critical storm duration for the 1 in 100 year return period, including allowances for climate change, flood event.</p> <p>IV. Detailed designs, modelling calculations and plans of the of the drainage conveyance network in the:</p> <ul style="list-style-type: none"> - 1 in 30 year critical rainfall event to show no above ground flooding on any part of the site. - 1 in 100 year critical rainfall plus 40% climate change event to show, if any, the depth, volume and storage location of any above ground flooding from the drainage network ensuring that flooding does not occur in any part of a building or any utility plant susceptible to water (e.g. electricity equipment required at the converter / booster station and substation) within the development. <p>V. The design of any drainage structures will include appropriate freeboard allowances. Plans to be submitted showing the routes for the management of exceedance surface water flow routes that minimise the risk to people and property during rainfall events in excess of 1 in 100 year return period.</p> <p>VI. Details of how temporary works or temporary storage areas that will generate surface water runoff will be controlled to prevent a temporary increased risk of flooding. These details will also include what strategy/ plans will be provided to reinstate land to the pre-development state.</p> <p>VII. Finished ground floor levels of the converter / booster station and substation should have a freeboard such that all infrastructure is above expected flood levels from all sources of flooding, including fluvial flooding associated with the ordinary watercourse, tidal flooding and any above ground storage or flooding from the proposed drainage scheme.</p> <p>VIII. Details of how all surface water management features are to be designed in accordance with The SuDS Manual (CIRIA C697, 2007), or the updated The SuDS Manual (CIRIA C753, 2015), including appropriate treatment stages for water quality prior to discharge.</p> <p>IX. A maintenance and management plan detailing the activities required and details of who will adopt and maintain the all the surface water drainage features for the lifetime of the development. This will also include the ordinary</p>	<p>secured by means of Requirement 15 of the draft DCO (APP-027).</p> <p>Notwithstanding this, initial infiltration testing has been undertaken at the onshore HVAC booster station and HVDC converter/HVAC substation, with the findings shared with NCC and the EA on 23 October 2018. These have been submitted as Appendix 25 and 26 to the Applicant's response to Deadline I.</p> <p>The Applicant will continue to engage with Norfolk County Council on flood risk and detailed drainage design, as detailed within the SoCG. In particular, the wording of the specific requirement remains under discussion.</p>

Relevant Representation Comment	Applicant's Response
<p>watercourse and any structures such as culverts within the development boundary.</p> <p>1.55. Reason:</p> <p>To prevent flooding in accordance with National Planning Policy Framework paragraph 103 and 109 by ensuring the satisfactory management of local sources of flooding surface water flow paths, storage and disposal of surface water from the site in a range of rainfall events and ensuring the surface water drainage system operates as designed for the lifetime of the development.</p>	

Annex 2 – Full response to CPRE [RR-037]

Annex 2 – Full response to CPRE (RR-037)

Relevant Representation Comment	Applicant's Response
<p>CPRE Norfolk responds to this consultation by focussing on planning and environmental/pollution issues. We are led to conclude that the Planning Inspectorate should not have accepted the Orsted application for entry into the DCO process, which is explained in our points 1, 2 and in part 3.</p> <p>In summary, this is because there is no information in the Orsted PEIR documents that provides any explanation of the physical differences between HVAC and HVDC transmission along the cabling route in terms of land take, either during construction or the permanent easement. The use of HVAC transmission adopts the worst case scenario as the baseline all along the cabling route. The differences between HVAC and HVDC transmission systems should have been stated throughout the consultation documentation, not hidden through the absence of data, overlain by masking that HVAC is always the worst case or maximum in terms of impact. The decision of Orsted to pursue the HVAC option is not compliant with PINS Advice Note Nine (2012) on the so-called Rochdale Envelope. In our view this was designed to allow for an unlikely or unforeseen event, or a genuine mistake in the construction; not to invite a known (but not to the public) option which has maximum range of impact or worst case scenario as the baseline, before evaluating any mitigation measures that can be potentially brought into play.</p>	<p>Hornsea Three is a nationally significant infrastructure project in a constantly evolving industry with a continuous focus on cost reduction and improvements in technology and construction methodologies. As such, it is not possible or desirable to provide precise final design details, or the way the project will be built, a number of years ahead of the time it will be constructed given the pace of change in the industry. Therefore, flexibility is required to be built into the DCO. As set out in paragraph 5.3.3.1 of Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement [APP-060], the Applicant has employed a maximum design scenario approach, which reflects the Rochdale envelope approach. This approach allows for a project to be assessed on the basis of maximum project design parameters in order to provide necessary flexibility, while ensuring all potentially significant effects (positive or adverse) are assessed within the EIA process and reported in the Environmental Statement. The maximum design scenario approach employed for Hornsea Three is consistent with the Planning Inspectorate's (PINS) updated Advice Note Nine: Rochdale Envelope (PINS, 2018), which explicitly allows and endorses flexibility to be built into nationally significant infrastructure projects.</p> <p>Please see Appendix 22 to the Applicant's response to Deadline 1, in respect of the implications the transmission system (HVAC and HVDC) would have on Hornsea Three parameters. Notwithstanding the information contained within Appendix 22, the assessments presented within the topic chapters of the Environmental Statement (Volume 2: Chapters 1 to 11 and Volume 3: Chapters 1 to 10) are based on a realistic maximum design scenario, which is either HVDC or HVAC technology depending on the receptor, not simply HVAC. Examples where each transmission technology represents the maximum design scenario are set out in Appendix 22. Where appropriate, mitigation is considered for the maximum design scenario throughout the Environmental Statement.</p> <p>The Applicant notes that the CPRE here and below refers to the PEIR. The Applicant would highlight that the PEIR formed the preliminary stage of the environmental assessment, with an environmental statement providing a more up to date position. This comment is not repeated below.</p>

Relevant Representation Comment	Applicant's Response
<p>We are also concerned about the disregard of NPPF policy on biodiversity, which is particularly critical for the River Glaven catchment, which is explained further in our points 4, 5 and 6, and in part 3.</p>	<p>Policies relevant to biodiversity, including the National Planning Policy Framework, have been fully considered in section 3.4.2 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. Consideration has also been given to the revised National Planning Policy Framework in Appendix 21 to the Applicant's response to Deadline 1.</p> <p>Detailed responses to points 4, 5 and 6 and part 3 are included below.</p>
<p>CPRE Norfolk responds to the above consultation by setting out our key points in a summary form. The supporting evidence is given in the attached documents, references 1 to 4. We make our numbered points under headings of first planning issues, and secondly ecology issues. Points 1 and 2, and point 3 in part, lead us to conclude that the Planning Inspectorate should NOT have accepted the Orsted application for entry into DCO process. The remaining points on ecology turn on the disregard of NPPF policy on biodiversity, which is particularly critical for the River Glaven catchment.</p>	<p>The Applicant has responded to the detailed points as set out below.</p>

Relevant Representation Comment	Applicant's Response
<p>PLANNING</p> <p>1. There is no information in anywhere in the Orsted PEIR documents that provide information of the physical differences between HVAC and HVDC transmission along the cabling route in terms of land take, either in construction or the permanent easement. This critically important information is of course known to the company but has been deliberately withheld. A single print document for the Vattenfall Vanguard PEIR application (which followed that of Orsted by two months) enables the estimation that the land take of HVAC is twice that of HVDC. The absence of this information in the Orsted documentation masks the very big difference in environmental impact on wildlife between the two transmission systems.</p> <p>2. This information obscures the fact that the use of HVAC transmission adopts the worst case scenario as a baseline all along the cabling route. The baseline environmental assessments throughout use the terms 'worst case scenario' or 'maximum' (as opposed to 'minimum') parameter. In fact the 'range' the range of impact in the envelope is simply the difference between the HVAC and HVDC transmission systems. They should have been stated as such in the consultations documentation, not hidden through absence of data overlain by masking that HVAC is always is always worst case or maximum in terms of impact.</p> <p>The decision of Orsted to pursue the HVAC option is not compliant with PINS Advice Note Nine (2012) on the so-called Rochdale Envelope. In our view this was designed to allow for an unlikely or unforeseen event, or a genuine mistake in the construction in construction; not to invite a known (but not to the public) an option which has maximum range of impact or worst case scenario as the baseline before evaluating any mitigation measures that can be potentially brought into play. In effect the use of HVDC is a very powerful mitigation measure to have in the tool kit, and recognised by some Vattenfall staff at the roadshow events (and of course it also removes the need for an onshore booster station).</p>	<p>Please see Appendix 22 to the Applicant's response to Deadline 1, in respect of points relevant to the transmission system (HVAC and HVDC).</p>

Relevant Representation Comment	Applicant's Response
<p>ECOLOGY</p> <p>3. River valleys are the most important element of the ecological network in terms of length and variety on habitats. The headwater of a river at a watershed can link one river system to the next, often running through intensively farmed arable land. Restored farmland ponds are proving to be a very powerful habitat in the 'stepping stones' category in addition to hedgerows etc. There is however scant mention in the Orsted PEIR of the ecological network or its recognition of the importance given in the 21012 National Planning Policy Framework (paragraphs 109, 113, 117; also 110 on pollution). The ecological network is particularly important for the River Glaven catchment as regards the Orsted application. This is the only example where the cabling runs along the spine of river system and the ecological network. (For the Bure, Wensum and Tud there is a river crossing at a right angle fixed point, and a different and lesser order of environmental impact). The application is seriously flawed in this respect, and a re-write which is required on points 1 and 2, should also take this issue on board. This would save time and effort all round in moving through the process of a DCO.</p>	<p>As outlined in Table 3.3 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075], the design of Hornsea Three has taken account of the requirements of the National Planning Policy Framework (NPPF) (2012), as updated in 2018, which mirrors the relevant provisions highlighted. As outlined in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059], the evolution of the scheme from the PEIR to the Environmental Statement (and previous site selection stages) included route refinement of the Hornsea Three onshore cable corridor to avoid all designated sites where possible and a commitment to Horizontal Directional Drilling (HDD) under designated sites where the Hornsea Three onshore cable corridor could not be re-routed around designated sites. This is secured in paragraph 3.2.1.2 of the Outline EMP [APP-180]. The CPRE only refer to the PEIR – as mentioned above, we would suggest that the CPRE consider the Environmental Statement if it has not done so already so as to understand the amendments in the proposed scheme since the PEIR.</p> <p>Furthermore, as stated in Table 3.19 and paragraph 3.11.1.41 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075], all major watercourses and associated riparian habitat will be crossed with HDD, as are the majority of minor watercourses. To take the River Glaven in particular, HDD (with haul road over) will be undertaken for the two Glaven tributary streams crossed by the Hornsea Three onshore cable corridor, at Kelling Road and Baconsthorpe Wood. This is secured in paragraph 2.2.1.3 and 3.2.1.2 of the Outline EMP [APP-180].</p> <p>In addition, there are numerous locations including within the River Glaven catchment area where hedgerows will be retained through the use of HDD. Full details of crossings are provided in Volume 4, Annex 3.5: Onshore Crossing Schedule of the Environmental Statement [APP-089]. Furthermore, as outlined in Table 3.19 Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement and also the Outline Ecological Management Plan [APP-075 and APP-180 respectively], where hedgerow losses will occur, replanting of species rich native hedgerow will be undertaken, including in locations where existing hedgerows are species-poor. Full details of hedgerow enhancement measures are detailed in the Outline LMP [APP-181].</p> <p>On the basis of the assessment presented within Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075], no significant effects on the River Glaven Catchment or its associated ecological features are anticipated.</p>

Relevant Representation Comment	Applicant's Response
<p>4. The general impact of HVAC having open trenching at about twice as width of that required for HVDC would be to create more disturbance to wildlife and habitats in general, and for longer times. The sum of the individual impacts on habitats collectively and cumulatively impacts on the ecological network as a whole. HVAC not only starts with a baseline impact much higher than with HVDC, the longer timescales means that any restoration measures will have less chance of being successful. HVDC also provides more 'wiggle room' in keeping at a distance of wildlife habitats, such as farmland ponds (N.B. The same would apply elsewhere, such as residential housing and historic assets). While across the EU the great crested newt is rare in the upper Glaven it is relatively common (but still protected species). Farmland ponds very quickly see a return of wildlife, and studies show this includes this newt.</p>	<p>The Applicant would highlight that Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075] assessed the maximum design scenario, which in this instance comprised the HVAC transmission system. Taking into account the designed-in mitigation measures provided in Table 3.19 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075], as well as design refinement, it was concluded that no significant effects on terrestrial habitats or species would occur. Please see Appendix 22 to the Applicant's response to Deadline 1, which provides a comparative assessment of the likely effects for both transmission systems (HVAC and HVDC).</p> <p>As a result of EWG meeting advice (25 July 2017), the Applicant has been engaging with the Norfolk Ponds Project with regard to the implementation of the preferred landscape-scale licencing route for GCN. This would involve directing resources towards pond restoration and terrestrial habitat creation targeted at GCN metapopulations most affected by Hornsea Three, to benefit this species (and would also benefit a number of other species including farmland birds, invertebrates and other amphibians associated with ponds). The Applicant is preparing a ghost licence application using this method, which will be submitted to Natural England during the course of Examination no later than Deadline 3. If Natural England do not agree that a LONI can be issued with the principles outlined in the ghost licence application, the Applicant proposes to submit a revised ghost licence application based on the traditional exclusion route. Ongoing discussions with Natural England in this regard are recorded within the SoCG.</p>
<p>POLLUTION</p> <p>5. The HVAC system would entail soil heaps to left for much longer, and be vulnerable plants that quickly colonise bare soil; for example Himalyan Balsam. More damaging however is that even with covering the reality remains that there would be much water borne soil entering the river system and adversely affecting the river ecology. Silt sees the loss of clean gravel habitat, but also will carry some agri-chemicals. There remains an ongoing issue with arable farming run-off, and will be with open cut trenching; and again especially with HVAC.</p>	<p>The Applicant would note that impacts to surface watercourses have been avoided or minimised through the commitment to use HDD to cross all 'main' and most 'ordinary' watercourses. This is secured through paragraph 2.2.8.2 of the Outline EMP [APP-180].</p> <p>Please also refer to the Applicant's response to Relevant Representation RR-096 where the Applicant identifies a further commitment to installing all onshore export cables circuits within ducts, as opposed to direct burial. This approach means that trenching and cable installation can be de-coupled and will provide more flexibility for the installation process facilitating an improved ability to optimise works and delivery of components. Typically, this will result in the trenches being open for a shorter duration, which minimises the length of time subsoil is stored outside of the trench and makes the construction work less susceptible to poor weather conditions.</p> <p>Notwithstanding this, impacts from open cut activities and the HDD pits on surface water features will be minimised</p>

Relevant Representation Comment	Applicant's Response
	<p>through the application of pollution prevention measures, the principles of which are set out in the Outline CoCP [APP-179], paragraph 6.4.1.15 – 6.4.1.17. The Outline CoCP identifies that areas with prevalent run-off will be identified and appropriately managed, for example through bunding and/or temporary drainage systems. In the same paragraphs, the Applicant also commits to ongoing consultation throughout the construction phase with the Environment Agency and Natural England to promote best practice and to implement proposed mitigation measures. Both Natural England and the Environment Agency in their Statements of Common Ground, included in the Applicant's submission to Deadline I, have agreed the Applicant's approach to protection of surface water from excessive sediment and pollution.</p> <p>Requirement 17 of the dDCO [APP-027] states that prior to construction of onshore works, a code of construction practice (CoCP) must be submitted to and approved by the relevant planning authority. This final CoCP must accord with the outline CoCP and will develop the principles of pollution prevention into site specific detailed measures as appropriate.</p> <p>In respect to colonisation of bare soil stored alongside the trenches or adjacent storage area, Appendix D of the Outline CoCP [APP-179] provides a protocol setting out measures to be undertaken to prevent the spread of invasive species during cable installation. Paragraph D1.1.2 of the Outline Biosecurity Protocol identifies general good practice measures such as the reporting of known locations of invasive plant species to the ECoW as soon as practicable and disposal of or thorough disinfecting of clothing or footwear which may have come into contact with invasive species. This protocol will be developed as part of the final CoCP under Requirement 17 of the dDCO [APP-027].</p>

Relevant Representation Comment	Applicant's Response
<p>6. The most critical protected species on the Glaven in the native white-clawed crayfish. The disease carried by the invasive non-native signal crayfish can be carried from one site to another by clothing and equipment and is fatal to the native crayfish. The upper Glaven is we think the only place in East Anglia with a healthy population of the white clawed crayfish, and as such has an Ark status, perhaps now south east England.</p> <p>Other rivers such as the Wensum with its SAC status, it native crayfish was the prime species for the designation, and is badly affected.</p> <p>While Orsted may be confident that they can be confident on the level of risk, they will be in a minority on this. If however there was a contamination incident, the impact and profile would be huge; and particularly if working with HVAC.</p>	<p>Paragraph 6.5.1.7 of the Outline CoCP acknowledges the potential risks associated with invasive species, particularly in the aquatic environment. The majority of watercourse crossings are being undertaken using HDD (see paragraph 2.2.8.2 of the Outline EMP [APP-180]) – including those where white-clawed crayfish are known or expected to occur (see Table 3.15 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement), and no ponds are directly affected; however, where working in or near water, control measures will be implemented. Appendix D of the Outline CoCP [APP-179] provides a biosecurity protocol which identifies measures to be undertaken to prevent the spread of invasive species during cable installation.</p> <p>An assessment of the potential impacts on surface water features and the native white-clawed crayfish is presented in Volume 3, Chapter 3: Ecology and Nature Conservation [APP-75] and concludes, based on the mitigation identified, that there would be no significant effects.</p>
<p>REFERENCE DOCUMENTS</p> <p>1. Letter from constituent to the Rt Hon Norman Lamb MP, dated 22 November 2017, 3 pages. (in particular, paragraph 4 for the cabling land take differences between HVAC and HVDC).</p> <p>2. Letter from constituent to Norman Lamb, dated 17 January 2018 (4 pages). This was in response to the reply from Rt Hon Richard Harrington MP, Minister for Energy and Business). It puts the case that the Orsted interpretation of PINS Advice Note Nine is wrong.</p> <p>3. The CPRE Norfolk/River Glaven Conservation Group (RGCG) response to the Orsted PEIR consultation, dated 20 September 2017 (8 pages). This submission replaced that sent on the 17 September to Orsted. Text unaltered but some use of bold and underling to highlight the importance of the ecological corridor.</p> <p>4. An 'expert' RGCG document on the importance of the upper Glaven in the ecological network, and the impact of the cabling route on wildlife (14 pages).</p>	<p>Noted</p>
<p>Attachments:</p>	

Relevant Representation Comment	Applicant's Response
<p>22 November 2017, Dear Norman Lamb, The Onshore Environmental Impact of Orsted and Vattenfall Wind Farms: HVAC versus HVDC for electricity transmission to the National Grid.</p> <p>FNN letter in response to correspondence between Norman Lamb MP and Richard Harrington MP, Minister for Energy and Industry 17th January 2018</p> <p>DONG Energy Horbsea Project Three PEIR Consultation. Joint Response From River Glaven Conservation Group (RGCG) and CPRE Norfolk</p> <p>Threats to the upper Glaven ecological network: Dong Energy cable route, River Glaven Conservation Group</p>	<p>Noted</p>

Annex 3 – Full response to South Norfolk Council [RR-054]

Annex 3 – Full response to South Norfolk Council (RR-054)

Relevant Representation Comment	Applicant' response
<p>In general, the District Council is supportive of the project, recognising its importance in relation to the diversification of UK energy supplies and potential contribution to the national and local economy. The economic benefits in terms of investment and job creation are welcomed. We are however concerned at the adverse visual effects, together with the harm to Heritage assets the converter/substation would have on our District. Contrary to National and Local Policy.</p> <p>The Environmental Impact Assessment has been conducted using appropriate and agreed methods and has been informed by relevant and up to date surveys, modelling, evidence gathering and desk studies. The scope and methodology of these has been agreed with key stakeholders and consultees throughout the process. Overall the ES is comprehensive and of good quality and there are no substantive issues arising from it, subject to the following comments:</p>	<p>The Applicant notes the Council's support for the project and has responded to the concerns under the detailed comments below.</p>
<p>Impact on Heritage Assets The Council considers that the impact of the development on both the setting of Keswick Hall and the setting of the historic parkland should be considered to be a greater level of impact and of more significance in the EIA than currently attributed. This we feel should be given sufficient weight, particularly with regard to the options between HVAC and HVDC converter/substation, where the latter would result in a significantly higher building, a greater degree of harm, and fewer possibility of mitigating that harm in terms of the design approach. Other mitigating measures could include further tree planting and careful consideration of the proposed colours of the building/buildings.</p>	<p>The sensitivity of Keswick Hall is assessed in paragraph 5.11.1.98 Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077) as medium (taking into account that setting makes a significant contribution to the sensitivity of the designated asset in that it retains its parkland setting) appropriate.</p> <p>The magnitude of impact as reported in paragraphs 5.11.1.93 to 5.11.1.95 Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077) is minor and the significance of effect is reported as minor adverse. The Applicant will continue discussions with SNC with an aim to reach agreement on the predicted magnitude of impact and significance of effect on the designated asset and its setting (as noted in the SNC SoCG). Notwithstanding these discussions, the proposed mitigation as set out in Table 5.13 of Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077) and the commitment, under Requirement 7 of the draft DCO (APP-027), to submit details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the HVDC converter/HVAC substation for approval SNC prior to commencement of construction are considered to be appropriate.</p>

Relevant Representation Comment	Applicant' response
<p>Landscape and visual impact</p> <p>It is considered that in landscape impact terms, the greatest effect is on the site of the proposed sub-station and this would be a significant adverse effect (major-moderate adverse) but that this would diminish outside the site where the effects would not be significant. With regards to the visual impact, the most significant visual effects are from Mangreen Lane and Low Road. Overall the EIA concludes that, on completion, the visual effects would diminish as new planting matures so to be not significant. However, the planting will take a long time to establish. It is also considered that some of the degree of harm can be mitigated against through various measures such as having a substation/converter which is lower height and use of recessive colour for the building.</p> <p>In respect of the impact of the cable route, in the absence of the information in terms of the 'importance' of hedgerows under the Hedgerows Regulations and assessment of trees implicated in the scheme, it is not possible to conclude on the impacts of the cable route. Concern that the creation of woodland, whilst offering an opportunity to reduce the visual and aural impact of the A47 on the rural ambience of this area, would impact on the openness of the bypass protection zone, which could result in a significant adverse effect.</p>	<p>The assessment of potential effects on landscape and visual resources in Section 4.11 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement is presented in Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement (APP-076)).</p> <p>This assessment is based on a maximum design scenario of the HVDC converter/HVAC substation as set out in Table 4.8 of the same chapter, which includes a maximum height of building/equipment of 25 m across the permanent area of the site.</p> <p>The indicative landscape planting proposed at the onshore HVDC converter/HVAC substation, including the proposed species mix and specification, is shown in Appendix A of the Outline LMP (APP-181) and integrates the proposals into the landscape context. Further details of the mitigation planting will be provided in the final LMP to be developed in consultation with the relevant local authorities' post-consent (under Requirement 8 of the draft DCO (APP-027)). In particular, consideration will be given to mitigation planting to ensure it reflects the mitigation necessary for the final design of the onshore HVDC converter/HVAC substation (to be approved under Requirement 7 of the draft DCO (APP-027)). This will enable the design to maintain the openness of the bypass protection zone as far as possible, as well as mitigate landscape and visual effects and promote good design.</p> <p>Since the point of application, the Applicant has committed in the Outline LMP (APP-081) to planting sections of the landscape planting at the commencement of works at the onshore HVDC converter/HVAC substation, which could be up to three years ahead of the planned completion of construction works, in order to maximise the screening provided in the shortest period of time. Revised wording at newly added paragraphs 3.1.3.4-3.1.3.5 of the Outline LMP (APP-181) has been agreed with SDC in the SOCG.</p> <p>The assessment methodology in respect to impacts on hedgerows and trees currently assumes a maximum design scenario of removal in all areas where HDD is not proposed, or specific protective measures are not identified within the Outline EMP (APP-180) (i.e. as done for retained habitats of ecology and nature conservation concern, paragraph 4.2.2). The Applicant considers that this approach provides sufficient comfort that impacts on hedgerows and trees identified under the maximum design scenario have been considered and where appropriate, suitable mitigation is captured within the Outline CoCP (APP-179), Outline EMP (APP-180) and Outline LMP (APP-181).</p> <p>The Applicant has submitted Appendix 38 to the Applicant's response to Deadline 1 which clarifies the classification of hedgerows, and identifies individual tree locations. Furthermore, the Applicant has updated paragraphs 2.2.7.3 – 2.2.7.6 in the Outline EMP (APP-181) to reflect the impacts on Important Hedgerows.</p> <p>The Applicant is committed to continuing engagement with SNC following Deadline 1 and is confident that a position can be reached whereby SNC is provided with sufficient information on which they can form a judgement on the implications of the authorised development.</p>

Relevant Representation Comment	Applicant' response
<p>Noise and Pollution</p> <p>With regards to specified works to be undertaken issues relating to Control of Noise, Air Quality, Artificial Light, Waste Management, Pollution Prevention, Contamination Assessment and Mitigation and Working Hours are adequately covered by the Requirements in the Draft DCO. The Council is in general agreement with the Outline Code of Construction Practise but wishes to confirm that issues relating to hours of operation, siting of any standby generators, good practise procedures, prior notification of constructional noise, floodlighting, movement and storage of waste materials, public safety, dust control, emissions, telecommunication or television interference and decommissioning should be in place in the final document.</p>	<p>This point has been discussed and resolved through the SOCG process. In summary, the Applicant and SNC agree that detailed CoCP(s) will provide further details of hours of operation, siting of standby generators, good practice procedures, movements and storage of construction waste, measures associated with emissions (including dust), telecommunication interference, lighting and decommissioning in accordance with RR-054.</p> <p>A communication plan will also be developed as part of the detailed CoCP, managed and implemented by Hornsea Three to provide prior notification of construction activities. An outline communication framework was included within the Outline CoCP (APP-179).</p>
<p>Conclusion</p> <p>The Council acknowledge that there are national benefits in delivering 2,400 MW of electricity, which as stated by Orsted would meet the daily energy needs of over 2 million homes, however there are limited benefits at the local level. There is however harm identified at a local level, in particular by the construction of the proposed converter/substation in the parish of Swardeston. The Council considers that significant weight should be had to the visual and heritage harms in the planning balance.</p> <p>In view of the above, the Council would urge that the substation is constructed using technologies that would allow for its height to be kept as low as possible. There is a significant difference between HVDC height of 25m and HVAC height of 15m.</p> <p>The Council wishes to continue to work pro-actively with the applicants as the application is progressed through to Examination to try to resolve some of the outstanding issues, particularly in relation to hedgerows and trees.</p> <p>Attachment to this representation is saved on PINS website: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010080/EN010080-000804-20181325.pdf</p>	<p>The Applicant notes this conclusion and has addressed the detailed points in turn above, with consideration for the points included in the attached committee report which have been further addressed in the Statement of Common Ground. The Applicant is committed to continued engagement with SNC and is confident that a reasonable solution can be reached.</p>

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker [RR-067]

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>An alternative cable route has been suggested to take into account the following:</p> <ul style="list-style-type: none"> - Under the current emerging Greater Norwich Local Plan, the South West growth location, which includes Hetherset, will need to accommodate up to 1,500 new homes for the period to 2036. - Due to existing physical and planning policy constraints, land to the north of Hetherset is the logical location for development to take place (to accommodate up to 1,500 homes). - The proposed cable route would result in approximately 9.8 hectares of residential development land being sterilised. At a typical density of 30 dwelling per hectare this would result in the loss of approximately 294 dwellings. <p>Two plans will follow by separate email, one showing the effect of the proposed cable route on the residential development land (Drawing No 0088/007), and the second showing the alternative cable route proposed (Drawing No 0088/008) to avoid the residential development land.</p> <p>The attachment to this Representation is saved on PINS website: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-000782-Proposed%20Cable%20Route.pdf</p>	<p>In designing and refining the onshore cable corridor route, the Applicant has taken into account all reasonable factors at relevant stages, such as consultee comments, technical feasibility, the anticipated market regime and the minimisation of environmental and visual impacts and land take. Further information pertaining to the route selection process is provided in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p> <p>The respondents have made both formal and informal representations to the Applicant in respect of alternative cable corridor routes close to their land, in response to which the Applicant has ensured that as little of the respondents' proposed development land is impacted by utilising the furthest north-western sections of the land. The Applicant is unable to entirely avoid the land via the alternative route included in the representation, for a number of reasons.</p>

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
	<p>The alternative route involves crossing the Bray Meadow County Wildlife Site and the cable route refinement process sought to avoid County Wildlife Sites where possible, unless not possible to do so, where they are crossed by horizontal directional drills. The alternative route suggests moving away from an area of land that was included in the recent South Norfolk DC call-for-sites onto land that was also included in the same call for sites, so the relative merits of the land for development when applied and compared for both the proposed route are no different. Finally, the alternative route takes the route closer to residential receptors, which cable route refinement has also sought to avoid where possible.</p> <p>Where possible, Hornsea Three has sought to minimise impacts to landowners, either through site selection/route refinement or through the identification of suitable mitigation measures. The Applicant has sought to engage with the respondents' agent in respect of terms for a voluntary agreement.</p> <p>In the event that it is not possible to enter into a voluntary agreement, compensation will be payable in accordance with the statutory compensation code. Further information is set out in paragraph 11.2 of the Statement of Reasons [APP-032].</p>

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>OUTLINE REPRESENTATIONS</p> <p>1 Introduction</p> <p>1.1 These are the Outline Representations of the National Farmers Union ("NFU") and the Hornsea Three Agents (agents acting for NFU members and their clients on this project) to the application for a Development Consent Order by the Secretary of State for Housing, Communities and Local Government identified as the Hornsea Project Three Offshore Wind Farm Project order. The agents representing the landowners/occupiers are Savills, Strutt & Parker, Bidwells, Irelands, Brown & Co and Cruso & Wilkin (henceforth known as the Land Interest Group (LIG)).</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>
<p>1.2 The objectives of the NFU are to champion farming in England and Wales and to provide professional representation and service to its members.</p> <p>1.3 The matters raised in these Outline Representations are matters not only of concern to the farming owners of agricultural land affected by this DCO, but also of concern to, and raise points of principle that will affect, members of the NFU having farm holdings that may be affected by similar Offshore Wind Farm schemes.</p>	

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>2. Consultation and Engagement</p> <p>2.1 There has been a lack of constructive and proactive face to face meetings with Orsted and their agents. Some meetings have been held but the detail required by landowners has not been available. For example details on timings of construction to be able to understand the impact on the cropping rotation of the farm or the commercial shoot over the winter months. Therefore it has not been possible to discuss all aspects of the scheme.</p> <p>2.2 Orsted and their agents have been meeting LIG but due to the lack of specific information there has been no progression in negotiations in the last two months over June and July 2018</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>
<p>2.3 Heads of terms were sent out on the 20th April 2018 which do not at the present time contain the specific detail for the scheme. Further specific detail has been requested from Orsted at the last meeting held on 9th July 2018.</p> <p>2.4 Orsted have still not sent out a draft option and lease to the agents or landowners after many requests to see these documents. It is imperative that the NFU and agents acting (LIG) see these documents to make sure that the terms are reasonable. The time period where incentive payments are offered must be long enough for LIG to look at the terms offered in detail and negotiate. Orsted must not force the hand of landowners.</p>	

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>3.0 Compulsory Acquisition and Compelling Case Requirement</p> <p>3.1 The DCO will contain powers to acquire compulsorily so much of the Order land as is required for the authorised development, or to facilitate, or is incidental to it.</p> <p>3.2 Further, the guidance as to negotiations either before or parallel with formal processes may well give rise to a "legitimate expectation" that such will occur, and a failure to conduct such negotiations deprives landowners of the benefit that negotiations may have brought, especially in relation to where different locations and lesser rights might have been achieved.</p> <p>3.3 The NFU and the land agents LIG believe that no meaningful negotiations have taken place alongside the formal procedures for compulsory purchase. Therefore a compelling case cannot be made.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>

Relevant Representation Comment	Applicant's response
<p>4.0 HVAC v HVDC Cables</p> <p>4.1 It was made clear at the statutory consultation carried out at the end of November 2017 that Orsted would be applying for a DCO on both HVAC and HVDC cables. This will involve building a booster station or converter substation.</p> <p>4.2 It has been highlighted that the use of DC technology for offshore windfarms is still maturing and that there are certain risks by only taking forward DC technology. If Orsted could confirm that they are taking forward DC technology this would greatly reduce the impact on land operations and farm businesses as the width of the lease area required will be less and it is likely that no link boxes will be required. Landowners and their agents have been asking for information from Orsted to confirm why they cannot use DC technology and the only reasons forthcoming have been cost, risk and the length of the scheme. There is confusion out there with landowners as another developer Vattenfall who are also proposing a NSIP project the Norfolk Vanguard and Boreas Cable Project have confirmed that they will be using DC technology.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>
<p>5. Booster Station</p> <p>5.1 LIG would like further clarification as to why the proposed Booster station is not being built on a brown field site? Whilst the cost of this may be greater for Orsted there would be significantly less impact on farmers and their agricultural businesses.</p>	

Relevant Representation Comment	Applicant's response
<p>6. Construction and Funding</p> <p>6.1 Orsted have stated that they will need at least 8 years to lay all the cables and that this would be carried out in two phases. Construction works of two phases of two and half years with a three year gap in between. If the project was constructed in one phase with high intensity it has been stated that it would be possible to do this with a minimum duration of three years. Two of the reasons given for a two phase programme are constraints in the supply chain and/or the timing of auctions for the Government's Contract for Difference process which offshore wind farms currently rely on to secure a price for the electricity produced by a project. Therefore Orsted are indicating that they do not have the necessary funding to build the project at the present time in one phase. We have grave concerns that Orsted do not have the funding to deliver the second proposed phase of the project and so should not be applying for this phase of the project within this current DCO application.</p> <p>6.2 The project involves laying 6 large cables over a width of 60 metres along some of the most productive Grade 1, 2 and 3a land classification farmland in Norfolk. The cables will be buried so most farming operations can take place on top of them and we believe that this will be a minimum depth of 1.2m.</p> <p>6.3 At the present time Orsted have not been able to confirm whether they will be ducting the cables and that their preference is to just lay the cables in open trenches. If the cables were in ducts this would enable Orsted to lay the ducts during the first phase for the whole project.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>

Relevant Representation Comment	Applicant's response
<p>7. Cumulative Impact</p> <p>7.1 Cumulative Affect Assessment has been addressed in the PEIR but the detail is exceedingly broad with no mention of the Vattenfall Boreas scheme only Norfolk Vanguard. These are two major schemes affecting landowners and occupiers in Norfolk which are programmed to be constructed at approximately the same time but one is running north to south (Hornsea 3) and the other east to west (Vattenfall) across the county, therefore greatly affecting the number of landowners affected and taking more land out of agricultural production than is necessary.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>
<p>8. Jointing bays and Link Boxes</p> <p>8.1 It is understood from other projects that 'Jointing Bays' should be all underground and will not interfere with agricultural operations.</p> <p>8.2 It is understood that link boxes will be needed if the cables are HVAC cables and they are normally placed at least every 600 to 800 metres on a cable run near to the jointing bays. No clarification has been received on how many link boxes will be needed at the end of every run. Link boxes do stand proud above ground level and so greatly interfere with agricultural operations and are a hazard to farm machinery. It is extremely important to have further design information on link boxes and the siting of them. This includes any link boxes to be located in a cluster and how will they be marked/identified/fenced. The preference is that all link boxes are located within fence boundaries.</p>	

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>9. Field Drainage</p> <p>9.1 Land drainage is one of the main issues which landowners and occupiers are concerned about on this scheme and some detail has been agreed in the heads of terms but it is not satisfactory.</p> <p>9.2 To date insufficient detail has been received by LIG on behalf of their clients and members in regard to how reinstatement of field drainage will take place.</p> <p>9.3 No information has been provided on how field drainage will be reinstated in the documents as part of the DCO application. As no draft Option and Lease has been made available it has not been possible to see whether drainage reinstatement is covered satisfactorily in the proposed option and deed.</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>
<p>10. Soils</p> <p>10.1 As above the treatment and reinstatement of soil during and after construction is one of the main issues of concern. Limited detail has been provided to landowners and occupiers. Again LIG does not know how soil reinstatement and aftercare will be dealt with in the Option and Lease. Furthermore no measures have been set out after soil has been reinstated. What measures will be put in place to bring the soil back to its condition and quality before the works took place? An aftercare plan should be included in a code of construction.</p>	
<p>11. Flood Issues</p> <p>11.1 No details have been provided to landowners and occupiers on how any increase in surface run off of water from the haul road or the construction compounds will be dealt with during construction. Therefore there is concern that retained land may flood during the construction works.</p>	

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>12. Dust/Irrigation</p> <p>12.1 Clarification is needed on how practical issues like dust will be controlled during construction and how can the effect on irrigation be minimised?</p>	<p>Please see the Applicant's response to Relevant Representation RR-146.</p>
<p>13. Access routes to the Order Limits</p> <p>13.1 At the present time Orsted has provided no detail in regard to how it is proposing to gain access to the order limits. There is a question over whether access may be needed along private access roads and/or to create access.</p>	
<p>14. Access to land and the Haul Road</p> <p>14.1 Insufficient detail has been provided as to how landowners and occupiers are to access land severed by the construction works and as to whether landowners will be able to access the haul road during construction. Furthermore no detail has been provided on how the haul road may be constructed and if it is possible to use tracking for the haul road which can be laid on the surface of the land and taken up. No specific detail has been given on the time the haul road will be down for severing land. If it is down for the full construction period of 8 years this is unacceptable interference.</p>	

Annex 4 – Full response to Bidwells on behalf of Carl Baker & David Baker (RR-067)

Relevant Representation Comment	Applicant's response
<p>15. Request to Attend Hearings and make Representations</p> <p>15.1 The NFU and the Hornsea Three Agents known as LIG intends to lodge full Written Representations in due course and request to make oral representations at the compulsory acquisition hearing or any other hearings which may be held.</p> <p>15.2 NFU and LIG represents approximately 50 members/clients who own or lease land affected by the DCO. A full list of names and addresses are available if requested. The members and clients have not been listed on this representation due to data protection. Each landowner or occupier has submitted an outline representation highlighting specific issues to the individual business, if appropriate, and has made reference to this outline representation which highlights the main issues of all landowners concerned.</p>	<p>Noted.</p>

Annex 5 – Full response to Environment Agency [RR-073]

Annex 5 – Full response to Environment Agency (RR-073)

Relevant Representation Comment	Applicant's response
<p>1.0 The Role of the Environment Agency</p> <p>1.1 The Environment Agency is a statutory consultee on all applications for development consent orders. We have a responsibility for protecting and improving the environment, as well as contributing to sustainable development.</p> <p>1.2 We have three main roles:</p> <p>(i) We are an environmental regulator – we take a risk-based approach and target our effort to maintain and improve environmental standards and to minimise unnecessary burdens on business. We issue a range of permits and consents.</p> <p>(ii) We are an environmental operator – we are a national organisation that operates locally. We work with people and communities across England to protect and improve the environment in an integrated way. We provide a vital incident response capability.</p> <p>(iii) We are an environmental advisor – we compile and assess the best available evidence and use this to report on the state of the environment. We use our own monitoring information and that of others to inform this activity. We provide technical information and advice to national and local governments to support their roles in policy and decision-making. One of our specific functions is as a Flood Risk Management Authority. We have a general supervisory duty relating to specific flood risk management matters in respect of flood risk arising from Main Rivers or the sea.</p>	<p>The Environment Agency have been engaged in consultation with Hornsea Three throughout the pre-application and post-application process.</p> <p>Hornsea Three has had consideration to the Environment Agency's advice, as noted in the Consultation Report [APP-34], the Statement of Common Ground, and in this response.</p> <p>Although each point has been responded to in turn, these discussions are also reflected in the Statement of Common Ground between the Environment Agency and Hornsea Three which confirms that there are no outstanding issues under discussion within the Environment Agency's remit.</p>

Relevant Representation Comment	Applicant's response
<p>2.0 Code of Construction Practice (CoCP)</p> <p>2.1 The Outline Code of Construction Practice (Outline CoCP)– PINS Document Reference: A8.5- sets out the applicant's approach to protecting the environment during the construction process.</p> <p>2.2 The Outline CoCP points out at 1.3.1.1 that detailed CoCPs will be required for specific activities such as crossing watercourses. We agree that activity and location specific CoCPs are necessary to protect the environment and to ensure that environmental safeguarding for each area of construction activity is adequately focused on the sensitivities of a given location.</p> <p>2.3 We are content that the applicant has identified within section 6.4 Protection of the surface water environment; 6.5 Onshore ecology and nature conservation; 6.9 Protection of groundwater; 7.1 Protection of the surface water environment and 7.2 Intertidal ecology; the issues that should be addressed in detailed CoCPs post DCO consent.</p> <p>2.4 We note that within the sections identified at 2.3, it is stated that the Environment Agency should be consulted when detailed designs are prepared. We agree that this is necessary to ensure protection of the environmental elements within our remit.</p> <p>2.5 However, we note that within the Draft Development Consent Order including Draft Deemed Marine Licences – PINS Document Reference: A3.1 Part 3, Schedule 1, 'Requirements', Code of Construction Practice paragraph 17 (page 38); that there is no requirement for the Environment Agency to be consulted or approve detailed CoCPs.</p> <p>2.7 We consider that in order to safeguard areas within our remit that it is necessary for our prior approval of the detailed CoCP and site specific Pollution Control Plans</p> <p>2.8 We request that Requirement 17 includes a requirement that for each phase a CoCP and associated pollution control plans are submitted to and approved by the Environment Agency prior to works on that phase commencing.</p>	<p>2.1-2.3 In paragraph 1.3.1.1 of the Outline Code of Construction Practice (CoCP) [APP-179], the Applicant notes that “a CoCP or number of detailed CoCPs will be prepared for specific elements of Hornsea Three”. The detailed CoCP(s) will include site specific control measures required to mitigate the construction impacts considered likely at these locations.</p> <p>Paragraph 1.3.2.1 of the Outline CoCP [APP-179] notes that the principal contractor will develop Construction Method Statements (CMS) prior to the commencement of specific activities, including watercourse crossings. Specific crossing method statements will be developed for particularly sensitive locations (such as crossings with the potential to impact designated sites).</p> <p>The CMS will sit below the detailed CoCP(s).</p> <p>2.4-2.8 The Applicant acknowledges the request from the Environment Agency and has amended Requirement 17 in the draft DCO [APP-027] such that it now reads: <i>“No phase of any works landward of MLWS may commence until for that phase a code of construction practice (which must accord with the outline code of construction practice) has been submitted to and approved by the relevant planning authority, in consultation with the relevant highway authority, the Environment Agency and, if applicable, the MMO.”</i></p> <p>The final CoCP(s) must accord with the Outline Code of Construction Practice [APP-179].</p> <p>Within section 3.1.1.1 of the Outline Code of Construction Practice [APP-179], the Applicant states that the following plans will be developed in consultation with the Environment Agency:</p> <ul style="list-style-type: none"> • Outline Method Statement for Crossing Techniques (Appendix B of the Outline CoCP [APP-179]) and site-specific method statements for the crossings of main rivers and IDB watercourses. • Bentonite Break Out Plan (Appendix C of the Outline CoCP [APP-179]) • Pollution Control Plan. <p>The above is reflected in the Statement of Common Ground between the Environment Agency and Hornsea Three which confirms that there are no outstanding issues within the Environment Agency's remit regarding the drafting of the Outline CoCP [APP-179].</p>
<p>3.0 Ecology and Biodiversity</p> <p>3.1 We note that in the Outline Ecological Management Plan– PINS Document Reference: A8.6 at 5.3.4.4 the</p>	<p>3.1-3.3 The Applicant acknowledges this request and has amended Requirement 10 (1) of the draft DCO [APP-027] such that it now reads: <i>“No phase of the connection works</i></p>

Relevant Representation Comment	Applicant's response
<p>applicant states that 'Methodologies will be preapproved by the Environment Agency.....where applicable, so as to help minimise the likely impacts on the wetland habitats'</p> <p>3.2 However, we note that within the Draft Development Consent Order including Draft Deemed Marine Licenses – PINS Document Reference: A3.1 Part 3, Schedule 1, 'Requirements', there is no Requirement to ensure that the Environment Agency pre-approves the methodologies as referenced in paragraph 3.1 above. We consider that the undertaking in the Outline Ecological Management Plan for pre-approval of methodologies should be reflected in a Requirement.</p> <p>3.3 We request that the Development Consent Order includes a Requirement that the Environment Agency pre-approves methodologies, this is to protect wetland habitats as proposed in the Ecological Management Plan.</p> <p>3.4 Volume 3, Chapter 3 – Ecology and Nature Conservation - PINS Document Reference: A6.3.3 at table 3.1 'Summary of NPS EN-1 and NPS EN-5 policy relevant to ecology and nature conservation.' Cites the NPS EN-1, paragraph 5.3.4 which states 'The applicant should show how the project would take opportunities to conserve and enhance biodiversity conservation interests'.</p> <p>In addition to the enhancements identified the Environment Agency would like to work with the applicant to undertake river enhancements identified at paragraphs 3.5 and 3.6 below.</p> <p>3.5 River Wensum restoration – is an ongoing project to restore the River Wensum SSSI/ SAC/ SPA. There is potential to work with the Environment Agency to assist with river restoration between Attlebridge and Morton Farm CWS, where the cable network passes under the Wensum (HDD). This could include floodplain reconnection, installation of woody debris, creation of berms and tree planting.</p> <p>3.6 River Yare – there is currently an EA Natural Flood Management Project being delivered at Marlingford. There may be potential to work with the Environment Agency on further river enhancements on this stretch.</p> <p>3.7 We would encourage the applicant to consider other locations for ecological enhancements with the aim that the project deliver a net gain in UKBAP priority habitats. The applicant could also consider opportunities for planting</p>	<p><i>may commence until for that phase a written ecological management plan (which accords with the outline ecological management plan [APP-180]) reflecting the survey results and ecological mitigation and enhancement measures included in the environmental statement has been submitted to and approved by the relevant planning authority in consultation with Natural England, and (where works have the potential to impact wetland habitats) the Environment Agency."</i></p> <p>3.4–3.8 In contributing towards international and national obligations on climate change, as acknowledged in the Statement of Reasons [APP-032], the Applicant is conserving biodiversity interests on a broad scale.</p> <p>On the more local scale, the Applicant has proposed, where practicable, opportunities to conserve and enhance biodiversity. This includes measures to enhance hedgerows, and where practicable create habitats, secured in the Outline Ecological Management Plan [APP-180] and Outline Landscape Management Plan [APP-181].</p> <p>Post-application, the Applicant has confirmed that its preferred pathway for securing a great crested newt licence is through the landscape scale approach recently promoted by Natural England. This would involve the restoration of ponds and terrestrial habitat in areas critical to great crested newt populations, and have additional biodiversity benefits to species including invertebrates, farmland birds and fish.</p> <p>In addition, Ørsted has a strong track record for establishing voluntary Community Benefit Funds (CBFs) as part of its community engagement programme for its latest offshore wind farm projects in the UK. These funds can make a valuable contribution to the local area by supporting conservation and wildlife projects, among other public benefit projects. Any decision to establish a CBF for Hornsea Three would be made after determination of the application and would be subject to the Applicant making a positive Financial Investment Decision (FID). These funds are therefore voluntary and are not intended to be secured through the DCO.</p> <p>The Applicant therefore considers that no further enhancements are required to meet the NPS - EN policies.</p>

Relevant Representation Comment	Applicant's response
<p>pollinator corridors over freshly excavated ground, and restoration of standing water bodies such as ponds and lakes which fall within the cable corridor impact zone.</p> <p>3.8 We would encourage the applicant to consider what WFD mitigation measures could be put in place to help the affected waterbodies achieve 'Good' status. These measures could be implemented after the work has been completed, to 'enhance and biodiversity conservation interests' as stated in the NPS. This also links to our comments at 3.4 – 3.7.</p> <p>3.9 Volume 6, Annex 2.5 – Water Framework Directive Surface Water Assessment - PINS Document Reference: A6.6.2.5 incorrectly identifies the River Basin Management Plan (RBMP) as 'Anglican'; the correct name for the RBMP is 'Anglian'.</p>	<p>3.9 The Applicant acknowledges that Volume 6, Annex 2.5 – Water Framework Directive Surface Water Assessment [APP-128] incorrectly identifies the River Basin Management Plan (RBMP) as 'Anglican'; the correct name for the RBMP is 'Anglian'. The Applicant has submitted an application errata list in Appendix 18 to the Applicant's submission to Deadline I.</p> <p>The Statement of Common Ground with the Environment Agency, which forms part of the Applicant's submission to Deadline I, confirms that there are no outstanding issues within the Environment Agency's remit regarding ecology and nature conservation.</p>
<p>4.0 Groundwater</p> <p>4.1 Dewatering. Once schemes have been finalised the Environment Agency should be contacted to determine whether or not they will require a water abstraction licence. Further details about impounding or abstracting water can be found at: https://www.gov.uk/guidance/water-management-abstract-or-impound-water Queries on groundwater monitoring data should be directed to the Environment Agency in order to reduce the uncertainty in the conclusions drawn from the data. Groundwater monitoring in SPZ1 and other sensitive areas will be critical prior to, during, and after the works.</p> <p>4.2 Environmental Statement (Addendum): Volume 7 - Land at Booton – PIN Document Reference: A6.7. This document should include a section on whether or not the works may change groundwater flow to the SSSI/SAC.</p> <p>4.3 Environmental Statement: Volume 6, Annex 2.4– Hydrological Characterisation Report- PINS Document Reference: A6.6. Section 4. Study Area 2 – Blackwater Drain. The main concerns are the potential for impacts on Booton Common during HDD for the Blackwater Drain, and within the SPZ1 in the Yare catchment; both of these should be fully investigated within the forthcoming hydrogeological risk assessments once the proposed depths for the works are known and where necessary reflected in the site specific CoCP.</p> <p>4.4 Environmental Statement: Volume 6, Annex 1.2 – Abstraction Licences and Source Protection Zones –PINS</p>	<p>4.1 The Consents Management Plan [APP-175] states that Water Abstraction Licences may be required and confirms that it will consult the Environment Agency as to whether they are required.</p> <p>Impacts on SPZs and water bodies protected under the WFD are assessed in paragraphs 1.11.1.8 to 1.11.1.20 of Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement [APP-073]. The Applicant commits to groundwater monitoring at site investigation boreholes created as part of a sensitive HDD within SPZ areas (locations where the order limits intersect SPZs are shown in volume 6, Annex 1.2: Abstraction Licences and Source Protection Zones [APP-121]). Paragraph 6.9.1.5 of the Outline CoCP (APP-179) has been updated to read "Cable trenching across the Source Protection Zones requires measures to ensure that the principal aquifer is unaffected either directly or indirectly. The depth of superficial deposits would be confirmed via a site investigation to ensure works are not undertaken within the chalk aquifer. <u>A hydrogeological risk assessment based on information from the site investigation will be undertaken at each trenchless conduit crossing location within a Source Protection Zone.</u> The site investigation will allow an assessment of the relationship between the aquifer within the superficial deposits and the underlying principal aquifer, <u>to inform the risk assessment which will to ensure works will not minimise the potential for works to directly impact the principal aquifer. Where agreed with the Environment Agency, site investigation boreholes within SPZ1 and other sensitive sites will be used to monitor groundwater flows for an agreed period.</u> A hydrogeological risk assessment will be undertaken at each trenchless conduit crossing location</p>

Relevant Representation Comment	Applicant's response
<p>Document Reference: A6.6.1.2. The SPZ for the Sheringham area has been updated; the new zones include part of the eastern 1 km study area. This was previously advised to the applicant in our letter of 19 September 2017. The new zones are at the edge of the search corridor but nonetheless should be taken into account when undertaking detailed site investigation and CoCP.</p> <p>4.5 Environmental Statement: Volume 6, Annex 1.4 – Water Framework Directive Groundwater Assessment-PINS Document Reference: A6.6.1.4. Section 3.2. This section should be entitled “Groundwater quality and quantity objectives”. Further clarity is required on the four quantitative groundwater tests. Quantitative and quality tests should be discussed separately, until overall WFD status is considered, and the dependence of terrestrial ecosystems or surface waters on groundwater should be made explicit. Throughout the set of documents the phrase “Current quantitative quality” is used. We are unsure as to whether this is meant to imply a consideration of current quantitative WFD status or perhaps current overall groundwater body WFD status.</p>	<p>within Source Protection Zones. Direct Current cabling will be thermally insulated.”</p> <p>Any monitoring will be discussed with the Environment Agency as part of consultation on site investigation methodologies.</p> <p>4.2 The potential impacts and effects on groundwater flows, including around Booton Common SSSI, are considered in Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement [APP-073], and no significant effects from cabling or HDD were assessed. On this basis, the provisions to carry out a hydrogeological risk assessment and prepare a site-specific method statement for the nearby HDD crossing (of Blackwater Drain), which will incorporate areas for consideration identified in the Hydrological Characterisation Study (Volume 6, Annex 2.4 of the Environmental Statement, APP-127) are appropriate control measures for impacts on Booton Common SSSI.</p> <p>Additionally, the Applicant has added the following text to the Outline CoCP [APP-179] in paragraph B.1.1.3: “The detailed Watercourse Crossing Method Statement for Blackwater Drain (near Booton Common) will be developed in consultation with Natural England, in addition to the Environment Agency.”</p> <p>4.3 The Applicant has committed to undertaking hydrogeological risk assessments for HDD crossings undertaken within SPZs [paragraph 6.9.1.5 of the Outline CoCP, APP-179], and at each HDD crossing of a sensitive watercourse [paragraph 6.9.1.7 of the Outline CoCP, APP-179]. The site specific method statement will be prepared in discussion with the Environment Agency.</p> <p>4.4 The Environment Agency has provided details of the revised SPZ boundaries and these are shown in Volume 6, Annex 1.2: Abstraction Licences and Source Protection Zones of the Environmental Statement [APP-121]. These have and will be taken into account.</p> <p>4.5 The Applicant has clarified its use of quantitative and qualitative tests. The Environment Agency notes in the SoCG that it agrees sufficient and appropriate information has been provided to make Volume 6, Annex 1.4: Water Framework Directive Groundwater Assessment of the Environmental Statement [APP-123] a reasonable characterisation of WFD groundwater bodies.</p> <p>The above is reflected in the Statement of Common Ground between the Environment Agency and Hornsea Three which confirms that there are no outstanding issues within the Environment Agency's remit regarding groundwater.</p>

Relevant Representation Comment	Applicant's response
<p>5.0 Contaminated Land</p> <p>5.1 Environmental Statement: Volume 4, Annex 4.4 – Post PEIR Changes to Hornsea Project Three (Stages 8-9)- PINS Document Reference: A6.4.4.4. Section 2.4.3.4. Whilst identified as abandoned, the MOD pipeline may still have potential to cause or have caused contamination. Confirmation of the depth of the pipeline at the crossing point should be sought to determine whether trenching activities will impact upon the pipeline and if so, what measures will be taken to manage any contamination encountered and/or prevent any contamination occurring. We would expect to see this referenced in a CoCP for the relevant phase which is submitted to and approved by the Environment Agency.</p>	<p>5.1 The disused Ministry of Defence pipeline is identified in paragraph 1.7.4.36 of Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement [APP-073] as a potential source of contamination from historic land uses within the Hornsea Three geology and ground conditions study area. Paragraph 1.7.4.37 [APP-073] confirms that the risks associated with areas which have potential contamination, including former military land, will be confirmed and addressed as part of preliminary risk assessments and/or site investigations during the detailed design stage and prior to the commencement of works in that locality.</p> <p>A 'Written Scheme to deal with any Contamination of Land' will accompany the final Code of Construction Practice [Section 3 of the Outline CoCP, APP-179], which will be approved by the Environment Agency as noted above in the response to Section 2 of the Environment Agency's Relevant Representation.</p> <p>The above is reflected in the Statement of Common Ground between the Environment Agency and Hornsea Three which confirms that there are no outstanding issues within the Environment Agency's remit regarding contaminated land.</p>
<p>6.0 Environmental Permits</p> <p>6.1 We note that the applicant is not seeking to dis-apply environmental permits. We would like to remind the applicant that it will be necessary to apply for and have in place all necessary permits prior to any works commencing.</p> <p>6.2 Flood Risk Activity Permit. Proposed crossings of the main rivers by both open cut and trenching methods will require a Flood Risk Activity Permit from the Environment Agency. The proposed crossings of main river by directional drilling may fall under an exemption if they meet all of the conditions, which include being further than 200 from a SSSI, SAC and SPA, and the crossing is within 10 degrees of perpendicular to the direction of flow in the river. All the requirements can be found at https://www.gov.uk/government/publications/environmental-permitting-regulationsexempt-flood-risk-activities/exempt-flood-risk-activitiesenvironmentalpermits.</p> <p>6.3 If the requirements for exemption are met, the applicant must register an exemption with the Environment Agency. If the proposed crossing does not meet all the conditions of the exemption then it will need to be applied for as a bespoke permit. The application forms can be found at</p>	<p>6.1 The Applicant is aware of the necessary permits relating to Hornsea Three works and has included them in the Consents Management Plan [APP-175]. The Applicant will work with the Environment Agency to ensure that all necessary permits are in place prior to commencement.</p> <p>6.2 The Applicant acknowledges that Flood Risk Activity Permit(s) for main river HDD crossings will be required, should the crossing not meet the Environment Agency criteria for exception.</p> <p>6.3 If the requirements for HDD main river crossing exceptions are met during detailed design, the Applicant will register an exception or apply for a bespoke permit, as appropriate.</p> <p>6.4 The applicant has committed to HDD crossing on all main rivers. This is outlined in the Onshore Crossing Schedule [APP-089].</p> <p>Site-specific method statements for the crossings of main rivers and IDB watercourses as identified in the Hydrological Characterisation Report [APP-127] will be developed in discussion with the Environment Agency.</p> <p>The Applicant has included an outline method statement for HDD crossing techniques within the Outline Code of Construction Practice [APP-179].</p> <p>6.5 The Applicant does not propose to construct any permanent culverts as part of Hornsea Three.</p>

Relevant Representation Comment	Applicant's response
<p>https://www.gov.uk/guidance/floodrisk-activities-environmentalpermits#bespoke-permits.</p> <p>6.4 If the proposed crossings are using an open cut method then a bespoke permit will be required, as detailed above.</p> <p>6.5 Culverting: The Environment Agency is generally opposed to the culverting of watercourses because of the adverse ecological, flood risk, human safety and aesthetic impacts. Watercourses are important linear features of the landscape and should be maintained as continuous corridors to maximise their benefits to society. We will consider each application to culvert a watercourse on its own merits and in accordance with our risk-based approach to permitting. We will only approve a culvert if there is no reasonably practicable alternative, or if we think the detrimental effects would be so minor that a more costly alternative would not be justified. In all cases where it is appropriate to do so, applicants must provide adequate mitigation measures, accept sole ownership and responsibility for future maintenance. Applicants will be required to prove why culverting is both necessary and the only reasonable and practicable alternative and to provide information to show that it will not have a detrimental effect on flood risk. Where a culvert is deemed to be acceptable, the length of any culvert should be restricted to the minimum necessary to meet the applicant's objective.</p> <p>The proposal must include appropriate assessment of flood risk and environmental impact. The applicant should take into account the possible effects of climate change and future development in the catchment on the watercourse when calculating the capacity of the culvert.</p> <p>6.6 Flood Risk: The document states that the landing sites for the river crossings will be located outside of the flood zones wherever possible. In addition it is noted in the Flood Risk assessment that the HVAC Booster Station and onshore HVDC converter/HVAC substation are both in Flood Zone 1 therefore, we have no concerns with the proposal in relation to this.</p>	<p>The Applicant has had consideration to the impacts of temporary culverts in paragraphs 2.11.1.15 to 2.11.1.17 of volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement [APP-074]. An outline method statement for crossing watercourses has been included in the Outline Code of Construction Practice [APP-179] and will be developed further in discussion with the Environment Agency and Natural England during the detailed design phase. Measures to reduce and manage runoff in terms of volume and quantity would include the use of settling tanks or ponds to remove sediment and the installation of pre-installed culvert (flume) pipes in the watercourse under the construction accesses and haul road. The pipe would be of suitable size to accommodate water volumes, including (in line with all drainage and flood risk measures) the possible effects of climate change. Construction accesses and haul roads will be removed, and watercourses reinstated, at the end of the construction programme.</p> <p>6.6 The Applicant acknowledges the Environment Agency's confirmation that site selection is appropriate with regards to flood risk.</p>
<p>7.0 Marine Processes and Landfall: We are content that the documents submitted adequately address issues within our remit.</p>	<p>The Applicant acknowledges there are no outstanding issues within the Environment Agency's remit regarding marine processes and the landfall site.</p> <p>This is reflected in the Statement of Common Ground between the Environment Agency and Hornsea Three.</p>

Annex 6 – Full response to Marine Management Organisation [RR-085]

Annex 6 – Full response to Marine Management Organisation (RR-085)

Relevant Representation Comment	Applicant's response
<p>... The Development Consent Order Application includes a draft development consent order (the "DCO") and an Environmental Statement (the "ES"). The draft DCO includes, at Schedule 11 and 12 a draft Deemed Consent under Part 4 (Marine Licensing) of the Marine and Coastal Access Act 2009 (the "Deemed Marine Licence")... This document comprises the MMO's initial comments in respect of the DCO Application in the form of a relevant representation. This is without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. This is also without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for anything else.</p> <p>Please find the MMO's initial comments for your consideration below:</p>	<p>This is acknowledged by the Applicant.</p>
<p>General Comments on the Application:</p> <p>1. The lack of sufficient survey data to support this application was highlighted in the final round of Evidence Working Group meetings. The MMO does not consider that sufficient data has been provided to allow a full and robust assessment of the impacts on the marine environment. For example, any assessments of impact made in relation to the inshore cable route are not supported by recent benthic survey data. Habitat types have been extrapolated from limited survey points outside of the proposed cable corridor to support such assessments. Furthermore, the ornithological baseline data does not meet the standard requirement for 2 years of survey data as set out by Natural England and does not therefore meet the requirement for a robust data set to support ornithology impact assessments. The MMO additionally questions whether the ES provides the 'best available' data in support of environmental impact assessments. The majority of data provided has been derived from desk studies or was collected for Hornsea Project Two. Furthermore, data deficiencies have not been fully acknowledged in the ES which raises further questions as to whether the supporting environmental data is of a sufficient standard.</p>	<p>The Applicant's position is that the Environmental Statement has given careful consideration to the use of data to adequately characterise the baseline environment. This has enabled a robust assessment of impacts across the marine environment to be presented. This has involved consideration of the availability of existing, appropriate, datasets and the supplementing of these datasets with project specific data collection, where required. The data used to characterise the baseline environment is detailed in each offshore chapter of the Environmental Statement. In some cases, this has involved the use of pre-existing datasets previously presented in relation to adjacent offshore wind farm developments, but only in instances where these data are appropriate and add value to the baseline characterisation.</p> <p>The Applicant acknowledges the two specific example areas of concern quoted by the MMO (namely, benthic survey data and ornithological data). The specific concerns in relation to marine processes and benthic ecology are addressed in response to the MMO comments 3.6, 4.2 and 4.13. With respect to ornithological concerns, the Applicant is currently working with Natural England to resolve any concerns raised in relation to the baseline characterisation.</p> <p>The Applicant will continue to work with the MMO to resolve the concerns on these matters. However, notwithstanding these comments, the Applicant considers the Environmental Statement to be robust and underpinned by an appropriate characterisation of the marine environment.</p>
<p>2. It is the MMO's opinion that this application does not</p>	<p>The Applicant has sought to address concerns relating to the</p>

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<p>comply with the 'Rochdale Envelope' approach. The aim of the Rochdale Envelope approach is to identify and consider the maximum potential adverse impact to ensure that the likely impacts of the process have been properly assessed. The MMO considers that this application does not meet this aim due to the following reasons:</p> <p>Firstly, the MMO would like to highlight that the project parameters are not adequately or realistically defined to be in line with the Rochdale Envelope. The documents show numerous discrepancies between the documents, especially between the figures assessed in the ES and the DCO. The incorporation of a high number of uncertainties in the assessment for cumulative effects is unrealistic and does not allow for an accurate assessment of the worst case scenario.</p>	<p>Rochdale Envelope and also the links between the ES and DCO in the subsequent responses and therefore, cross refers the MMO to these responses (e.g. MMO comments 1.5, 1.21, 1.24 and 1.25).</p>
<p>Secondly, the MMO highlights that the assessment of significance of effect has not always been undertaken in line with the Rochdale Envelope. The ES has identified a number of impacts on the marine environment, however in instances where the assessment of significance of effect concluded 'negligible or minor' or 'minor or moderate', the assessment conclusion was made for the lower impact, in this case 'negligible' or 'minor' respectively. To undertake the assessment in line with the Rochdale Envelope, the ES should always identify the maximum potential adverse effect and the assessment for significance of effect should highlight the maximum effect, in these cases 'minor' or moderate'. The MMO raised this point in response to publication of the Preliminary Environmental Impact report under section 42 of the PA 2008 and the issue does not appear to have been addressed in the subsequent Environmental Statement.</p>	<p>As outlined in section 5.3.3 of Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement (APP-060) the Rochdale Envelope approach has been followed and is consistent with the Planning Inspectorate's (PINS) Advice Note Nine: Rochdale Envelope (PINS, 2012). For each impact assessed within the topic chapters (i.e. Volume 2, Chapters 1 to 11 and Volume 3, Chapters 1 to 10) the maximum design scenario is identified from the range of possible options for each parameter within Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058). This maximum design scenario is then carried through to the impact assessment in those topic chapters, in line with the Rochdale Envelope approach.</p> <p>The approach to evaluation of significance of effect is outlined in paragraph 5.3.5.14 Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement [APP-060]. The matrix approach, correlating magnitude of the impact and sensitivity of the receptor, has been adopted as a guide, with latitude for professional assessment where deemed appropriate in the application of the matrix. Specifically, where the matrix offers a choice of significance levels, professional judgement has been used to determine the most likely outcome.</p> <p>In paragraph 2.9.2.5 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062) it is clarified that, in cases where a range is suggested for the significance of effect, there remains the possibility that this may span the significance threshold (i.e. the range is given as minor to moderate). In such cases the final significance concluded in the assessment is based upon the expert's professional judgement as to which outcome delineates the most likely effect, with an explanation as to why this is the case. This is consistent with the methodology presented in Environmental Statement Volume 1, Chapter 5:</p>

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	<p>Environmental Impact Assessment Methodology (APP-060).</p> <p>Additional explanatory text has been inserted into the relevant assessments in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] since the publication for the Preliminary Environmental Information report in order to clarify why, in instances where there is a choice in the matrix table, an effect has been considered as minor rather than moderate. See paragraphs 2.11.2.28, 2.11.2.161 and 2.11.2.165 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] for examples of where this approach is demonstrated.</p>
<p>3. The MMO considers that there are a number of major outstanding concerns which would have been better addressed through the pre-application process, and now require resolution during the pre-examination / examination phase. It is a concern for the MMO that should these issues not be resolved pre-consent, significant issues may remain for the MMO and its advisers post-consent in administering any future deemed marine licences for the project.</p>	<p>The Applicant notes that this comment from the MMO is generic in nature. The Applicant has sought to address each of the MMO comments as raised and therefore, assumes that in doing so, it has addressed the MMO concerns here. The applicant is committed to working with the MMO and its advisers to resolve issues during the Examination process. If there are any further specific matters of concern to the MMO, then the Applicant looks forward to confirmation of these so that it can work collaboratively with the MMO to resolve them.</p>
<p>Development Consent Order and Deemed Marine License (DML):</p> <p>General comments:</p> <p><i>Major comments:</i></p> <p>1.1. This is the first opportunity, after a formal application to PINS has been made, that the MMO has had the opportunity to review and comment on the proposed DCO and the Deemed Marine Licences (DMLs). Since both the DCO and the DMLs contain a number of novel and unprecedented conditions, the MMO would have welcomed discussion of the content of a draft DCO and DMLs prior to submission of the application to the Planning Inspectorate. Discussion and consideration of these as part of the pre-application process would have been in accordance with the principles of the PA 2008, which encourages a front-loaded application process.</p>	<p>This is acknowledged by the Applicant, however it is hoped that the comments made in this document by the Applicant will have addressed a significant number of the comments raised by the MMO and it commits to working collaboratively with the MMO over the coming months to resolve any residual matters.</p>
<p>1.2. The DCO for Hornsea Project 3 (Hornsea Three) includes a Schedule (Schedule 13) detailing the process for arbitration, which is supported by Article 36 and several conditions throughout the DCO and the DMLs Schedules 11 and 12. The process for arbitration detailed in this DCO proposes that any difference shall be referred to and settled in arbitration in accordance with the rules at Schedule 13 of the DCO. In comparison to previously used articles for arbitration, the process sets out significantly different conditions and timeframes, which the MMO consider to be inappropriate and therefore recommend to be removed from the DCO and the DMLs.</p>	<p>Regarding Article 36 arbitration – see 1.16. <i>Article 36 (page 27) – Arbitration below.</i></p>

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<p>The applicants reasoning for departing from the model provision and for including this extended clause is that “this approach will provide greater certainty to all parties involved in the process and is preferential to the approach adopted in the model provisions”. It is the MMOs opinion that the proposal goes beyond providing greater certainty. Arbitration provisions tend to follow the model clauses and be confined to disputes between the applicant/beneficiary of the DCO and third parties e.g. in relation to rights of entry or rights to install/maintain apparatus. It is the MMOs opinion that the described process shifts the responsibility of decision making from the hands of the regulator to an independent arbitrator, which is contrary to the intent of Parliament set out in MCCA and usurps the role of the MMO as a regulator. Please see paragraphs 1.16, 1.30 and Schedule 13 for further information.</p>	
<p>1.3. The interpretation of ‘commence’ for both the DCO and DMLs excludes offshore site preparation works. The definition for ‘Offshore Site Preparation Works’ specifically includes surveys and monitoring but also sandwave levelling and boulder clearance. Such a definition also has the potential to include Unexploded Ordnance (UXO) clearance and other works. The MMO considers that offshore preparation works should be included in the interpretation of ‘commence’. This would permit consultation and formal consideration of such works and their potential impacts on marine protected areas and habitats. Exclusion of these works from the definition of ‘commence’ would allow the developer to undertake sandwave levelling, boulder relocation and other activities prior to the agreement of any required mitigation, sufficient consideration and consultation upon construction methods and monitoring plans and prior to the requirement to perform any necessary pre-construction monitoring surveys.</p>	<p>The Applicant has reflected on this point, and given the control in Condition 13 of the generation assets dML and Condition 14 of the transmission assets dML (Numbering here and after as per the DCO and DMLs provided for Deadline 1) (as highlighted in bold below) are happy to ensure that “commence” captures offshore site preparation works:</p> <p>13.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) has been submitted to and approved in writing by the MMO.</p> <p>The term “offshore site preparation works” has therefore been removed from both dMLs.</p> <p>UXO clearance does not form part of the authorised development. This is confirmed in the HOW03 Environmental Statement, Chapter 3: Project Description. The Undertaker will apply for a marine licence in respect of UXO if/when required.</p>
<p>1.4. The proposed timescales conditioned in the DMLs require a response period of 8 weeks following receipt of all post-consent documentation. The MMO considers that this would not provide sufficient time for consultation and subsequent comment, based on the experience of offshore wind farm licence management in the past. The MMO recommends that a minimum period of 6 months is applied for consideration of post-consent documentation submission to allow for sufficient stakeholder consultation and comment to be provided. The MMO also recommends removal of the requirement that any failure to provide a decision in time may lead for the matter to be referred to arbitration. Please see paragraph 1.14 for further detail.</p>	<p>The Applicant wishes to ensure an efficient and expeditious approval process for the discharge of conditions. However, we note the MMO's and Natural England's concerns, and propose the following compromise, which would require the amendment of condition 14 of the generation assets DML:</p> <p>“14.—(1) <i>Each programme, statement, plan, protocol or scheme required to be approved under condition 13 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.</i></p> <p>(2) <i>The MMO shall determine any application for approval consent made under condition 13 this article within a period of four months eight weeks commencing on the</i></p>

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	<p><i>date the application is received by the MMO, unless otherwise agreed in writing with the undertaker.</i></p> <p><i>(3) Where the MMO is minded to refuse an application for approval consent made under condition 13 and notifies the undertaker accordingly, or the Secretary of State fails to determine the application for consent under this article within the period prescribed in paragraph (2), the undertaker may refer the matter for determination in accordance with article 36 (arbitration) of the Order.</i></p> <p><i>(4) The licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 13, unless otherwise agreed in writing by the MMO."</i></p> <p>The similar amendments would also be required to condition 15 of the transmission assets DML. The effect of the amendments would be that applications to discharge conditions are submitted no later than four months before commencement and those applications must be determined within that four month period, unless an extension of time is agreed between the parties.</p>
<p><i>Minor comments:</i></p> <p>1.5. On numerous occasions, the figures for cable length, cable protection, scour protection and disposal volumes do not match between the DCO, the DMLs and the ES project description. The figures should match across all documents and the MMO requests that these errors are addressed to allow for accurate consideration of the potential impacts of these elements of the proposed development. Please see paragraphs 1.21, 1.24 and 1.25 for further detail.</p>	<p>The Applicant has provided a response below to each of the specific issues raised by the MMO with regard to the DCO, the DMLs and the Project Description.</p>
<p>1.6. The MMO recommends that figures for maximum sandwave levelling and boulder clearance should be included in the DCO/DMLs to ensure that the limits defined in the ES are adhered to. For sandwave levelling this should include both area and volume of impact. Furthermore, should any material be disposed outside of the disposal area designated for this project, information on the site should be provided.</p>	<p>The volume of sandwave and boulder clearance are included in the Draft DCO [APP-027] as follows:</p> <ul style="list-style-type: none"> - Schedule 1, Part 1, (c) includes for the removal of material from the seabed for the construction of Work Nos 1 to 5 and the disposal of up to 3,563,133 cubic meters of inert material of natural origin within the Order limits produced during [...] cable installation preparation such as sandwave clearance, boulder clearance [...]. - Schedule 11, Part 1, Article 2(1)(a) includes for the disposal [...] of up to 1,344,318 cubic metres of inert material of natural origin produced within Work No. 1. - Schedule 12, Part 1, Condition 2(a) includes for the disposal [...] of up to 2,218,816 cubic metres of inert material of natural origin produced [...] within Work Nos. 2, 3, 4 and 5. <p>The sandwave and boulder clearance material will be disposed of within the disposal site (specifically Works Nos. 1, 2, 3, 4 and 5) as outlined within the Draft DCO [APP-027].</p>

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	<p>The Applicant's response to the Planning Inspectorate on the 25 July 2018 provides further information on the relationship between the disposal volumes quoted in the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058). This document is located at https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/EN010080/EN010080-000802-20180723_HOW03_S58_Attach02_PDESTable.pdf</p>
<p>1.7. The requirement for a design plan to be approved by the MMO has been removed from the DMLs since this information has been included in the ES. The MMO suggests that the design plan should be approved post-consent to allow for consideration as to whether the final project plan sits within the consented envelope. Please see paragraph 1.35 for further detail.</p>	<p>The Applicant has reflected on this matter further and will amend the condition so that a design plan is required to be submitted for approval by the MMO save in relation to the layout.</p>
<p>1.8. Neither of the DMLs include any requirement for micro-siting around features of ecological importance outside of any European Designated Site. In addition, no conditions for pre- or post-construction monitoring for features of ecological importance have been included in the Generation Assets DML (Schedule 11?). The MMO notes that it is a standard approach of all offshore wind developments to conduct pre- and post-construction surveys to ensure that there will be no impacts on features of ecological importance outside of any European Designated Site. The MMO suggests that the applicant provides details of pre- and post-construction monitoring surveys to inform micro-siting around any features of ecological importance prior to the commencement of any licenced works and to provide evidence post-construction as to the impact on any such features as a result of the development. Please see paragraph 1.47 and 1.67 for further detail.</p>	<p>The Applicant does not agree that there is a standard approach to benthic monitoring within the offshore wind sector. However, and notwithstanding this, the Applicant can confirm that it will update the dML and IPMP to reflect a commitment to monitoring of key ecologically important features throughout the transmission and generation assets (both pre and where necessary post construction). The Applicant recognises that the dML wording relating to identification of designated features / annex I habitat that should be mitigated through micro-siting can be improved and this has been updated within both the generation and transmission assets dML Revision 1, submitted for Deadline 1.</p> <p>The Applicant has added conditions within the transmission assets and generation assets dML (19(2) (a) and 20(2)(b) respectively .) to ensure that where necessary post construction monitoring is carried out under both dMLs. The Applicant has made this amendment to the draft DCO (Revision 1, submitted for Deadline 1).</p> <p>The micro-siting commitment as part of the design plan (Condition 13(1)(a)(v) Generation assets, 14(1)(a)(v), transmission assets) has been expanded to capture Annex I habitat micro-siting and will be linked updated pre-construction geophysical & benthic survey conditions that will serve inform the location and extent of any features that require micro-siting.</p>
<p>1.9. The DML for the Generation Assets (Schedule 11) Condition 11 (2) (f) sets out the monitoring requirements for the pre-construction documentation. This condition is linked to the standard pre-construction timing requirement which states that all documentation is required to be submitted no less than 4 months prior to the commencement of the licenced activities. The MMO advises that pre-construction monitoring should have been undertaken well in advance of this date. Please see paragraph 1.39 for further detail.</p>	<p>The Applicant agrees that the monitoring plan will need to be submitted for approval an appropriate timescale in advance of that particular monitoring taking place. The condition has been amended accordingly to clarify this.</p>

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<p>1.10. Both DMLs set out the requirement for all pre-construction documentation and plans under Condition 11 or 12 to be submitted for approval 4 months prior to the commencement of any licenced activity. Considering the increased size and complexity of the Round 3 offshore wind farm projects and the increasing number of issues encountered on previous offshore wind farm projects throughout the pre-construction approval process, the MMO consider that a timeframe of 6 months would be more appropriate to address such issues through consultation prior to their approval. Please see paragraph 1.43 for further detail.</p>	<p>The Applicant notes that Orsted always seeks to submit plans for approval as far in advance as reasonably practicable. However, as final scheme design and installation contractor appoint can happen quite late in the process there is a risk that bringing submission of plans forward risks the need to resubmit plans at a later date. A process which is counter productive for all parties. Four (4) months is considered a well established and reasonably balanced timescale for this process. The applicant, in its application dML has however included a provision to allow for this to be extended upon agreement, and we do not propose to remove that upon amendment of the dMLs.</p> <p>It should be noted that these concerns have been raised by Natural England and the Applicant cross refers the MMO to its response to the equivalent point as well.</p>
<p>1.11. The post-consent monitoring as set out in the DMLs only provides limited information on benthic, ornithological and marine mammal monitoring. The MMO advise that it would be beneficial for the information to be repeated in the appropriate condition. Please see paragraph 1.47 for further detail.</p>	<p>The Applicant confirms that the first draft of the dML aimed at taking a concise (whilst robust) approach to the condition wording. With specific regard to this comment, the Applicant will update the monitoring conditions such that they are specific to pre-construction, construction and post-construction phases across both the generation and transmission assets.</p>
<p>1.12. A more detailed explanation of the issues is presented in the following sections.</p>	<p>This is acknowledged by the Applicant.</p>
<p>DCO Interpretations and Articles 1.13. <i>Part 1(2) (page 5) - Cable circuits</i> The interpretation defines 'cable circuits' for HVAC as a cable circuit that may be comprised of one or three cables, either installed bundled or as separate cables. The Environmental Statement (ES) project description (Table 3.38, page 31) indicates however that for High Voltage Alternating Current (HVAC) only one cable per circuit is required. The definition in the DCO therefore implies that 3 separate cables could be installed. Part 1 (2) should clarify that the maximum number of offshore export cables is 6 as defined in the ES project description Table 3.44 (page 36). This should be changed throughout the documentation including both Schedules 11 and 12.</p>	<p>The Applicant acknowledges the apparent discrepancy in the interpretation of 'cable circuits' in Part 1(2) of the Draft DCO [APP-027]. However, as noted in paragraph 3.6.8.5 of Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058), typical HVAC systems require three conductors per electrical circuit and offshore these are usually combined into a single cable (see Figure 3.20 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]). These conductors would not be installed separately in the marine environment.</p> <p>The number of cable circuits is specified within the Draft DCO [APP-027] (e.g. Schedule 1, Part 1, Work No. 2, Work No. 3 and Work No. 5) and this is consistent with the maximum design scenario considered within the Environmental Statement (i.e. up to six cable circuits in the Hornsea Three offshore cable corridor).</p>
<p>1.14. <i>Part 1(2) (page 5) - Commencement and offshore site preparation works</i></p> <p>Interpretation of 'commence' and 'offshore site preparation works'. Both the DCO and the DML have stated that offshore site preparation works are not defined as the commencement of works. Offshore site preparation works are defined in the DCO and DML as works that include, but are not limited to, surveys, monitoring, boulder clearance and sandwave clearance.</p>	<p>The Applicant has reflected on this point, and given the control in Condition 13 and 14 of the generation assets and transmission assets dMLs respectively (as shown below) are happy to ensure that "commence" captures offshore site preparation works:</p> <p><i>13.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) has been submitted to and approved in writing by the MMO</i></p> <p>It should however, be noted that UXO clearance is not</p>

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<p>This interpretation implies that other activities such as UXO clearance or pre-grapple runs could be undertaken as offshore site preparation works. Offshore preparation works have been identified in the ES as having the potential to cause significant impacts on the marine environment. The MMO therefore considers that offshore site preparation works should be included within the pre-construction plans and documentation to be submitted for approval following appropriate stakeholder consultation. Offshore site preparation works should therefore be defined as having commenced the licence activities and no works should be allowed to be undertaken until the pre-construction documentation has been approved by the MMO and all pre-construction monitoring has been undertaken.</p> <p>The MMO considers that pre-construction surveys should be the only licenced works not included in the interpretation of 'commencement'. These changes to the interpretation should be included throughout the documentation including both Schedules 11 and 12.</p>	<p>considered to fall under "site preparation works" and therefore, "commence" as this activity is explicitly not being included within the DCO and therefore, will be licenced separately.</p>
<p>1.15 Article 5 (1) and (13) (page 10) - Benefit of the Order</p> <p>The MMO is an interested party under the PA 2008 for proposed projects that may have an impact in the English marine area. The MMO is, therefore, an advisor in the process rather than the decision maker and as such are unable to provide advice on the mechanics of the DCO process or what is permissible under PA 2008. The Applicant must take their own advice and that of the Planning Inspectorate and the Secretary of State.</p> <p>The MMO's primary point of reference for the interpretation of PA 2008 is the Marine and Coastal Access Act (MCAA) 2009. It is therefore considered that if an activity is not permissible under MCAA 2009, it is unlikely to be considered as permissible under PA 2008. Section 72(7) of MCAA 2009 permits the whole transfer of marine licences from one party to another but does not permit the partial transfer of licences (i.e. 'splitting' of licences or apportioning of conditions). <i>"72 (7) On an application made by a licensee, the licensing authority which granted the licence (a) may transfer the licence from the licensee to another person, and (b) if it does so, must vary the licence accordingly."</i> (MCAA 2009)</p> <p>Furthermore, the MMO advise that DML conditions should remain effective against the licence holder or undertaker should any assets have to be transferred, e.g. transmission assets to Offshore Transmission Owners (OFTOs). Assets covered under the DML may also be subject to Section 71(5) of MCAA 2009, which means that conditions attached to DMLs for these assets may apply to both licence holder and other persons, such as the owner of the assets.</p>	<p>The MMO opinion that Section 72(7) of the MCAA09 does not allow for the partial transfer (or "splitting") of marine licences is matter previously ruled on through determinations of DCO / DMLs, with the Examining Authorities involved and the SoS consistently found in terms consistent to those promoted by the applicant.</p> <p>The following offshore wind DCOs include provision for the partial transfer of DMLs: The Walney Extension Offshore Wind Farm Order 2014 (as amended); The Hornsea One Offshore Wind Order 2014; The Dogger Bank Creyke Beck Offshore Wind Farm Order 2015; The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015; The Hornsea Two Offshore Wind Order 2016.</p> <p>Those DCOs also include drafting along the lines "The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence only apply to a transfer not falling within article 5 (benefit of the Order)". Those subsections state: <i>"(7) On an application made by a licensee, the licensing authority which granted the licence—(a) may transfer the licence from the licensee to another person, and (b) if it does so, must vary the licence accordingly; and (8) A licence may not be transferred except in accordance with subsection (7)".</i> The draft Order includes such provision.</p> <p>The draft Order includes at Article 5(7)(b) <i>"the transferred benefit shall reside exclusively with the transferee or, as the case may be, the lessee and the transferred benefit shall not be enforceable against the undertaker"</i>. This too is common to many offshore wind DCOs where it has been accepted by the SoS that once the ownership of the transmission assets</p>

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<p><i>"71. Licences (5) A licence authorising such activities as are mentioned in item 7 in section 66(1) may provide that the conditions attached to it are to bind any other person who for the time being owns, occupies or enjoys any use of the works in question (whether or not the licence is transferred to that other person)." (MCAA 2009).</i></p>	<p>has been transferred to an OFTO under the statutory regime, along with the related benefit of the DCO/DML, it is reasonable for liability for those assets to reside exclusively with the OFTO.</p> <p>Given that these points, and related substantive legal submissions, have been considered at length by several Examining Authorities and the SoS, and several DCOs have been granted making provision for the partial transfer of DMLs and allocation of liability for enforcement, the applicant will not be amending the draft DCO [APP-027] in this regard.</p> <p>The applicant is content that these are points that have been settled by the SoS and there is no good reason or need to revisit them in the context of this project and its examination.</p>
<p>1.16. <i>Article 36 (page 27) – Arbitration</i> Article 36 proposes that any difference shall be referred to and settled in arbitration in accordance with the rules at Schedule 13 of the DCO. In comparison to previously used articles for arbitration, Article 36 sets out significantly different conditions and timeframes, which the MMO consider to be inappropriate and therefore recommend should be amended or removed from the DCO and DMLs.</p> <p>The applicant's reasoning for departing from the model provision and for including the extended clause is that "this approach will provide greater certainty to all parties involved in the process and is preferential to the approach adopted in the model provisions".</p> <p>It is the MMOs opinion that the proposal goes beyond providing greater certainty. Arbitration provisions tend to follow model clauses and be confined to disputes between the applicant/beneficiary of the DCO and third parties e.g. in relation to rights of entry or rights to install/maintain apparatus. The MMO strongly questions the appropriateness of any regulatory decision or determination to be made subject to any form of binding arbitration as set out by Article 36 and Schedule 13. It is the MMOs opinion that Article 36 and Schedule 13 would shift the MMO's decision-making responsibility from the hands of the regulator with primary responsibility for administering the marine licensing regime to an independent arbitrator. This would be contrary to the intention of Parliament set out in MCAA and would potentially usurp the role of the MMO as a regulator. The MMO therefore request removal of Articles 36(2) and (3) from the DCO and DMLs. Please find below the detailed reasoning in support of this request.</p> <p>When the MMO was created by the Parliament to manage marine resources and regulate activities in the marine environment, the Secretary of State delegated his/her</p>	<p>Section 120 of the PA08 prescribes what may be included in a DCO and includes those matters listed in Part 1 of Schedule 5. Paragraph 37 of Schedule 5 prescribes "<i>The submission of disputes to arbitration</i>".</p> <p>That reference is not qualified at all. It does not limit or exclude any party to the dispute in question. There is nothing in the PA08, MCAA09, or other legislation that has limited the application of para 37, or otherwise serves to exclude the SoS or MMO from arbitration.</p> <p>It is conceivable that a dispute arising from a DCO may include a dispute between the undertaker and SoS/MMO, for example, on a matter of a technical nature that is beyond the everyday expertise and experience of those regulators. In those circumstances it is entirely appropriate for the matter to be determined by an appropriately qualified expert arbitrator.</p> <p>There would be no usurping of the authority of the SoS/MMO because the procedure set out in Schedule 13 of the draft DCO [APP-027] makes provision for all parties to the dispute to engage in the appointment of the arbitrator, make submissions to the arbitrator, and for the exchange of evidence. Therefore, the appointed arbitrator would necessarily have regard to the submissions and standing of the SoS/MMO when considering and determining the dispute. The possibility that the arbitrator may arrive at a different conclusion on the evidence than that of the SoS/MMO would not amount to a usurping of authority, but would provide swift an effective dispute resolution in accordance with well-established principles of natural justice, which does not exist in DCOs made to date.</p> <p>The applicant has not seen justification for why such an approach would be contrary to the intention of Parliament in making the PA08 or MCAA09 as the MMO has asserted.</p>

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<p>functions to the MMO under the MCAA 2009. As both the role of the Secretary of State in determining DCO applications and the role of the MMO as a regulator for activities in the marine environment are recognised by the PA 2008, the responsibility for the DML passes from the Secretary of State to the MMO once granted. Here the MMO is responsible for any post consent enforcement actions, any post consent monitoring, and any variations, suspensions or revocations associated with the DML.</p> <p>In doing so, it was not the intention of Parliament to create separate marine licensing regimes following different controls applied to the marine environment. In fact, one of the aims of the PA 2008 is the provision of a 'one stop shop' for applicants seeking consent for a national significant infrastructure project. The new regime allows for the applicant to choose whether to include a DML issued under MCAA within the DCO provision, or apply to the MMO for a standalone licence covering all activities in the marine environment. In any case, it is crucial that consistency is maintained between DMLs granted through the provision of a DCO and licenses issued directly by the MMO independent of the process.</p> <p>It is the MMOs opinion that the referral to arbitration in situations where 'difference' may arise, goes against what was intended by Parliament and usurps the MMOs role of the regulator for activities in the marine environment. Looking at the draft DMLs, the MMO feels that the 'difference' to which arbitration would be applied are those situations in which the MMO is required to give further consent or approval. These situations appear to arise when small re-determinations of aspects of the marine license process have to take place. A specific example here are situations where the applicant proposes changes to the way in which the already authorised activities will be carried out and effects have not been considered as part of the ES. Generally, these are technical determinations and the MMO feels that the MMO is better placed to make technical determinations than an arbitrator appointed under the DCO. Furthermore, in the case of any disagreement which may arise between the applicant and the MMO throughout this process, the existing appeal routes i.e. via the MMOs complaint procedure, by complaint to the Ombudsman, or ultimately via Judicial review should be taken. It is inappropriate for the DCO to apply arbitration to these decisions.</p> <p>It remains unclear to the MMO, why the applicant would like to apply arbitration to 'differences' which may arise post-consent between itself and either the Secretary of State or the MMO. It is recognised in the explanatory memorandum to the draft order, that the wording in Article 36 is a departure</p>	<p>The MMO has not provided a source or reference for that submission.</p> <p>A typical example of arbitration provisions previously endorsed by the SoS can be found in Article 41 of the Hornsea Two Offshore Wind Order 2016, which states: <i>"Any difference under any provision of this Order, unless otherwise provided for, must be referred to and settled by a single arbitrator to be agreed between the parties or, failing agreement, to be appointed on the application of either party (after giving notice in writing to the other) by the Secretary of State"</i>.</p> <p>Identical provisions exist in other offshore wind farm DCOs granted since the PA08 came in to force. There is nothing in those provisions that limits or excludes any party to the dispute in question. In other words the SoS/MMO could well be a party to a dispute determined by arbitration under those made DCOs, if an undertaker or other party chose to take that action.</p> <p>The SoS has previously considered who should be a party to arbitration provisions in a DCO. In respect of both the Triton Knoll Offshore Wind Farm Order 2013 and the Burbo Bank Extension Offshore Wind Farm Order 2014, Natural England submitted that it should be excluded from those provisions on the basis that the exercise of NE's statutory powers should not be subject to arbitration. In both cases, the SoS did not agree.</p> <p>At para 7.3 of the Triton Knoll decision letter the SoS states: <i>"The Panel also asked the Secretary of State to consider whether SNCBs should be removed from the provisions for arbitration covered by Article 12 of the draft Order at Appendix E (headed "Arbitration") [ER 5.11.20]. To maintain consistency with other offshore wind farms approved under the Planning Act 2008 since the close of the Panel's Examination, the Secretary of State has decided that the arbitration provisions should apply to SNCBs and has therefore modified the article in the Order accordingly."</i></p> <p>The outcome in Triton Knoll was noted by the ExA in its report on Burbo (as noted in para 7.45 and 7.46 of the Report): <i>"This draft article provides for the appointment of an arbitrator if a dispute arises in respect of any provision of the DCO. Early draft DCOs excluded NE from the operation of the provision, pursuant to an opinion provided by NE to the Triton Knoll Offshore Wind Farm Examining Authority that the exercise of its statutory powers should not be subject to arbitration and should only be adjudicated upon by the court. However, the Secretary of State in the Triton Knoll decision decided not to exclude NE from the arbitration provision in that DCO, on the basis that all issues and parties should be</i></p>

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<p>from the model provision. It is stated that the aim for this amendment is to provide greater clarity to all parties involved, however the MMO feel that the wording goes much further than simply providing clarity. It appears that the arbitration clause included allows a more widely application than in the case if the model clause were to be used. The model clause is set out to introduce arbitration in situations where differences arise between the applicant and any third parties who could be affected by the development, for example situations where third parties premises will be required. The model clause do not extend the use of arbitration to differences which could arise between the applicant and the Secretary of State or the MMO as a regulator for the granted DML. It is the MMOs view that this was not intended on the proper construction of the PA 2008 and the MCAA 2009.</p> <p>The arbitration schedule as set out in Schedule 13 describes a private process and require the agreement that all discussions and documentation will be confidential and not disclosed to third parties without written consent. The MMO would like to highlight that the regulatory decisions should be publicly available and open to scrutiny. In many cases, members of the public and Non-governmental organisations may make representations in relation to post-consent matters. Ordinarily, their views would be considered by the MMO and would be able to follow and challenge the decision making. A private arbitration to resolve post consent disputes would cut out the public and reduce transparency and accountability.</p>	<p><i>equally subject to arbitration on the same basis [emphasis added]. I proposed to delete the exclusion of NE from the arbitration provision in my draft DCO. The applicant and NE did not object to this revision which was sustained in the applicant's draft DCO Version 6 [APP-099]. I am content with the current drafting of this article.</i>" The SoS endorsed the ExA's conclusion in the made Order.</p> <p>Therefore, the applicant disagrees with the MMO's view that "Arbitration clauses...tend to be confined to disputes between the applicant/beneficiary of the DCO and third parties". Indeed the applicant has found no such qualification in any of the offshore wind DCOs made to date.</p> <p>Examining Authorities and the SoS have already opined on this point as highlighted above and concluded that "<i>all issues and parties should be equally subject to arbitration on the same basis</i>".</p> <p>Furthermore, the argument advanced by the MMO that it should be excluded from those provisions on the basis that the exercise of the MMO statutory powers should not be subject to arbitration, has been rejected by the SoS at least twice in the Triton Knoll and Burbo Bank Extension DCOs.</p> <p>Those arbitration provisions in made DCOs are silent on how the arbitration should be put into effect. For example, no provision is made for the appointment of the arbitrator, the terms of reference for the arbitrator, the exchange of evidence, or a determination period. This means that if a party wished to refer a matter to arbitration under those existing DCOs, there is no procedure for doing so, which could render the provision ineffective.</p> <p>On page 9 of its RR the MMO raises a point about the confidentiality requirement in the arbitration provisions at paragraph 7 of Schedule 13 of the draft Order. The applicant accepts that this could be amended to allow disclosure to enable a party to comply with disclosure obligations under legislation, e.g. the Freedom of Information Act 2000.</p> <p>It is for the above reasons that the applicant believes that the expanded arbitration provisions in the draft DCO [APP-027] would provide greater certainty to all parties potentially involved in a dispute under the DCO. The applicant has clarified that those parties may include the SoS/MMO and clearly set out a process for the arbitration to follow. Objectively, this clarity must be an improvement over the arbitration provisions included in DCOs to date. The alternative "appeal" routes mentioned by the MMO, i.e. the MMO's complaints procedure, Ombusman procedure and judicial review, do not provide for an expeditious alternative mechanism for dispute resolution.</p>

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	<p>Indeed, years can be consumed following those procedures, which an NSIP developer can ill-afford to follow, given the AfL and CfD milestones it is subject to.</p> <p>The timescales referred to in the arbitration provisions (and the discharge of conditions in the DMLs) have been adopted from the TCPA 1990, e.g. determination in 8 weeks, and are designed to provide for an expeditious procedure in a regime which currently makes no provision for determination periods. The MMO is subject to the similar resource and budgeting as LPAs and so the adoption of timescales akin to those in the TCPA is reasonable. In response to the MMOs stated requirement for time to consult, those TCPA timescales also require statutory consultation to be undertaken by an LPA. The applicant has not seen justification for an equivalent determination period for the MMO to be 6 months.</p> <p>The TCPA also provides for appeals for non-determination to be made after the statutory time limit has expired. The applicant considers that it is fair to have a similar provision in relation to DMLs, with associated reference to arbitration.</p> <p>Developers of offshore wind farms experience considerable delay and cost in the discharge of conditions/requirements set out in a DCO/DML and in the resolution of disputes in trying to achieve such discharge. Faced with no effective determination period or dispute resolution procedure, the result is often the developer having to reluctantly, and often unfairly, concede significant points in order to get the condition/requirement discharged and progress the project in accordance with AfL and CfD milestones, such is the imbalance of negotiating position in the process. This often results in increased costs and prejudices the common objective of the industry and Government to reduce the cost of energy.</p> <p>The applicant notes that the arbitration provisions in the draft Order have been adopted in their entirety in Vattenfall Wind Power Limited's applications for DCOs in respect of the Norfolk Vanguard Offshore Wind Farm (PINS Ref: EN010079) and the Thanet Extension Offshore Wind Farm (PINS Ref: EN010084).</p>
<p>DCO Schedule 1 - Authorised project development and requirements 1.17. <i>Part 1 (1) Work No.1 (a) (page 29) - Wind turbine Generation output</i></p> <p>Works No. 1 describe the offshore wind turbine generation station to have a gross output of over 100MW. The MMO would expect the maximum capacity as described in the ES to provide an upper generating output limit as part of the 'Rochdale Envelope' approach. In addition, requirement 6 –</p>	<p>Paragraph 2.10 of the Explanatory Memorandum explains why: <i>"The description of Work No.1 does not refer to an upper limit on the capacity of the generating station that development consent is being sought for. It is not considered that imposing an upper limit is desirable or necessary. The DCO includes parameters in which the Authorised Project must be constructed and it is on this basis which the environmental impact assessment has been undertaken. There is no reason to limit the electrical output capacity of</i></p>

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<p>Phases of authorised development on page 35 should ensure that, prior to any construction, a final scheme is outlined and provided to the MMO. The MMO recommends that the Generation Asset DML (Schedule 11) should be amended to reflect this requirement.</p>	<p><i>the Authorised Project provided the parameters of development are not exceeded. There are advantages in not imposing an upper limit so that the Undertaker can take advantage of technical advancements that emerge in the coming years in terms of wind turbine efficiency which would enable it to still construct the Authorised Project within the existing parameters but to increase capacity beyond the capacity which is currently anticipated based on existing technology. It is currently anticipated, when completed, the Authorised Project will have a total capacity of approximately 2.4 GW. However, Orsted does not wish to limit the development to this capacity and this is the reason that the description of the NSIP in Schedule 1 has been adopted.</i></p> <p>The maximum output capacity of an offshore wind farm is irrelevant for the purposes of EIA and so does not need to be fixed or capped in the ES or draft Order.</p>
<p>1.18. <i>Part 1 (1) Work No. 2 and 3 (d) (page 29/30) - Cable circuits</i></p> <p>Works No. 2 and 3 set out the use of High Voltage Direct Current (HVDC) or HVAC as available cable options. HVDC is described to contain up to 6 cable circuits between Works No.2 and 3 and between Works No. 3 and 5. Based on the interpretation provided in the draft DCO, 6 cable circuits each containing up to 3 separate cables can be installed. The same criteria applies to the use of HVAC. The MMO requests clarification that the maximum number of export cables would be 6, as described in the ES project description. This should also be clarified in Schedules 11 and 12.</p>	<p>See response to MMO comment 1.13 above. The maximum number of cables to be installed in Work No. 2 and Work No. 3 will be six as assessed in the Environmental Statement.</p>
<p>1.19. <i>Part 1(1) Work No. 2 and 3 (d) (page 29/30) - Cable crossings</i></p> <p>The ES project description includes an assessment of up to 44 cable crossings. The MMO recommends that the maximum number of cable crossings should be included in the DCO and DMLs. Cable crossing information should include consideration of the deposit of cable protection and any resultant potential impacts on the marine environment. The MMO considers that the maximum limits should be adhered to for both the overall project and for individual cable crossing. This should be further provided in both Schedules 11 and 12.</p>	<p>Cable crossings are included in the Draft DCO in Schedule 1, Part 3, Requirement 5(5) [APP-027] which states that the total volume of cable protection associated with cable crossings shall not exceed 784,875 cubic metres with a maximum footprint of 747,500 square metres. The Applicant's response to the Planning Inspectorate on the 25 July 2018 provides further information on the relationship between the cable crossing volume and area quoted in the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058].</p> <p>With regards to the area and volume of individual cable crossings, it is not standard practice to include this level of detail within the DCO, however in accordance with Schedule 11, Part 2, Condition 13(1)(h) and Schedule 12, Part 2, Condition 14(1)(h), a cable specification and installation plan, to include a detailed cable laying plan which will incorporate a burial risk assessment or similar to ascertain, amongst other things, cable protection, will be submitted to the MMO for approval prior to construction commencing.</p>
<p>1.20. <i>Part 1 (1) Work No. 2 (e) and 3 (page 30) - Horizontal Direction Drilling exit pits</i></p>	<p>The Environmental Statement considered a maximum design scenario of up to eight horizontal directional drilling</p>

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<p>This section describes the requirement of up to 8 horizontal direction drilling (HDD) exit pits. The ES assesses the requirement for a maximum of 6 cables. The MMO requests further explanation as to why an additional 2 exit pits would be required. Work No. 3 for HVAC cable installation does not state any requirement for HDD exit pits. This is in contrast with the ES project description, which states that the intertidal installation for both types would be the same. The MMO requests further clarification on this matter. This comment also applies to Schedule 12, Part 1, Work No. 2 (e) (page 143).</p>	<p>ducts and associated exit pits to be excavated during construction (see Table 3.52 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]) in line with the Draft DCO [APP-027]. The additional two horizontal directional drilling ducts have been included in the Project Description as contingency in the unlikely event that one of the horizontal directional drilling ducts or horizontal directional drilling operations may not be successful. This maximum design scenario was therefore considered throughout the Environmental Statement in line with the Rochdale Envelope approach.</p> <p>With regard to Schedule 1, Part 1, in the event of a HVAC mode of transmission, much of the infrastructure outlined Work No. 2 (e.g. up to 12 offshore type 1 substations and up to eight horizontal directional drilling exit pits) would still be required. As such, Work No. 3 would not replace all infrastructure outlined in Work No. 2. Work No. 3 specifies the additional infrastructure required on the Hornsea Three offshore cable corridor for HVAC transmission.</p>
<p>1.21. <i>Part 1 (1) Work No. 15 (c) (page 31) - Disposal volumes</i></p> <p>This section describes the total disposal volume as 3,563,133m³. Schedules 11 and 12 split the volume into 1,344,318m³ for generation assets and 2,218,816m³ for transmission assets. When added together there is a discrepancy of 1m³ between the DML schedules and the DCO. Furthermore, within the Dredge and Disposal Site characterisation report (Table 2.2., page 9) a disposal quantity of 2,289,137m³ is described for the array and 1,467,956m³ for the transmission area. The total of 3,757,093m³ is significantly more than that detailed in the DCO. The MMO requests further clarification of these figures. This comment also applies to Schedule 11, Part 1 (2) (f) (page 128) and Schedule 12, Part 1 (2) (f) (page 143).</p>	<p>The comments from the MMO are noted regarding the discrepancy between the Schedule 1, 11 and 12 of the Draft DCO [APP-027]. On review, Schedule 11, Part 1, Condition 2(1)(a) has been updated to state "<i>the deposit at sea... up to 1,334,317 cubic metres of inert material of natural origin</i>".</p> <p>Table 2.2 of Volume 4, Annex 3.2: Dredging and Disposal: Site Characterisation of the Environmental Statement (APP-086) provides a breakdown of the maximum total spoil arisings within the Hornsea Three array area and offshore cable corridor. The Hornsea Three array area maximum design scenario is based on the HVDC transmission scenario and the Hornsea Three offshore cable corridor is based on the HVAC transmission scenario. It should be noted that the infrastructure for both the HVAC and HVDC transmission scenario will not be required and therefore these numbers should not be summed.</p> <p>As illustrated in Indicative Extent of Development Consent Order and Deemed Marine Licences - Cross Sectional (APP-025), Schedule 12 of the Draft DCO [APP-027] considers all of the offshore electrical substations. The maximum design scenario is the HVAC transmission scenario and therefore the spoil arisings for the offshore HVDC converter substations are not included within the Draft DCO [APP-027] as these are not required in the maximum design scenario.</p>
<p>1.22. <i>Part 2 (1) (a) (page 33) – Ancillary works</i></p> <p>The MMO advises that the construction of temporary landing places and moorings are licensable activities under MCAA 2009 and should therefore be included in the DMLs.</p>	<p>The Applicant can confirm that the DMLs have been amended to include this.</p>
<p>1.23. <i>Part 3 (3) (1) (page 34) - Offshore electrical installations and offshore accommodation platforms</i></p> <p>The maximum total number of offshore electrical installations</p>	<p>Table 3.37 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058] outlines that, for the HVAC transmission scenario, the following offshore</p>

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<p>and offshore accommodation platforms proposed in the DCO is 21. The ES project description indicates there would be a maximum of 22 offshore electrical installations for HVAC and 16 for HVDC but also refers to a maximum total of 319 structures to be installed, including a maximum of 300 turbines. Further clarification on this should be provided, and the total number should be reflected in Schedule 12, Part 2 (1) (page 146).</p>	<p>substations will be required:</p> <ul style="list-style-type: none"> - Offshore transformer substations; and - Offshore HVAC booster stations. <p>For the HVDC transmission scenario, the following offshore substations will be required:</p> <ul style="list-style-type: none"> - Offshore transformer substations; and - Offshore HVDC converter substations. <p>In addition, as outlined in Table 3.35 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], a maximum of three accommodation platforms are required.</p> <p>As illustrated in Indicative Extent of Development Consent Order and Deemed Marine Licences - Cross Sectional (APP-025), Schedule 12 of the Draft DCO [APP-027] considers all of the Hornsea Three offshore electrical substations. Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058] states that a maximum of 12 offshore transformer substations (Table 3.39), a maximum of four offshore HVAC converter substations (Table 3.41) and a maximum of six subsea offshore HVAC booster stations (Table 3.43) will be required. It should be noted that the infrastructure for both the HVAC and HVDC transmission scenario will not be required and that the Draft DCO [APP-027] therefore considers the maximum design scenario, which is the HVAC transmission scenario with a maximum of 21 offshore substations and platforms (12 offshore transformer substations + six subsea offshore HVAC booster stations + three accommodation platforms). The HVDC transmission scenario would result in a maximum of 19 offshore substations and platforms (12 offshore transformer substations + four offshore HVDC converter substations + three accommodation platforms) and is therefore not considered the maximum design scenario.</p> <p>The reference within Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058] to 319 structures is specifically to those to be located within the Hornsea Three array area. The maximum scenario for the Hornsea Three array area is the HVDC transmission scenario (300 turbines + 12 offshore transformer substations + four offshore HVDC converter substations + three accommodation platforms). The HVAC transmission scenario would result in less infrastructure within the Hornsea Three array area as the offshore HVAC booster stations are to be located within the Hornsea Three offshore cable corridor.</p>
<p>1.24. Part 3 (4) (page 35) - Scour protection</p> <p>The maximum scour protection volume indicated in the DCO is 2,709,673m³. This is different to the total volume of scour</p>	<p>As noted in response to MMO Relevant Representation comment 1.23, the infrastructure for both the HVAC and HVDC transmission scenario will not be required and the Draft DCO [APP-027] considers the maximum design</p>

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<p>protection indicated in DML Schedules 11 and 12, which adds up to a total of 2,952,873m³. Schedule 11 allows a total of 2,418,473m³ of scour protection for turbines and accommodation platforms and Schedule 12 allows a total of 534,400m³ of scour protection to be used for transmission assets. The scour protection volume proposed in the ES for both HVDC and HVAC together however amounts to a total volume of 385,600m³ (Table 3.11-3.14 page 18/19). The MMO requests clarification as to the total quantity of scour protection required for the proposed development and recommends that these figures are updated throughout the application documents.</p>	<p>scenario. For scour protection, this is the HVDC transmission scenario. The Applicant's response to the Planning Inspectorate on the 25 July 2018 provides further information on the relationship between the scour protection volumes quoted in the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058).</p>
<p>1.25. Part 3 (5) (2) (page 35) - Cable protection</p> <p>The DCO proposes 2,201,000m³ volume of cable protection excluding cable crossings. The maximum volume of protection for cable crossings proposed is 784,875m³. The total volume of cable protection in the draft DCO is 2,985,875m³. Cable protection proposed in the ES project description however states the following:</p> <ul style="list-style-type: none"> - Export cable: 1,146,000m³ (Table 3.46, page 37) - Cable crossing: 1,146,000m³ (Table 3.48, page 38) - Array cables: 830,000m³ (Table 3.33, page 29) - Interconnectors: 225,000m³ (Table 3.50, page 38). <p>The total volume of cable protection proposed in the ES project description is therefore 3,347,000m³, which is significantly higher than that stated in the DCO. Schedule 11 defines the volume of cable protection as 1,055,000m³ whereas Schedule 12 defines a total volume of 1,371,000m³. Added together, the DMLs propose a total volume of 2,426,000m³. Neither of the draft DMLs give any indication as to whether the total volumes include cable protection for cable crossings.</p> <p>The footprint of cable protection (excluding cable crossings) proposed in the DCO identifies a maximum footprint of 1,540,700m² in addition to the maximum footprint for cable crossings of 747,500m². Calculated together the DCO proposes a maximum footprint for cable protection of 2,288,299m². The cable protection footprint proposed in the ES project description is as follows:</p> <ul style="list-style-type: none"> - Export cable: 802,200m² (Table 3.46, page 37) - Cable crossing: 802,200m² (Table 3.48, page 38) - Array cables: 581,000m² (Table 3.33, page 29) - Interconnectors: 157,500m² (Table 3.50, page 38) <p>The total volume of cable protection proposed in the ES project description therefore amounts to 2,342,900m², which is significantly higher than that proposed in the DCO. The MMO requests further clarification of the cable protection footprint and volume and for corrections to be made to the</p>	<p>The Applicant's response to the Planning Inspectorate on the 25 July 2018 outlines the relationship between the cable protection volumes quoted in the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058).</p> <p>It should be noted that Schedule 11, Part 2, Condition 3(1) includes the volume of cable protection, excluding cable protection required for cable crossings, in Work No.1(c) (i.e. the array cables) and Work No.2(c) (i.e. interconnector cables) and Schedule 12, Part 2, Condition (3)1 includes the volume of cable protection, excluding cable protection required for cable crossings, in Work No.2 (i.e. interconnector cables and export cables) and Work No.3 (i.e. export cables). If the cable protection volumes from Schedule 11, Part 2, Condition 3(1) and Schedule 12, Part 2, Condition (3)1 are added together, this results in the cable protection for the interconnector cables to be double counted. In order to clarify that Schedule 11, Part 2, Condition 3(1) and Schedule 12, Part 2, Condition 3(1) does not include cable protection required for cable crossings, it is proposed that the Draft DCO [APP-027] is updated to state: <i>"the volume of their cable protection (excluding cable crossings) [...]"</i></p>

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<p>DCO, DMLs and ES accordingly.</p> <p>Schedule 11 Deemed Marine Licence – Generation Asset 1.26. <i>Part 1 (4) (a) (page 127) - Contact details</i></p> <p>The correct contact details for the Marine Management Organisation are as follows:</p> <p>Marine Management Organisation, Marine Licensing Team, Lancaster House Hampshire Court, Newcastle Business Park, Newcastle upon Tyne, NE4 7YH Tel: 0300 123 1032</p>	<p>The Applicant can confirm that it has amended the dMLs accordingly.</p>
<p>1.27. <i>Part 1 (2) (1) (g) (page 128) - Site preparation works</i></p> <p>Item 2 proposes permissions to carry out site preparation works without providing details of the maximum scope of such works. The MMO recommends that the definition of offshore site preparation works should include boulder clearance and sandwave levelling due to their potential impacts on the environment. The MMO recommends that the extent of boulder clearance and the maximum volume and area of sandwave levelling should be made explicit in the DCO and DMLs.</p>	<p>The Applicant confirms that it has made these changes to the dMLs and cross refers the MMO to its response to 1.3 and 1.6</p>
<p>1.28. <i>Part 1 (6) (page 129) - Site preparation works condition</i></p> <p>This condition states that any offshore site preparation works will not be considered as having commenced the licensable activities. The MMO recommend that that this condition should be removed from the DML for the reasons identified above in paragraph 1.14.</p>	<p>The Applicant confirms that it has included site preparation work within the definition of commence and refers the MMO to its responses to 1.3 and 1.14.</p>
<p>1.29. <i>Part 1 (8) (page 129) - Splitting and transferring of the DML</i></p> <p>The MMO is an interested party under the PA 2008 for proposed projects that may have an impact in the English marine area. As such, The MMO's primary point of reference for the interpretation of PA 2008 is the MCAA 2009. It is therefore considered that if an activity is not permissible under MCAA 2009, it is unlikely to be considered as permissible under PA 2008. Section 72(7) of MCAA 2009 permits the whole transfer of marine licences from one party to another but does not permit the partial transfer of licences (i.e. 'splitting' of licences or apportioning of conditions). Please see paragraph 1.15 –Benefit of the Order for further information. The MMO therefore recommend that this condition should be removed from the DMLs.</p>	<p>The Applicant refers the MMO to its response to 1.15.</p> <p>Examining Authorities involved and the SoS have consistently found against this argument. The following offshore wind DCOs include provision for the partial transfer of DMLs: The Walney Extension Offshore Wind Farm Order 2014 (as amended); The Hornsea One Offshore Wind Farm Order 2014; The Dogger Bank Creyke Beck Offshore Wind Farm Order 2015; The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015; The Hornsea Two Offshore Wind Order 2016.</p> <p>Those DCOs also include drafting along the lines "The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence only apply to a transfer not falling within article [xx] (benefit of the Order)". Those subsections state: "(7) On an application made by a licensee, the licensing authority which granted the licence—(a) may transfer the licence from the licensee to another person, and (b) if it does so, must vary the licence accordingly; and (8) A licence may not be transferred except in accordance with subsection (7)". The draft Order includes such provision.</p>

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	<p>The draft Order includes at Article 5(7)(b) "the transferred benefit shall reside exclusively with the transferee or, as the case may be, the lessee and the transferred benefit shall not be enforceable against the undertaker". This too is common to many offshore wind DCOs and related submissions have been rehearsed before several Examining Authorities and the SoS. It has been accepted by the SoS that once the ownership of the transmission assets has been transferred to an OFTO under the statutory regime, along with the related benefit of the DCO/DML, it is reasonable for liability for those assets to reside exclusively with the OFTO.</p> <p>Given that these points, and related substantive legal submissions, have been considered at length by several Examining Authorities and the SoS, and several DCOs have been granted making provision for the partial transfer of DMLs and allocation of liability for enforcement, the applicant hopes that these are not points that the MMO will pursue in the examination of the draft Order. It would be very unreasonable for the applicant to have to incur cost in relation to countering submissions on these points.</p>
<p>1.30. <i>Part 1 (11) (page 129) – Arbitration</i></p> <p>This condition is a repeat of the Arbitration Article (36). As discussed above in paragraph 1.16, the MMO consider the conditions and timeframes set out under this article as inappropriate since Article 36 and Schedule 13 as included in the DCO would be contrary to the intentions of Parliament and usurp the role of the MMO as a regulator. The MMO therefore request removal of the arbitration clause from the DMLs.</p>	<p>The Applicant refers the MMO to the points above on arbitration.</p>
<p>1.31. <i>Part 2 (page 130) - Condition for maximum hammer energy</i></p> <p>The MMO recommends that a condition is included to restrict the maximum hammer energy to the worst case scenario (5,000kJ) assessed in the ES. The MMO recommends the following condition wording: <i>In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed 5,000kJ.</i></p>	<p>The Applicant has reflected on this request and is minded to accept the condition as proposed by the MMO.</p>
<p>1.32. <i>Part 2 (4) (page 131) - Maintenance Works</i> The MMO would like to highlight that the clearing of J-Tubes has not been included in the array DML, but is mentioned in the transmission DML. The MMO is aware of cases where the clearing of J-Tubes has been required for generation assets. The MMO suggests that J-Tube clearing and maintenance should be included in Schedule 11 for generation assets if this is likely to be required.</p>	<p>The Applicant can confirm that it has amended the DML accordingly.</p>
<p>1.33. <i>Part 2 (5) (6) (page 132) – Notifications</i></p> <p>The MMO recommends that notification to the MMO Coastal Office should be included, to ensure that the MMO's local</p>	<p>The Applicant can confirm that it has amended the DMLs accordingly.</p>

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<p>office are aware of completion of activities. Notification should take place within 5 days of the completion of the licenced activity. Please see recommended condition wording below and should also be applied to Schedule 12:</p> <p><i>The undertaker must inform the MMO Coastal Office in writing at least five days prior to the commencement of the licensed activities or any part of them and within 5 days of the completion of the licenced activity.</i></p>	
<p>1.34. Part 2 (11) (page 134) - Pre-construction plans and documentation</p> <p>The MMO recommends that Condition 11 is amended to include appropriate timescales to allow for consideration and discharge of the relevant conditions prior to the commencement of the works. The MMO recommends that the following text is added to Condition 11:</p> <p><i>Pre-construction plans and documentation are to be submitted to the MMO in accordance with the following —</i></p> <p><i>(a) at least six months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed monitoring;</i></p> <p><i>(b) at least six months prior to construction, detail on construction monitoring;</i></p> <p><i>(c) at least six months prior to commissioning, detail of post-construction (and operational) monitoring;</i></p> <p><i>unless otherwise agreed in writing with the MMO.</i></p> <p>Given the numerous issues that the MMO encounters throughout this process and the increased size and complexity of Round 3 projects, the MMO consider that a 6 month submission timeframe would be more appropriate. This would be in line with the Historic England Written Scheme of Investigations, which is generally submitted 6 months prior to construction.</p>	<p>As identified in the response to comment 1.10 the Applicant considers that a 4 month timescale is appropriate and wherever possible the Applicant submits plans in advance of this to the MMO. The applicant, in its application dML has however included a provision to allow for this to be extended upon agreement, and we do not propose to remove that upon amendment of the dMLs. The Applicant does not necessarily agree that there is an increased complexity (with Round 3 Projects) with many of the pre-commencement return documents. To the contrary, it is the experience of Orsted that the approval of many documents is efficient process where it relates to confirmation of final scheme design information.</p> <p>The Applicant acknowledges that some plans have recently taken longer to agree. However, it is the opinion of the Applicant that this is frequently reflective of the duration in advance of the activity that such plans are submitted. This has resulted in updates being required to factor in project changes as it finalises its design, and also to address changes in guidance / stakeholder advice during the period over which the plan has been discussed.</p>
<p>1.35. Part 2 (11) (1) (a) (page 134) - Pre-construction plans and documentation</p> <p>Condition 1 proposes the submission and approval of a design plan by the MMO. It further states however, that in the event that the design plan is in accordance with the development principles as set out in Volume 2, Chapter 7 and Volume 5 Annex 7.1 of the ES, approval by the MMO is not required. The MMO recommends that a design plan is submitted to the MMO for approval, in consultation with Natural England, to ensure that the decision on whether the project falls within the consented project envelope is made by the MMO and not by developer. The MMO therefore recommend that the paragraph stating that approval of the design plan by the MMO is not required should be removed from the DMLs.</p>	<p>The Applicant refers the MMO to its response to 1.7 above.</p>
<p>1.36. Part 2 (11) (1) (b) (page 135) - Pre-construction plans and documentation</p>	<p>The Applicant notes that within the dMLs the monitoring plans are already required to be submitted for approval up to</p>

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<p>The MMO recommends that submission of a construction programme should also include a construction monitoring plan in line with the principal monitoring plan. Proposed timings for mobilisation should include whether such works will be carried out as a single offshore phase or as multiple phases.</p> <p>Furthermore, the MMO recommends that the construction programme should include proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with the relevant monitoring conditions in the DML(s).</p>	<p>four months prior to any monitoring activity. The Applicant notes that the construction programme would follow as part of the wider suite of pre-construction documentation that will be submitted for approval up to four months prior to commencement of works. Given this, the Applicant questions the need for this additional commitment and therefore, welcomes further clarification with the MMO on this matter.</p>
<p>1.37. Part 2 (11) (1) (c) (page 135) - Pre-construction plans and documentation</p> <p>The MMO recommends that the construction method statement should make reference to whether the undertaker proposes to use soft start procedures as part of the foundation installation methodology, with durations specified if soft start procedures are to be used.</p>	<p>The Applicant notes that this is not a standard licence requirement from the MMO. The Applicant has committed to a soft start procedure (where piled foundations are used) and therefore, it is not a case of “whether” they will be used. The Applicant notes that the Marine Mammal Mitigation Protocol (MMMP) will capture the level of information requested by the MMO, and refers the MMO to Schedules 11& 12, Conditions 13(1)(g) & 14 (1)(g) where it is stated:</p> <p><i>“in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, including details of soft start procedures with specified duration periods following current best practice as advised by the relevant statutory nature conservation bodies.”</i></p> <p>The Applicant considers that this should provide the MMO with adequate comfort on this matter.</p>
<p>1.38. Part 2 (11) (1) (e) (page 136) - Pre-construction plans and documentation</p> <p>The MMO recommends that the scour protection management plan should also provide information on the installation methods for cable protection.</p>	<p>The Applicant confirms that the scour protection plan is to deal with solely scour protection. The Cable Specification and Installation Plans will provide the requested cable protection information (Schedules 11& 12, Conditions 13 & 14:</p> <p><i>(h) a cable specification and installation plan, to include—</i> <i>(ii) a detailed cable laying plan for the Order limits, incorporating a burial risk assessment encompassing the identification of any cable protection that exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA) to be taken to ensure existing and future safe navigation is not compromised or similar such assessment to ascertain suitable burial depths and cable laying techniques, including cable protection;</i></p> <p>The Applicant considers that this clarification addresses the MMO's concern on this matter.</p>
<p>1.39. Part 2 (11) (1) (f) (page 136) – Pre-construction plans</p>	<p>The Applicant refers the MMO to its response to comment</p>

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<p><i>and documentation</i></p> <p>The MMO considers that the proposed time scales are inappropriate to allow for sufficient discussion and approval of pre-construction surveys and on-going monitoring. The MMO recommends that monitoring plans should be submitted 18 months prior of the commencement of licenced activities to enable sufficient consultation time and the completion of the pre-construction surveys prior to commencement.</p>	<p>1.10 and 1.34, and reaffirms that it considers the 4 month timeframe to be appropriate.</p> <p>The Applicant notes that this MMO request is slightly at odds with comments above (and below) that request a 6 month timeframe.</p>
<p>1.40. <i>Part 2 (11) (2) (Page 136) – Archaeology</i></p> <p>The MMO recommends inclusion of the following condition to ensure that no known or unknown archaeological artefacts are at risk from the proposed investigation works;</p> <p><i>Pre-construction archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific Written Scheme of Investigation which is itself in accordance with the details set out in the outline offshore Written Scheme of Investigation, and which has been submitted to and approved by the MMO.</i></p>	<p>The Application can confirm that it has added a condition to the dMLs to reflect this (condition 13(3) generation assets, and 14(3) transmission assets).</p>
<p>1.41. <i>Part 2 (11) (4) (page 137) - Site Integrity Plan</i></p> <p>The MMO recommends the inclusion of a Site Integrity Plan, including detailed timings for consultation, suitable mitigation and the process for the condition to be updated as suggested below. The provision of a Site Integrity Plan will allow the consideration of impacts on harbour porpoise based on the final project envelope as defined in the construction plan alone and in combination with projects at the time.</p> <p><i>In the event that driven or part-driven pile foundations are proposed to be used, the licenced activities, or any phase of those activities must not commence until a Hornsea Project Three Southern North Sea cSAC Site Integrity Plan which accords with the principles set out in the In Principle Hornsea Project Three Southern North Sea cSAC Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that the plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.</i></p>	<p>The Applicant has added the proposed condition as conditions 13(5) and 14(5) of the generation assets and transmission assets dMLs respectively .</p>
<p>1.42. <i>Part 2 (11) (page 137) – Pre-construction plans and documentation</i></p> <p>Further to the conditions set out under Condition 11, the MMO recommends inclusion of the following conditions in the DMLs to ensure that all pre-construction documentation are agreed with the appropriate statutory body and the MMO prior to the commencement of the licenced activities;</p>	<p>The Applicant's response to each point raised under 1.42 is as follows:</p> <ul style="list-style-type: none"> - Conditions 13(2) (generation) and 14(2) (transmission) already require consultation with the statutory historic body. - As mentioned above, the Applicant considers four months with a mutual agreement to extending option to be reasonable.

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<ul style="list-style-type: none"> - Any archaeological reports produced in accordance with Condition 11(1)(2)(c) are to be agreed with the statutory historic body. - Each programme, statement, plan, protocol or scheme required to be approved under Condition 11 must be submitted for approval at least six months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO. - No licensed activity may commence until for that licensed activity the MMO has approved in writing any relevant programme, statement, plan, protocol or scheme required to be approved under Condition 11. - The licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under Condition 11, unless otherwise agreed in writing by the MMO. - No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has given written approval of an Emergency Response Co-operation Plan (ERCoP) which includes full details of the plan for emergency response and co-operation for the construction, operation and decommissioning phases of that part of the authorised scheme in accordance with the MCA recommendations contained within MGN543 "Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues", and has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that part of the authorised scheme, adequately addressed all MCA recommendations contained within MGN543 and its annexes. 	<ul style="list-style-type: none"> - The Applicant does not feel that is required, as each of the obligations requiring programmes, plans or statements, state that works cannot commence until the relevant document is approved. - This is already contained within condition 13(4) (generation) and 15(4) (transmission). - This is already contained within conditions 15 (generation) and 16 (transmission).
<p>1.43. Part 2 (12) (1) (Page 137) – Timeframes</p> <p>This condition sets out the timeframe for the submission of pre-construction plans and documentation 4 months prior to the construction. Given the numerous issues that the MMO encounters throughout this process and the increased size and complexity of Round 3 projects, the MMO consider that a 6 month timeframe would be more appropriate. This would be in line with the Historic England Written Scheme of Investigation, which is generally required for submission 6 months prior to construction.</p>	<p>The Applicant refers the MMO to its response to comment 1.10 and 1.34, and reaffirms that it considers the 4 month timeframe to be appropriate.</p>
<p>1.44. Part 2 (12) (2) (page 137) – Timeframes</p> <p>The MMO does not consider that 8 weeks would provide sufficient time to undertake a document review, consider all potential impacts, consult with the appropriate stakeholders, resolve potential issues with the developer and approve pre-</p>	<p>As mentioned above, the Applicant considers 4 months and an option to extend as a reasonably balanced timescale for this process.</p>

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<p>construction documentation and plans. Acting in our role as the enforcing body, it has previously been within the MMOs remit to determine timelines for pre-construction documentation sign off. An 8 week timescale for document review and responses would not be practical given consideration times required by statutory consultees and the requirement for the MMO to negotiate between the undertaker and concerned stakeholders to address any issues raised. Pre-construction documentation and plans have previously consisted of lengthy documents with a number of issues outstanding to resolve. The MMO therefore considers that an 8 week approval process would result in an unsupportable burden upon the regulator and stakeholders. The MMO proposes that pre-construction documentation should be submitted 6 months prior to commencement of works to allow time for the required stakeholder consultation and for any necessary amendments to be negotiated and approved.</p>	
<p>1.45. <i>Part 2 (12) (3) (page 137) – Arbitration</i></p> <p>Condition 2 is a repeat of the Arbitration Article 36. As discussed above in paragraphs 1.16, the MMO consider the conditions and timeframes set out under this article to be inappropriate since Article 36 and Schedule 13 as included in the DCO would be contrary to the intentions of Parliament and usurp the role of the MMO as a regulator. The MMO therefore request the removal of this condition from the DMLs.</p>	<p>Please see the Applicants response to 1.16 on arbitration.</p>
<p>1.46. <i>Part 2 (15) (1) (page 138) – Monitoring and Surveys</i></p> <p>The MMO recommends that Condition 15 (1) should be amended to include the following: <i>(a) the survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and</i> <i>(b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.</i> Such an amendment would ensure consistency throughout the reports and provide clarity to all consultees and to facilitate review of the documents.</p>	<p>The Applicant has added new monitoring requirements to each dML including this wording or a close variant of it.</p>
<p>1.47. <i>Part 2 (15) (2) (page 138) – Monitoring and surveys</i></p> <p>The proposed monitoring plan is limited to marine mammal and ornithological monitoring pre-construction and post-construction. The MMO recommends that benthic community monitoring is included as a requirement pre- and post-construction. Such information would be required to</p>	<p>The Applicant confirms that benthic monitoring commitment identified in the transmission assets dML will be carried across to the generation assets and extended for both pre- and post-construction phases.</p> <p>The Applicant does not agree that it is in keeping with best practice to cite a commitment to 3 years of post construction</p>

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<p>inform micro-siting around features of conservation interest.</p> <p>The MMO recommends that the post-construction monitoring condition explicitly includes a requirement to carry out three years of post-construction monitoring with the duration specified for these surveys. The MMO suggests addition of the following condition:</p> <p><i>The undertaker must carry out the surveys agreed under sub-paragraph (add reference) for up to 3 years post-construction, which could be non-consecutive years, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.</i></p> <p>In addition, to allow for consistency in the cable monitoring plan, inclusion of the following condition is recommended for post-construction activities;</p> <p><i>Following installation of cables, the cable monitoring plan required under condition 11(1)(h)(iii) must be updated with the results of the post-installation surveys. The plan must be implemented during the operational lifetime of the project and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.</i></p> <p>During construction The MMO recommends that Condition 15 (2) (b) should set out all requirements for monitoring to be undertaken during the construction phase. The MMO proposes that the following conditions should replace draft DCO conditions 15(2)(b)(i) and (ii);</p> <p><i>The undertaker must, in discharging Condition 11(1)(b), submit details (which accord with the in principle monitoring plan) for approval by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In any event, such monitoring must include measurements of noise generated by the installation of the first four piled foundations of each piled foundation type to be installed.</i></p> <p><i>The undertaker must carry out the surveys approved under sub-paragraph (1), including any further noise monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.</i></p> <p><i>The results of the initial noise measurements monitored in accordance with sub-paragraph (add reference) must be</i></p>	<p>monitoring. It may transpire that this is appropriate for certain monitoring scenarios, however, in other instances it may be inappropriate. For example;</p> <ul style="list-style-type: none"> - if after the first year of monitoring the evidence suggests recovery / no effect is occurring etc, then the need for further monitoring would not exist - if a strategic monitoring programme was taken forward then it may not fit with a traditional "pre and post construction" monitoring programme and therefore, such a condition would be unnecessary - if after 3 years an effect was persisting, it may be necessary to continue monitoring beyond this timeframe. <p>The Applicant would therefore, not seek to cite the number of years in the wording, so as to ensure a pragmatic and adaptive approach can be taken to monitoring which should benefit all parties.</p> <p>With regard to cable monitoring, the Applicant broadly accepts the MMO's recommendation, but wishes to ensure that this does not duplicate any specific monitoring commitments relating to cable burial that are discussed with Natural England.</p> <p>The Applicant considers the wording of during construction noise monitoring to be in keeping with other contemporary licences where there is an established process for their nature and discharge process. Furthermore, we note that the MMO's comment effectively would seek to replace the two existing commitments (underwater noise monitoring and confirmation of piling duration) down to a single commitment (underwater noise monitoring). The Applicant included the latter commitment ("monitoring of the duration of piling") following discussions within the EWG that related to an opportunity to enhance the evidence base relating to the assumptions (and any potential uncertainty) relating to piling duration, that subsequently feed into the impact assessments. The Applicant therefore, questions whether the MMO was cognisant that their change request (if applied) would see this commitment removed?</p>

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<p><i>provided to the MMO within six weeks of the installation of the first four piled foundations of each piled foundation type. The assessment of this report by the MMO will determine whether any further noise monitoring is required.</i></p>	
<p>1.48. Part 2 General Comment (page 139) – Dredge and Disposal</p> <p>The MMO recommends that the following condition should be included in Schedule 11 to ensure that no man-made material is disposed to sea.</p> <p><i>Any man-made material must be separated from the dredged material and disposed of on land.</i></p>	<p>To the Applicant's knowledge, this condition has not previously been applied to similar projects in the past in this part of the southern North Sea. The MMO has not provided any indication that there is a significantly greater risk of occurrence of man made material (e.g. litter) within the Hornsea Three project area such that such a condition is justified. Furthermore, this condition is not likely to be practical in an offshore environment. The Applicant welcomes further discussion with the MMO to resolve this point.</p>
<p>1.49. Part 2 General Comment (page 139) - Reporting of impact pile driving/detonation of explosives</p> <p>Under the UK Marine Strategy, all developers are committed to record human activities in UK seas that produce loud, low to medium frequency (10Hz-10kHz) impulsive noise. The MMO therefore requests inclusion of the following conditions in the DML;</p> <p><i>Only when driven or part-driven pile foundations or detonation of explosives are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—</i></p> <p><i>(a) prior to the commencement of the licenced activities, information on the expected location, start and end dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Forward Look requirements;</i></p> <p><i>(b) at six month intervals following the commencement of pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements;</i></p> <p><i>(c) within 12 weeks of completion of impact pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements</i></p> <p><i>The undertaker must notify the MMO of the successful submission of Forward Look or Close Out data pursuant to paragraph (c) above within 7 days of the submission.</i></p> <p><i>For the purpose of this condition—</i></p> <p><i>(a) "Marine Noise Registry" means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas;</i></p> <p><i>(b) "Forward Look" and "Close Out" requirements are as set out in the UK Marine Noise Registry Information Document Version 1 (July 2015) or any updated information document.</i></p>	<p>The Applicant confirms that it has included the requested conditions in the DML.</p>
<p>Schedule 12 Deemed Marine Licence – Transmission Asset</p> <p>1.50. Part 1 (4) (a) (page 141) - Contact details - This</p>	<p>Where applicable, the responses above also apply to the corresponding points raised in this section.</p>

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<p>condition is identical to Schedule 11. Please see paragraph 1.26 for MMO comments.</p> <p>1.51. <i>Part 1 (2) (1) (g) (page 143) - Site preparation works</i> - This condition is identical to Schedule 11. Please see paragraph 1.27 for MMO comments.</p> <p>1.52. <i>Part 1 (6) (page 146) - Site preparation works condition</i> - This condition is identical to Schedule 11. Please see paragraph 1.28 for MMO comments.</p> <p>1.53. <i>Part 1 (8) (page 146) - Splitting and transferring of the DML</i> - This condition is identical to Schedule 11. Please see paragraph 1.29 for MMO comments.</p> <p>1.54. <i>Part 1 (11) (page 146) – Arbitration</i> - This condition is identical to Schedule 11. Please see paragraph 1.30 for MMO comments.</p> <p>1.55. <i>Part 2 (6) (6) (page 149) – Notifications</i> - This condition is identical to Schedule 11. Please see paragraph 1.33 for MMO comments.</p> <p>1.56. <i>Part 2 (12) (page 151) - Pre-construction plans and documentation</i> - This condition is identical to Schedule 11. Please see paragraph 1.34 for MMO comments.</p> <p>1.57. <i>Part 2 (12) (1) (b) (page 151) - Pre-construction plans and documentation</i> - This condition is identical to Schedule 11. Please see paragraph 1.36 for MMO comments.</p> <p>1.58. <i>Part 2 (12) (1) (c) (page 152) - Pre-construction plans and documentation</i> - This condition is identical to Schedule 11. Please see paragraph 1.37 for MMO comments.</p> <p>1.59. <i>Part 2 (12) (1) (e) (page 152) - Pre-construction plans and documentation</i> - This condition is identical to Schedule 11. Please see paragraph 1.38 for MMO comments.</p> <p>1.60. <i>Part 2 (12) (1) (f) (page 152) – Pre-construction plans and documentation</i> - This condition is identical to Schedule 11. Please see paragraph 1.39 for MMO comments.</p> <p>1.61. <i>Part 2 (12) (2) (Page 153) – Archaeology</i> - This condition is identical to Schedule 11. Please see paragraph 1.39 for MMO comments.</p> <p>1.62. <i>Part 2 (12) (page 153) – Pre-construction plans and documentation</i> - This condition is identical to Schedule 11. Please see paragraph 1.42 for MMO comments.</p> <p>1.63. <i>Part 2 (13) (1) and (2) (page 154) – Timeframes</i> - This condition is identical to Schedule 11. Please see paragraph 1.43 and 1.44 for MMO comments.</p> <p>1.64. <i>Part 2 (13) (3) (page 154) – Arbitration</i> - This condition is identical to Schedule 11. Please see paragraph 1.45 for MMO comments.</p> <p>1.65. <i>Part 2 (16) (1) (page 154) – Monitoring and surveys</i> - This condition is identical to Schedule 11. Please see paragraph 1.46 for MMO comments.</p> <p>1.66. <i>Part 2 (16) (2) (page 154) – Monitoring and surveys</i> - This condition is identical to Schedule 11. Please see paragraph 1.47 for MMO comments.</p>	
<p>1.67. <i>Part 2 (16) (2) (a) (ii) (page 155) – Monitoring and surveys</i> - The MMO recommends that the monitoring of Annex 1 reefs should not be restricted to the North Norfolk</p>	<p>The Applicant cross refers the MMO to its response to comment 1.8, where it is clear that the monitoring for Annex I features is across the areas within which construction activity</p>

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<p>Sandbanks and Saturn Reef SAC but should be extended into the entire export cable route. The MMO considers that the proposed monitoring would not be sufficient to mitigate potential impacts on benthic communities. Given the potential temporal difference between any DCO consent and the actual construction of the windfarm, the benthic environment may have changed since the initial surveys were conducted.</p>	<p>will take place and not just designated sites.</p>
<p>1.68. <i>Part 2 (16) (2) (c) (i) (page 155) – Monitoring and surveys</i> It is unclear from this condition whether post construction monitoring will be undertaken. The MMO requests further clarification of the terms 'representative proportion' and 'sensitive cable protection'.</p>	<p>The Applicant can confirm that it has updated the dML to reflect the changes to the monitoring as described above under 1.8 and 1.47 (noting that the pre-construction surveys will be extended to cover the whole areas within which construction activity is planned).</p>
<p>1.69. <i>Part 2 (page 155)</i> This condition is identical to Schedule 11. Please see paragraph 1.48 for MMO comments.</p>	<p>The Applicant refers the MMO to its response to 1.48.</p>
<p>Schedule 13 Arbitration Rules 1.70. <i>General comment</i></p> <p>The MMO notes that the introduction of the arbitration schedule and subsidiary conditions is a change from the established process. The explanatory memorandum highlights the developer's intention to ensure a quick dispute resolution and a timely delivery of the project. It is the MMO's opinion that the proposal goes beyond providing greater certainty. Arbitration provisions have previously followed model clauses and been confined to disputes between the applicant/beneficiary of the DCO and third parties e.g. in relation to rights of entry or rights to install/maintain apparatus.</p> <p>The MMO strongly questions the appropriateness of any regulatory decision or determination to be made subject to any form of binding arbitration as set out by Article 36 and Schedule 13. It is the MMO's opinion that Article 36 and Schedule 13 would shift the responsibility of decision making from the hands of the regulator with primary responsibility for administering the marine licensing regime to an independent arbitrator. This would be contrary to the intention of Parliament set out under MCAA and has the potential to usurp the role of the MMO as a regulator.</p> <p>Furthermore, the MMO consider the justification provided in the explanatory memorandum to be insufficient, given that the evidence for such a requirement provided is the reference to PINS advice note 15: Drafting Development Consent Orders, which suggests the inclusion of a route for issue resolution. The MMO considers the inclusion of the proposed arbitration process to be in excess of this Planning Policy Guidance Note.</p> <p>In the MMO's opinion, arbitration should be a measure of</p>	<p>Please see above for our comments on the arbitration provisions. In addition to specific points raised in relation to this schedule:</p> <ol style="list-style-type: none"> 1. The arbitration provisions would naturally be a measure of last resort; the parties having already tried to resolve matter between themselves – the dispute would arise because they cannot reach agreement. Furthermore, if a party genuinely believes agreement could be reached with others, within a reasonable timeframe, it would not serve the arbitration notice. 2. For the SoS to have the power to refuse arbitration would defeat the point of having such a resolution process in the first place. 3. The timescales given are intended to provide for an expeditious resolution so as not to delay delivery of the NSIP as is currently experienced. Where the MMO is the recipient of an arbitration notice, it should have already consulted relevant parties in arriving at its decision to side against the other party to the dispute. The need for further consultation should not arise. Paragraph/provision 5 allows for time limits to be varied by agreement or by the arbitrator. 4. The costs provisions are fair and are similar to those found in other appeal related costs awards. However, the Applicant is willing to amend this provision to allow each party to bear its own costs. Draft wording is set out below. 5. If the arbitration provisions are not included the current situation would prevail, i.e. one where the other parties engaged via the DMLs are under no incentive or imperative to determine points of disagreement quickly or at all, that situation should not be allowed to continue and it directly undermines the delivery of NSIPs and the progress towards

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<p>last resort, following open discussions and debates between the regular, developer and relevant stakeholders. The current draft DCO and DMLs imply that arbitration will be the first point of call should any difference in opinion be encountered. This implication is supported by several DML conditions, specifically highlighting the referral to arbitration in case of any difference.</p> <p>Generally, the process should allow for the Secretary of State to refuse an arbitration request due to other issue resolution options being available. The MMO therefore consider that the proposal for an independent arbitration process should be removed, together with the subsidiary conditions proposed in the draft DCO. Current procedures in place to resolve disputes have been proven to be effective in taking account of relevant stakeholder perspectives to enable appropriate consideration of their views in line with existing legislation (see Paragraph 1.16).</p>	<p>meeting the national energy need.</p>
<p>1.71. <i>Provision 3 – Timelines</i> The timeline within this provision would require the MMO to undertake consultation with its consultees and produce reports within 14 days of notice. The MMO considers the time period proposed to be insufficient to allow for appropriate consultation and any necessary legislative assessments which may arise from the fulfilment of conditions. The proposed 14 day timescale for responses would present unacceptable resource implications for the MMO and its consultees. The MMO generally recommend time scales of a minimum of 6 weeks. This includes a 4 week consultation period and a 2 week determination period.</p>	<p>The timescales referred to in the arbitration provisions (and the discharge of conditions in the DMLs) have been adopted from the TCPA 1990, e.g. determination in 8 weeks, and are designed to provide for an expeditious procedure in a regime which currently makes no provision for determination periods. The MMO is subject to the similar resource and budgeting as LPAs and so the adoption of timescales akin to those in the TCPA is reasonable. In response to the MMOs stated requirement for time to consult, those TCPA timescales also require statutory consultation to be undertaken by an LPA. The applicant has not seen justification for an equivalent determination period for the MMO to be 6 months.</p> <p>The Applicant has responded to the points made on Arbitration in more detail at Point 1.16 of this response.</p>
<p>1.72. <i>Provision 6 - Costs</i> This provision stated that the award of costs will be made by the arbitrator and would be based on the degree of success of the party as stated under provision 6 (4). It is the MMOs interpretation that, in the event that any arbitration decision goes against the opinion of the MMO, the MMO may be required to cover any cost for the arbitration process including the costs to the developer and other parties involved.</p> <p>The MMO considers that such an approach would directly contradict the 'Polluter Pays' principle which underlines a sustainable approach to environmental consenting. The MMO considers that any costs for arbitration should be solely borne by the applicant, unless it is deemed that a party has acted unreasonably or in bad faith. Moreover, such an approach may encourage developers to resolve issues by challenging them through arbitration early in the consideration process, since only limited discussions and</p>	<p>On review, the Applicant has updated rule 6 (4) as follows (updates shown in bold text):</p> <p>(4) The Arbitrator will award recoverable costs on the general principle that each party should bear its own costs follow the event, having regard to all material circumstances, including such matters as exaggerated claims and/or defences, the degree of success for different elements of the claims, claims that have incurred substantial costs, the conduct of the parties and the degree of success of a party.</p>

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<p>expert involvement would be expected to have taken place at this stage.</p>	
<p>1.73. <i>Provision 7 –</i></p> <p>This provision states that all matters discussed as part of the arbitration process must remain confidential. As the matters discussed will relate to environmental consenting decisions, the MMO is confident that it would not be able to refuse a request for such information under the Freedom of Information Act or the Environmental Information Regulations 2004. Confidentiality clauses for arbitration process discussions would directly contradict the requirement for transparency in decision making.</p>	<p>On review, the Applicant has updated rule 7 (2) as follows (updates shown in bold text):</p> <p>7.—(1) The parties agree that any hearings in this Arbitration shall take place in private.</p> <p>(2) The parties and Arbitrator agree that any matters, materials, documents, awards, expert reports and the like are confidential and shall not be disclosed to any third party without prior written consent of the other party, save for any application to the Courts <u>or where disclosure is required under any legislative or regulatory requirement.</u></p>
<p>Environmental Statement (ES):</p> <p>2. General comments:</p> <p>2.1. Throughout the ES, the MMO notes that the assessment of significance of effect has not been undertaken in line with the Rochdale Envelope approach. In applying this approach, the ES should identify and address the maximum potential adverse impacts to ensure that the likely impacts of the project have been properly assessed. The ES has identified a number of impacts on the marine environment, however in instances where the assessment of significance of effect concluded 'negligible or minor' or 'minor or moderate', the assessment conclusion was made for the lower impact, in this case 'negligible' or 'minor' respectively. To undertake the assessment in line with the Rochdale Envelope, the ES should always identify the maximum potential adverse effect and the assessment for significance of effect should highlight the maximum effect, in these cases 'minor' or moderate'. The MMO recommends that this should be revised throughout the whole chapter.</p>	<p>The Applicant cross refers the MMO to its response to 2 in the General Comments.</p>
<p>3. Marine Processes</p> <p>Major comments</p> <p>3.1. All key impacts and associated impact pathways have been identified, however these have been assessed at a generic level across the whole of the proposal development. For instance, the disturbance of the sandy muds within Markham Hole (as compared to the mixed sandy gravels) has not been assessed in detail (also see item 22 below). The MMO would expect to see an indicative layout along with indicative intra-array cables routes shown with the background of depth (i.e. combining Figures 1.1 (bathymetry) along with Fig 3.9 for 300 turbines and 19 platforms (or Fig 3.10 for 160 turbines and 19 platforms)) and an indicative intra-cable layout. The MMO acknowledges that this request requires a detail which may not be available at this stage, and would therefore recommend for this information to be included in the documentation for the pre-construction sign off.</p>	<p>The disturbance of both fine, sand and gravel sediments (together sandy muds or mixed sandy gravels, etc), leading to potential increases in suspended sediment concentration and subsequent sediment deposition, is considered in detail for a range of activities within Sections 4.3.2 (for drilling), 4.3.3 (for dredging) and 4.3.5 (for cable burial) of Volume 5, Annex 1.1: Marine Processes Technical Annex (APP-101). These changes to pathways are then summarised in Section 1.11.2 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement (APP-061).</p> <p>With regard to the inclusion of indicative layouts and installation plans within the relevant pre-commencement documentation is a reasonable request would seek to include this information (where available) as standard. It should be noted that if certain plans are developed significantly in advance of final scheme design then the information provided will only be "indicative".</p>
<p>3.2. The MMO notes that potentially significant impacts on</p>	<p>The estimates of scour consider the full range of maximum</p>

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<p>marine processes have been identified and mitigated. Scour and cable protection have been proposed to ensure the integrity of the structures. Some of the detail is lacking however, for instance, a potential scour pit of 19.5m has been identified (Table 1.11) for a monopile (15m diameter) but the location and substrate have not been provided. Similarly, clarification on whether this is a common feature or just associated with softer sediments, should be provided.</p>	<p>design scenario foundation types and dimensions, and assume that the full equilibrium scour depth is achieved. This in turn assumes that scour development is not constrained by sediment type or other relevant environmental parameters. The estimate therefore represents the maximum realistically expected scour depth in any location (and for any sediment type) within Hornsea Three array area and offshore cable corridor. Other assumptions would result in smaller estimated dimensions of scour.</p>
<p>Minor Comments: 3.3. Section 1.7.1.24 – The MMO recommends that the periodicity that the seabed will be disturbed by waves should be specified, noting that waves interact non-linearly with tidal currents.</p>	<p>The role of waves in sediment transport has been accounted for (see section 1.7.1 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]), including spatial variation in the relative frequency and magnitude of wave action (e.g. depending on proximity to the coast and water depth). Spatial variation in the long term net effect of periodic wave action (in combination with non-linear interaction with tidal currents) is also evident in the distribution and nature of seabed sediments and bedforms within the marine processes study area.</p>
<p>3.4. Section 1.7.1.43 – The MMO requests further clarity on the local sediment transport pathways associated with changes in water depth and sediment type around the Markham Hole and the Outer Silver Pit. Please clarify what the evidence base is to suggest that “only limited net rates of sediment transport are actually expected”.</p>	<p>The evidence base includes the baseline environmental conditions (current speed, wave action, water depth and sediment type) and the observed actual sediment transport indicators (bedform dimensions and shape, and seabed sediment type).</p> <p>It is shown in the baseline environmental description (paragraph 1.7.1.10 onwards in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]) that typical tidal current speeds within the Hornsea Three array area are relatively low in comparison to the threshold for motion of fine and sandy sediments in such water depths (approximately 0.4 to 0.5 m/s). Relatively greater water depths in Markham Hole and Outer Silver Pit further reduce the potential for sediment transport in these areas due to the reduced frequency and magnitude of wave action at the seabed. Sediment transport rates are expected to be progressively limited under such environmental conditions.</p> <p>The field evidence also indicates that net sediment transport rates are likely to be limited. Larger sedimentary bedforms in the surrounding area are not noted to rapidly migrate or evolve and crest shapes are relatively symmetrical. The presence of finer sediment in the Markham Hole and the Outer Silver Pit, within the context of the surrounding sandier areas, is itself a clear indication of locally more limited sediment mobility and transport potential in these areas.</p>
<p>3.5. Section 1.7.1. 44 - Whilst regional tidal current are explored in Figure 1.3, the MMO requests clarification as to whether there are any bathymetric currents associated with the changing bathymetry in Markham Hole and Outer Silver Pit.</p>	<p>Although Markham Hole and Outer Silver Pit are relatively deep features in comparison to the surrounding seabed, they also have a very large scale and so the associated seabed slopes are not unusually steep. As a result, these features do not cause notable measurable deviation of current speed or direction (more than a few cm/s or degrees) when</p>

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	<p>modelled or studied at the regional scale. The scale of such localised differences is less than the general spatial variability in peak tidal current speed and direction within the surrounding area.</p> <p>The baseline understanding of Markham Hole and Outer Silver Pit does not suggest that any localised effects on currents due to bathymetry are important for the local nature or distribution of seabed sediments, or the sediment transport regime in these areas.</p>
<p>3.6. Figure 1.13 – The MMO requests clarification as to why there are gaps in the coverage along the export cable route.</p>	<p>Figure 1.13 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061] shows the bathymetry data along the Hornsea Three offshore cable corridor. This includes site specific bathymetry data for the entire Hornsea Three offshore cable corridor, with the exception of the two offshore cable corridor re-routes, where site specific bathymetry data were not collected prior to the submission of the DCO application.</p> <p>In these areas, desk based data sources were used and these are set out in Table 1.5 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. This includes bathymetry data from UKHO (available through the INSPIRE portal), as well as surveys undertaken to inform seabed characteristics within the North Norfolk Sandbanks and Saturn Reef SAC and Cromer Shoal Chalk Beds MCZ. These desk based sources provide an adequate baseline characterisation for the purposes of informing a robust EIA.</p>
<p>3.7. The MMO would like to highlight that there are remaining concerns in relation to impacts from cable protection on sediment transport and coastal processes in relation to the North Norfolk coast where the proposed cable route runs parallel to the coast. Further information should be provided to allow a full assessment on coastal processes.</p>	<p>The applicant acknowledges the remaining concerns regarding the potential impacts from cable protection on sediment transport and coastal processes. The Applicant has provided the MMO with a 'Clarification note' (Appendix 5) to further validate the conclusions provided in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061] regarding this point. This clarification note focusses on available supporting evidence from field and laboratory studies. The evidence is consistent with and confirms the basis, assumptions and conclusions of the assessment provided in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061].</p>
<p>3.8. Table 1.11 (page 40) – the MMO requests confirmation as to whether the gravity based diameter is 43m with an associated bed preparation diameter of 61m when 53m has been mentioned elsewhere in the report. The MMO requests an explanation as to how the 170m² spud can mark would be generated.</p>	<p>As noted in the associated justification, the greatest sediment disturbance from a single gravity base foundation location is associated with the largest diameter gravity base foundation (53 m base diameter, 61 m bed preparation diameter), which results in the greatest volume of spoil from a single foundation.</p> <p>The greatest volume of disturbance across entire array area is associated with the greater number (300) of the smaller diameter foundations (43 m base diameter, 53 m bed preparation diameter), which results in the greatest total volume of spoil from all (gravity base foundation) foundations.</p>

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	Each of the above maximum design scenarios are separately assessed in relation to this potential impact.
3.9. Table 1.11 (page 42) – Since a target depth of 2m for the export cable is proposed the MMO requests clarification as to whether any contingency been included either from needing to over dredging due to unpacked sediments or active sandwaves requiring repeat dredging. Similarly, clarification is required as to whether there is contingency in sandwave removal estimates.	The Applicant has included contingency in the sandwave disposal volumes assessed within the Environmental Statement and presented within the DML. This was included to account for any potentially unforeseen scenarios (e.g. sandwave mobility). The Applicant has provided the MMO with a clarification note (as submitted at Appendix 11 to the Applicants response to Deadline I.) to demonstrate how the sandwave clearance volumes have been calculated for Hornsea Three.
3.10. Table 1.11 (page 43) – The MMO requests an explanation as to how the 170m ² spud can mark would be generated.	<p>The maximum design scenario number of legs (six) and the area for a single spud can (170 m²) is realistically representative of the larger installation vessels presently being used to install offshore wind farms in UK.</p> <p>The plan shape of the spud may vary between vessels (circular, rectangular or other multifaceted shapes are common). A round spud can with an area of 170 m² would have a corresponding diameter of approximately 14.7 m. A square spud can with an area of 170 m² would have a corresponding side length of approximately 13.0 m.</p> <p>A description of how a spud can interacts with the seabed during insertion and retraction is provided in paragraph 1.11.2.79 to 1.11.2.80 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement (APP-061).</p>
3.11. Table 1.11 (page 48) - the MMO requests clarification as to what depth is proposed to be cut for the jacket foundations. This should include the volume of sediment both individually and globally required to be evacuated to allow assessment of the potential impacts.	<p>The Applicant currently follows guidance from BEIS “Decommissioning of offshore renewable energy installations under the Energy Act 2004” from January 2011: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47997/file35754.pdf section 7 it says that the entire installation must be removed, i.e. the entire pin-pile, unless there is a good reason not to such as an HSE risk. Due to this a depth of 1m below seabed is assumed which is commonly used in the industry and also stated in the Decommissioning Programmes to BEIS.</p> <p>Most likely the cut will be made from the inside, i.e. soil has to be removed to reach the required depth to make the cut. This would leave a small hole, that will be covered within few days of tides.</p> <p>Should the guidance change during the operational life the above would be adjusted accordingly.</p>
3.12. Section 1.11.2.66 – The MMO suggests that more context should be provided around the 1,329m ³ of excavated materials from various MCZs should be provided.	The maximum design scenario for disposal of material following sandwave clearance within the Cromer Shoal Chalk Beds MCZ was a conservative estimate. This estimate was based on the length of export cables within the boundary of the MCZ as a proportion of the overall length of the Hornsea Three offshore cable corridor. This approach

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	was used as site specific geophysical data were not available at the time that these estimates were being calculated.
<p>Referring to the Volume 5 Annex 1.1</p> <p>3.13. Table 4.7 – The MMO recommends that an assessment of mud in Markham's Hole should be added to this table, in line with the assessment of sand and gravel substrates.</p>	<p>The preceding Table 4.6 provides the requested assessment of levels of SSC resulting from drilling of the different foundation types (with different rates of release) assuming 100% of the drill arisings are fines (such as the muddy sediments in Markham's Hole) for a range of dispersion scenarios.</p> <p>The spreadsheet model provided in Table 4.7 is designed and appropriate for sediments (such as sands and gravels) that will settle out in relatively short periods of time (seconds to minutes). In comparison, fines may persist in suspension for hours to days or longer and are likely to be dispersed widely to very low concentrations before being redeposited.</p>
<p>3.14. Section 6.4.4.2 – The MMO requests confirmation as to whether the bathymetry profile would be suitable for vessels to enter the area to construct any caisson/ exit pits and whether flotation pits would be required.</p>	<p>Horizontal directional drilling exit pits will be constructed from a flat bottomed barge, jack-up barge or similar vessel, which has been allowed for in the project's consent envelope within the Cromer Chalk Beds MCZ and do not require flotation pits to be dug.</p>
<p>4. Benthic Ecology</p> <p>Major comments:</p> <p>4.1. The MMO notes that turbines would be painted every 10 years and this would require surface preparation to break down existing surface coatings and any associated corrosion. The potential impact of this material entering the benthic environment should be considered in the ES.</p>	<p>An assessment of the potential effects associated with the accidental release of pollutants on benthic receptors during the operation and maintenance phase is presented in paragraphs 2.11.2.174 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062). Given the designed-in mitigation measures (see Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]) which are proposed (i.e. the implementation of a Project Environmental Management and Mitigation Plan (PEMMP)), it is considered that the likelihood of accidental release is extremely low. In the event that surface preparation works result in the accidental release of small amounts of this material being released into the marine environment, as outlined in paragraph 2.11.2.186 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the volumes of potential contaminants released would be small and rapidly dispersed to concentrations below which deleterious effects would be expected.</p>
<p>4.2. Data collected within the array and original cable route have been analysed appropriately, however; the MMO would like to highlight that the revised cable route which crosses through the Wash and North Norfolk Coast Special Area Conservation (SAC) has limited/no survey data. Data from historical surveys undertaken on both sides of the route have been extrapolated across the area and assumptions have been made of the habitats present within the unsurveyed part of the route. No dedicated geophysical survey of this area has been undertaken to date and the absence of data within the new route was raised as a potential issue at the most recent Expert Working Group (EWG). Section 2.6.4.2 states that the developer has high confidence that the new</p>	<p>As outlined in paragraph 2.6.1.4 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], it was discussed with the Marine Processes, Benthic Ecology and Fish Ecology EWG on 4th December 2017 that the Hornsea Three offshore cable corridor re-route in the nearshore area coinciding with The Wash and North Norfolk Coast SAC would be robustly characterised using a combination of Hornsea Three site specific data and desktop data sources in this area. The desktop data sets which were used to extend the nearshore biotope maps generated from the Hornsea Three site specific benthic ecology data to provide a baseline characterisation for the purposes of the EIA are outlined in paragraph 2.7.6.2 of Volume 2, Chapter</p>

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<p>route will not differ substantially from the adjacent mapped sections of the corridor. The MMO question this confidence, as it is unclear to the MMO how the confidence can be high when only very limited information is available to support this statement. Furthermore, the MMO would expect to see pre-construction surveys to be undertaken within the area of concern to confirm the presence/absence of any habitat of conservation importance</p>	<p>2: Benthic Ecology of the Environmental Statement [APP-062]. The desktop data showed that the sediment types were broadly similar across the area with sandy sediments inshore grading into coarse/mixed sediments further offshore within The Wash and North Norfolk Coast SAC. The consistency in this pattern across datasets provided confidence in the extrapolation of biotopes into areas where there had been no site-specific sampling.</p> <p>Noting the MMO's concerns raised here, the Applicant would highlight that, since the DCO application was submitted, the Applicant has undertaken site specific drop down video sampling within the part of the Hornsea Three offshore cable corridor that coincides with The Wash and North Norfolk Coast SAC, in order to validate the baseline and predictions made within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. The results of this survey have confirmed the broadscale sediment types within this part of the Hornsea Three offshore cable corridor (i.e. sand and gravel sediments of varying proportions). This survey also included assessment of Annex I reef habitats (i.e. stony reef and Sabellaria spinulosa reefs) and found no evidence of reef habitats within this part of The Wash and North Norfolk Coast SAC. The full findings of the survey are presented at Appendix 5 to the Applicant's response to Deadline 1.</p> <p>Residual risks to Annex I features of The Wash and North Norfolk Coast SAC associated with a lack of site specific geophysical data in the nearshore section of the Hornsea Three offshore cable corridor will be controlled via the designed in mitigation measures adopted as part of Hornsea Three (see Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]). As per Schedule 12, Part 2, Condition 17 (2)(a) and 18(2)(b) of the generation assets and transmission assets dMLs respectively [APP-027], the Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits. Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible, and on the basis of the extent of these features at the time of construction.</p>
<p>4.3. No monitoring is proposed for benthic ecology, with the exception of specific areas to determine the success of the cable protection. The MMO does not consider this to be acceptable, particularly considering the size of the windfarm, length of construction and the number of conservation sites potentially impacted by the project. The MMO recommends monitoring of the benthic habitats both within the array to</p>	<p>The Applicant cross refers the MMO to its response to Comment 1.8 and comments on the IPMP (7.1 and 7.2).</p>

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<p>determine impacts due to placement of the turbines and extended periods of Suspended Sediment Concentrations (SSC), and along the cable route, particularly within SACs where sand wave levelling and boulder clearance is undertaken. The monitoring should be robust enough to enable any impacts due to the Project to be distinguished from natural changes (highlighted within Section 2.7.5.3) ongoing within the marine environment.</p>	
<p>4.4. Section 2.7.1.16 Reefiness at ECR04 has been classified as 'Low reef'. The MMO considers that this type of reef should be classified as Annex I reef, contrary to what is reported within the text of the report, especially as it is within a SAC. This has consequences for subsequent assessments undertaken within the ES which are based on the premise that no Annex I habitat was identified and hence no mitigation is required. Following from this, the MMO recommends that sandwave clearance along the offshore cable route should not be carried out in areas of <i>Sabellaria</i> reef (Section 2.11.1.17).</p>	<p>As outlined in paragraph 2.7.1.16 and paragraph 4.1.4.98 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062), the <i>Sabellaria spinulosa</i> recorded at ECR04 was very patchy and it was not possible to delineate the extent of <i>S. spinulosa</i> at this station. It is important to note however, as also outlined in paragraph 2.7.1.16 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], this sample station was located outside the Hornsea Three offshore cable corridor and would therefore not be directly impacted by cable installation activities.</p> <p>With respect to Annex I habitats within the Hornsea Three offshore cable corridor, as outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], residual risks to Annex I features of North Norfolk Sandbanks and Saturn Reef SAC will be controlled via the designed in mitigation measures adopted as part of Hornsea Three (see Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]). As per Schedule 12, Part 2, Condition 17 (2)(a) and 18(2)(b) of the generation assets and transmission assets dMLs respectively [APP-027], the Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits. Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible, including from sandwave clearance activities, although it is considered that <i>S. spinulosa</i> aggregations are unlikely to form on sandwaves.</p>
<p>4.5. Section 2.11.1.20: Temporary loss of Habitat E is predicted as ~30%. The MMO notes that this should be considered as of greater than minor magnitude when assessing magnitude of impact.</p>	<p>As outlined in Table 2.13 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062), Habitat E corresponds to <i>S. spinulosa</i> reef outside an SAC/SCI with high infaunal and epifaunal diversity. As outlined in paragraph 2.7.1.15 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the area of 'medium reef' (i.e. according to Gubbay, 2007) that comprised this Habitat E covered an area of approximately 0.084 km² to the north of the North Norfolk Sandbanks and Saturn Reef SAC. As outlined in paragraph 2.11.1.20 of Volume 2, Chapter 2: Benthic Ecology of the Environmental</p>

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	<p>Statement [APP-062], the temporary habitat loss/disturbance of 29.63% of this habitat would not change the outcome of the <i>S. spinulosa</i> reef assessment in this locality (i.e. the reef would still be assessed as 'medium reef') and as the overall status of the reef would not change, the magnitude was considered to be minor.</p> <p>As discussed in paragraph 2.11.1.29 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], although the associated communities would be sensitive to disturbance in the short term, recoverability is high with biodiversity of the habitat returning to baseline levels over the medium term (~5 years). Furthermore, it should be noted that this assessment presented in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] was highly precautionary in that it assumed that cables would be installed through Annex I reef. However, as outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible.</p>
<p>4.6. Section 2.11.1.37 assesses the overall sensitivity of habitats A-E combined to give an overall significance of the effect, which is assessed as minor adverse. However, the habitats respond differently to the different impacts of sediment disturbance, sandwave removal, smothering and the MMO considers that these should therefore be given separate significance ratings. This is particularly important in the case of Habitat E, <i>Sabellaria spinulosa</i>, as 30% of the known reef present within the Hornsea Three Project Area may be affected by sand wave clearance.</p>	<p>The assessment of the overall significance of the effect to temporary habitat disturbance/loss was based on an appraisal of how each of the habitats individually would respond to the impacts of sediment disturbance, sandwave removal, and smothering. The assessment presented in paragraph 2.11.1.3 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] describes each of these separately in order to provide an individual quantification of the effects. Both individually and overall, the significance of effects was considered to be of minor significance, and it should be noted that the assessment would have highlighted where there was an exception to this conclusion for a particular habitat. As described previously (in response to RR 4.5) we maintain that the assessment of effect on Habitat E is accurate as the temporary loss of habitat would not change the classification of <i>Sabellaria</i> reef in this area and that recoverability of this biotope is high following the temporary disturbance.</p>
<p>4.7. Section 2.11.1.39: Sandwave clearance within the North Norfolk Sandbanks and Saturn Reef SAC may affect the integrity of the sandbank system within the site. Although sand will be deposited within the SAC, sandwaves may not form where they were previously. The MMO considers that this needs to be highlighted within the ES. Sand may also smother habitats such as those (e.g. coarse sediments) preferred by e.g. <i>Sabellaria spinulosa</i> and may affect the potential of reefs to form particularly due to the lengthy period of construction.</p>	<p>An assessment of the potential impacts of sandwave levelling in designated area is provided in paragraphs 1.11.5.3 to 1.11.5.18 within Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. In paragraph 1.11.5.9 it is specifically found that 'the proposed levelling is not likely to influence the overall form and function of the [sandbank] system and eventual recovery via natural processes is therefore expected'. It is acknowledged that 'the shape of the bedform following recovery might recover to its original condition (e.g. rebuilding a single crest feature, although likely displaced in the direction of natural</p>

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	<p>migration) or it might change (e.g. a single crest feature might bifurcate or merge with another nearby bedform)'. However, it is also found that 'all such possible outcomes are consistent with the natural processes and bedform configurations that are already present in the site would not adversely affect the onward form and function of the individual bedform features, or the sandbank system as a whole'.</p> <p>Risks to Annex I features of the North Norfolk Sandbanks and Saturn Reef SAC, should these develop within the Hornsea Three offshore cable corridor prior to construction, will be controlled via the designed in mitigation measures adopted as part of Hornsea Three, outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062). As per Schedule 12, Part 2, Condition 17 (2)(a) and 18(2)(b) of the generation assets and transmission assets dMLs respectively [APP-027], the Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits. Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible, including from sandwave clearance disposal activities.</p> <p>As described in paragraph 2.11.1.3 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the deposition of coarse, granular sediments from sandwave clearance is assessed as temporary habitat loss. There is, however, also the potential for smothering of benthic communities in the wider area as a result of the deposition of suspended fine sediment; this is discussed and assessed in paragraph 2.11.1.104 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. As noted in paragraph 1.11.2.72 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061], the majority of coarse material will settle within tens to a few hundred metres. Any fine grained sediment disturbed may enter into suspension and be advected away from the release location by tidal currents. This material may remain in suspension for a period of several days and be transported a distance of several tens of kilometres. However at this distance and after this time, concentrations would be very low (approximately a few mg/l) and well within the range of natural variability (see paragraph 1.11.2.68 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]). A Clarification Note on Sandwave Recovery has been provided to the MMO, as submitted at Appendix 11 to the Applicant's response to Deadline 1.</p>

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<p>Minor comments: 4.8. The MMO recommends that other sites classified as 'not a reef' within the SACs should still be considered as potential Annex I reef habitat within the ES and mitigation should be proposed.</p>	<p>The assessment presented within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062) was based on the best available information at the time of writing with regards to Annex I reef habitat which was acquired through a combination of site-specific survey and desktop data sources. It should be noted that, irrespective of the classification of the reefs in any part of the Hornsea Three array area or offshore cable corridor, these classifications were made in line with best practice guidance. The Applicant has made a number of commitments to control the residual risk to any Annex I reef habitats which develop prior to construction, these are outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. The Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits (as per Schedule 12, Part 2, Condition 17 (2)(a) and 18(2)(b) of the generation assets and transmission assets dMLs respectively) [APP-027]. Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible. This ensures that the project considers a future baseline scenario, where Sabellaria may develop into reef in the intervening time between the current baseline and the baseline immediately prior to construction.</p>
<p>4.9. Figure 2.5: SS.SBR.PoR.SspiMx biotope has been assigned to an unsurveyed area. As previously noted, the MMO considers that this area needs further survey effort to ensure that any <i>Sabellaria spinulosa</i> reef is avoided.</p>	<p>As outlined above, the Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits (as per Schedule 12, Part 2, Condition 17 (2)(a) of the draft DCO) [APP-027]. Should any reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible.</p> <p>Since the DCO application for Hornsea Three was submitted, the Applicant has undertaken site specific drop down video sampling within the part of the Hornsea Three offshore cable corridor that coincides with The Wash and North Norfolk Coast SAC to validate the baseline and predictions made within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062). The results of this survey recorded no evidence of Annex I reef habitats within this part of the Hornsea Three offshore cable corridor, including within those areas assigned to the SS.SBR.PoR.SspiMx biotope. The Applicant cross refers the MMO to Appendix 5 to its response to Deadline I.</p>
<p>Observations:</p>	<p>All records of <i>Arctica islandica</i> found within the Hornsea Three benthic ecology study area were in the area known as</p>

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<p>4.10. Section 2.7.1.22 initially states that <i>Arctica islandica</i> was found within the Hornsea Three benthic ecology study area. However, the final sentence of this paragraph states that no <i>Arctica islandica</i> were found within the Hornsea Three study area. The MMO requests clarification of this point.</p>	<p>the former Hornsea Zone (see paragraph 2.3.1.1 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062) for a description of study areas). None of the individuals were found within the Hornsea Three array area or Hornsea Three offshore cable corridor. For clarification, the last sentence of paragraph 2.7.1.22 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] should have read 'No <i>A. islandica</i> individuals were recorded within the Hornsea Three array area itself or offshore cable corridor'; this is consistent with the text in paragraph 5.2.1.6 of Volume 5, Annex 2.1: Benthic Ecology Technical Report (APP-102).</p>
<p>4.11. Section 2.11.1.50 makes reference to Jenkins <i>et al</i> (2016). This reference is not provided in the reference list. Section 2.11.1.52 again refers to Jenkins <i>et al</i> 2016 in relation to The Wash and North Norfolk coast SAC. The MMO notes that the report by Jenkins <i>et al</i> 2015 was based on a survey at the North Norfolk Sandbanks and Saturn Reef SAC and Roberts <i>et al</i> 2016 refers to the core reef approach.</p>	<p>Both paragraphs 2.11.1.50 and 2.11.1.52 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062) should reference the Roberts <i>et al.</i> (2016) paper rather than Jenkins <i>et al.</i> (2016); Jenkins <i>et al.</i> (2016) has been referenced in error. The full details of the Roberts <i>et al.</i> (2016) reference are as follows: Roberts, G., Edwards, N., Neachtain, A., Richardson, H. and Watt, C. (2016). Core reef approach to Sabellaria spinulosa reef management in The Wash and North Norfolk Coast SAC and The Wash approaches. Natural England Research Reports, Number 065.</p> <p>Subsequent references to Jenkins <i>et al.</i> (2015) in the context of the dedicated survey of the North Norfolk Sandbanks and Saturn Reef SAC by JNCC and Cefas in 2013 are correct (e.g. paragraph 2.11.1.50 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062))</p>
<p>4.12. Table 2.20 Core reef approach. The MMO does not consider that the core reef approach by Roberts <i>et al.</i> 2016 is entirely appropriate within the North Norfolk Sandbanks and Saturn Reef SAC due to the limited survey effort to date. The MMO acknowledges, however, that this limitation has been noted in section 2.11.1.53.</p>	<p>The comment is noted and, as outlined in paragraph 2.11.1.53 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062), the limited number of datasets available for the area of the North Norfolk Sandbanks and Saturn Reef SAC coinciding with the Hornsea Three offshore cable corridor is a key limitation associated with the application of the core reef approach to the Hornsea Three assessment. As per best practice, the assessment of an impact occurring to potential future Annex I reef as presented in paragraphs 2.11.1.43 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], is based upon the best available data with assumptions and limitations clearly stated.</p> <p>The purpose of this exercise was to provide a high-level risk assessment, as advised by Natural England in the Marine Processes, Benthic Ecology and Fish and Shellfish Ecology EWG meeting on 23 February 2018, in order to future proof the assessment to cover the possibility of Sabellaria reef developing in the intervening time between the Hornsea Three characterisation and the pre-construction Annex I reef surveys.</p> <p>It should also be noted that, the Applicant has made a</p>

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	<p>number of commitments to control the residual risk to any Annex I reef habitats which develop prior to construction, these are outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. The Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits (as per Schedule 12, Part 2, Condition 17 (2)(a) and 18(2)(b) of the generation assests and tranmission assets dMLs respectively) [APP-027]. Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible.</p>
<p>4.13. Section 2.11.1.70. The new cable route passes through the most eastern part of the Wash and North Norfolk Coast SAC and survey of this area was not undertaken in 2017. This is reason for <i>Sabellaria spinulosa</i> reef for not being recorded. The MMO recommends that a survey of this area should be undertaken to confirm whether reef is present within this previously unsurveyed part of the cable route.</p>	<p>As outlined in paragraph 2.6.1.4 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the Hornsea Three offshore cable corridor re-route in the nearshore area coinciding with The Wash and North Norfolk Coast SAC was characterised using a combination of Hornsea Three site specific data and desktop data sources in this area. The reason for this was due to time restrictions during the pre-application phase following the decision to take forward this re-route, which did not allow for site-specific surveys to be undertaken. The desktop datasets showed that the sediment types were broadly similar across the area with sandy sediments inshore grading into coarse/mixed sediments further offshore within The Wash and North Norfolk Coast SAC. These datasets also consistently indicated that Annex I reef habitats (including <i>S. spinulosa</i>) were not likely to be present, which suggested a low likelihood of Annex I reefs occurring in this part of the Wash and North Norfolk Coast SAC/Hornsea Three offshore cable corridor.</p> <p>Since the DCO application for Hornsea Three was submitted, the Applicant has undertaken site specific drop down video sampling within the part of the Hornsea Three offshore cable corridor that coincides with The Wash and North Norfolk Coast SAC to validate the baseline and predictions made within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062). The results of this survey recorded no evidence of Annex I reef habitats within this part of the Hornsea Three offshore cable corridor, including within those areas assigned to the SS.SBR.PoR.SspiMx biotope, reflecting the patterns observed in the desktop data sources. The findings of this survey will be provided to the MMO in advance of Deadline 1. The Applicant cross refers the MMO to Appendix [5] to its response to Deadline I.</p> <p>As outlined above, the Applicant has committed to undertake a pre-construction survey to determine the location, extent</p>

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	<p>and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits (as per Schedule 12, Part 2, Condition 18(2)(b) of the draft DCO) [APP-027]. Should any reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible.</p>
<p>4.14. Section 2.11.1.113: The MMO was not able to locate the statement that 5cm is a pressure benchmark for smothering within Tillin and Marshall (2015) (superseded by Tillin, Marshall and Gibb 2018). The reference states: The MMO requests further evidence for the statement that 5cm is a pressure benchmark for smothering.</p>	<p>The reference to Tillin and Marshall (2015) (superseded by Tillin, Marshall and Gibb 2018) in paragraph 2.11.1.113 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062), relates to the MarESA assessment for the Sabellaria spinulosa on stable circalittoral mixed sediment biotope which can be accessed here: https://www.marlin.ac.uk/habitats/detail/377. From this webpage it is possible to select each of the pressures to view the associated benchmarks (https://www.marlin.ac.uk/sensitivity/SNCB-benchmarks) or alternatively these are available from the following report by Tillin and Tyler-Walters (2015) :</p> <p>Tillin, H.M. & Tyler-Walters, H., 2015. Finalised list of definitions of pressures and benchmarks for sensitivity assessment. May 2015.</p>
<p>5. Fish Major comments: 5.1. The MMO notes that the underwater noise assessment appears to have taken a conservative approach in assessing the impacts to fish, however it is unclear whether the scenario of concurrent piling (discussed on page 27 of Chapter 3 of the ES) has been taken into consideration for the modelling. If concurrent piling is proposed, then the MMO recommends that noise modelling should reflect this scenario and a revision of the mapped noise contours should be presented to identify any potential overlap with herring spawning grounds.</p>	<p>The assessment of the impact of underwater noise on fish and shellfish, as presented in paragraphs 3.11.1.43 et seq. of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement (APP-062), provides ranges of effect (rather than total area of effect) for injury (mortal injury, recoverable injury) and TTS at different modelling locations across the Hornsea Three array area based on a worst case scenario of the most hearing sensitive fish group. Thus, if concurrent piling occurs, these ranges would be predicted to occur at each of the concurrent piling locations at similar times.</p> <p>As outlined in Paragraph 3.11.1.70 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement [APP-063], the noise contours presented in Figure 3.4 and Figure 3.5 are for illustrative purposes only as there are no agreed behavioural noise criteria for fish. The noise contours assume piling at the closest point within the Hornsea Three array area to the herring spawning ground off Flamborough Head. Given the large distance between the Hornsea Three array area and this spawning ground (i.e. approximately 80 km) the risk of behavioural effects are low and piling at any other location within the Hornsea Three will increase this distance, further reducing the risk to this herring spawning ground.</p>
<p>5.2. The MMO suggests that the use of bubble curtains to reduce noise propagation when piling could reduce the impact of underwater noise and vibration on fish and this has not been considered in the report. Given the duration of</p>	<p>The assessment presented in paragraphs 3.11.1.43 et seq. of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement (APP-063), considered the impact of subsea noise on spawning and nursery habitats and</p>

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<p>construction works (up to eight years) additional mitigation measures such as the use of bubble curtains should be considered, not only to reduce impacts on those species which have spawning and nursery grounds in the Hornsea Three area, but also to reduce impacts to species which transit through the Hornsea Three area for their seasonal migratory movements.</p>	<p>concluded that behavioural effects, not necessarily leading to strong avoidance, could occur over a range of tens of kilometres from the source. For one of the most hearing sensitive species, herring, the key spawning habitat is ~80 km from Hornsea Three array area and therefore disturbance effects on spawning adults are not anticipated to occur. Whilst there are some species whose spawning habitats do overlap the Hornsea Three array area, the extent of these mapped spawning area are vast i.e. covering much of the southern North Sea region, and therefore the proportion of spawning area affected by subsea noise is small.</p> <p>In addition, whilst the construction phase is given as 8 years, the actual piling phase within this will be 2.5 years and piling will occur intermittent during this time. In addition, the highest risk of behavioural effects for the most hearing sensitive species are within the intermediate field (100's of metres) with the risk of behavioural effects considered to be 'moderate' over the far field (1,000's of metres) and not likely to lead to displacement of individuals over these greater ranges. Therefore, strong biological drivers, such as spawning, would not necessarily be interrupted by elevated levels of noise across suitable habitat. Based on this, the assessment did not identify any significant effects on fish and shellfish populations, including spawning and nursery habitats, and therefore the Applicant does not consider it necessary to consider additional mitigation measures.</p>
<p>Observations 5.3. Little information is known on the physical effects of piling on sandeels, however, it is likely that they will suffer disturbance as a result of the vibrations, particularly during the autumn and winter months when they hibernate, and when they emerge to spawn (November – February). The MMO recommends that this should be acknowledged or considered in the ES.</p>	<p>Paragraph 3.11.1.63 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement (APP-063) acknowledges that there could be an effect of vibration on sandeels during winter hibernation when they remain buried in the sediment. The assessment predicts that there will be some disturbance to fish populations (including sandeels) from noise and vibration arising from the piling. Sandeel is a Group 1 fish (lacking a swim bladder), and therefore are expected to only detect the particle motion component of the subsea noise arising from piling. As discussed in paragraph 3.11.1.64 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement [APP-063], particle motion would be expected to deteriorate more rapidly than acoustic sound pressure. Consequently, the assessment predicts that that there is a low risk of behavioural effects in the far field for Group 1 fish (including sandeels) and behavioural effects arising from noise and vibration would be spatially limited to within a few kilometres of the piling.</p>
<p>5.4. The MMO recommends that considerations to avoid construction activities during the sensitive spawning season of sand eels should be given where feasible.</p>	<p>The MMO's comment is acknowledged, however, as described previously (response to Item 5.3) the range of potential behavioural effects for sandeel is limited to within a few kilometres of the piling (see paragraph 3.11.1.64 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement (APP-063)). The assessment presented in paragraph 3.11.1.75 of Volume 2, Chapter 3:</p>

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	Fish and Shellfish Ecology of the Environmental Statement [APP-063] considered that the impact on this species from piling noise and vibration is not significant in EIA terms. Therefore, the Applicant does not consider any further mitigation (in the form of piling restrictions) to be merited.
<p>6. Underwater Noise Major comments: 6.1. UXO Clearance PTS: Section 4.11.1.188: Permanent Threshold Shift from UXO clearance was assessed as negligible to low magnitude of impact. When considering mitigation and compliance of EPS guidance the overall risk was assessed as negligible magnitude. The MMO consider that this assessment is not appropriate, as commonly used mitigation measures to date have found to be insufficient in mitigating the full predicated impact area and injury may occur. The MMO therefore recommend that the magnitude of the impact should be as assessed as medium.</p>	<p>It is important to note that the assessment of UXO clearance within the ES is intended to provide a high level assessment only consent for UXO clearance is not being sought within the DCO. The assessment provides an indicative impact range for PTS and using an average broad scale density estimate, provides an estimate of the number of animals potentially within that range. The assessment of magnitude is based on the consideration of that number of animals in light of the potential severity of the impact, and the total size of the reference population. When expressed as a proportion of the relevant reference population, these numbers are extremely low in the absence of any mitigation (maximum of 0.0578%). It is on this basis that the magnitude is assessed as low or negligible. Current scientific opinion is that the magnitude of PTS as predicted at these ranges using the NOAA/NMFS thresholds will be unlikely to significantly affect the survival of individuals. A small effect on the fitness of this number of affected individuals will not have a detectable effect on the size or status of the population. The Applicant accepts that for EPS licencing purposes, an MMMP will be developed which will reduce the risk to individual animals to negligible but maintain that for EIA purposes, this assessment is valid. In accordance with the dML Conditions (Schedules 11 and 12, Part 2, Condition 13(1)(g)/14 (1)(g)) the undertaker will be required to develop a MMMP to manage PTS risk. The mitigation applied as part of this MMMP will be established once the final design has been established, and will be sufficient to appropriately mitigate PTS.</p>
<p>6.2. The MMO recommends that assessment of significance of effect should also be reconsidered. Sensitivity is considered to be high to medium depending on the species impacted. The overall significance of effect should therefore be moderate to major, depending on the species impacted, which would be significant in EIA terms.</p>	<p>See above comments, the Applicant maintains that an assessment of negligible to low magnitude without mitigation is valid and therefore the assessment of significance should not change.</p>
<p>6.3. The MMO has previously advised that the most direct and comprehensive way to mitigate the risk of acoustic impact on marine species is to reduce the amount of noise pollution emitted at source. Noise reduction technologies are available, such as big bubble curtains and acoustic barriers that are integrated into the piling rig (e.g. IHC Noise Mitigation System). Such mitigation should be considered as a primary means of reducing the potential acoustic impact of pile driving operations and UXO clearance activities.</p>	<p>The Applicant does not agree that the MMO have raised "at source noise mitigation" in the context of piling or UXO detonation to Hornsea Project Three during the pre-application phase. Notwithstanding this point, the Applicant agrees that mitigation through the MMMP will be key to managing residual risk if piled solutions are retained in the envelope. The Applicant confirms its commitment to a robust MMMP and the conditions within the dMLs relating to the potential for mitigation with regard to the SNS SCI.</p> <p>The nature of any mitigation required through the MMMP will be established once it is clear what type, location and</p>

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	<p>number of UXO may be required for clearance (for the UXO MMMP) and final scheme design has been completed (for the piling MMMP).</p> <p>The Applicant does not consider it appropriate to cite a specific mitigation option at this stage, as it a) may not end up being relevant, and b) an alternative (and potentially preferable) mitigation may come into the market place in the intervening period.</p>																																			
<p>6.4. Generally, the limits for bubble curtains are wave heights of 3m for operation and 5m for survival, in addition to wind speed of and above 30 m/s and currents of approximately 1.5 m/s. Based on the conditions at Hornsea Three as described in chapter 1 – Marine Processes, the MMO consider that the use of bubble curtains would be feasible to mitigate potential underwater noise impacts.</p>	<p>As stated above, The Applicant is committed to the development of a robust MMMP. The details of this MMMP will be agreed once the final scheme design is available.</p>																																			
<p>6.5. The subsea noise technical report predicts PTS impact ranges of up to 1.5 km (based on 5,000 kJ hammer energy for monopiles) for low-frequency cetaceans (Table 5.5). This is based on the cumulative SEL, for a fleeing receptor. For high-frequency cetaceans, PTS effect ranges are predicted to occur out to 1.2 km (for pin pile installation based on a hammer energy of 2,500 kJ). This is also based on the cumulative SEL for a fleeing receptor. The MMO therefore recommend that appropriate mitigation should be employed to cover such distances and reduce underwater noise impacts.</p>	<p>As stated above, The Applicant is committed to the development of a robust MMMP to reduce the risk of PTS to all marine mammals.</p>																																			
<p>Minor comments: 6.6. Auditory injury - Section 4.11.1.15: The US National Oceanic and Atmospheric Administration (NOAA) thresholds are indeed based on a dual criteria approach, and the first metric is pressure based. However, this metric as described is based on the zero-to-peak sound pressure level, as explicitly defined in the guidance, not the peak-to-peak sound pressure level. The MMO recommends that this error is corrected.</p>	<p>Both types of peak metric are given in the text because the previous paragraph highlights that thresholds have been proposed from Southall et al, NOAA and Lucke and across these, both peak metrics have been used (zero to peak for Southall and NOAA and peak to peak for Lucke). The table where the values for NOAA thresholds are presented do specify the correct metric as adopted in the assessment (zero-peak).</p>																																			
<p>Volume 4 – 3.1 – Subsea Noise Technical Report: 6.7. Table 2.2, Table 5.4 (provided for reference below) and section 5.1.3.7: It is appropriate that source levels have been provided as this follows best practice. However, for impact piling, the MMO recommends that the predicted source levels (for both hammer energies) should be expressed both as SPL_{peak} and single-pulse SEL (only the SPL_{peak} has been provided in the assessment), for comparison with the dual criteria. Furthermore, Figures 5.3 to 5.10 show contour plots of the modelled unweighted single-strike Sound Exposure noise levels. This point was previously raised in the Evidence Working Group process to the Hornsea Three project team in September 2017 and should be revised.</p>	<p>As identified by the MMO Table 5.4 sets out the SPL_{peak} source levels. The equivalent SEL_{ss} source levels are represented below for information:</p> <table border="1"> <thead> <tr> <th>SEL_{ss} Source levels (dB re. 1 μPa²s @ 1m)</th> <th>Monopile (5,000 kJ)</th> <th>Monopile (3,500 kJ)</th> <th>Monopile (2,000 kJ)</th> <th>Pin pile (2,500 kJ)</th> <th>Pin pile (1,750 kJ)</th> <th>Pin pile (1,250 kJ)</th> </tr> </thead> <tbody> <tr> <td>NW</td> <td>224.6</td> <td>223.3</td> <td>221.0</td> <td>222.0</td> <td>220.4</td> <td>218.7</td> </tr> <tr> <td>NE</td> <td>224.6</td> <td>223.3</td> <td>221.0</td> <td>222.0</td> <td>220.4</td> <td>218.7</td> </tr> <tr> <td>S</td> <td>224.6</td> <td>223.3</td> <td>221.0</td> <td>222.0</td> <td>220.4</td> <td>218.7</td> </tr> <tr> <td>HVAC</td> <td>216.</td> <td>215.</td> <td>212.</td> <td>213.</td> <td>211.</td> <td>209.</td> </tr> </tbody> </table>	SEL _{ss} Source levels (dB re. 1 μPa ² s @ 1m)	Monopile (5,000 kJ)	Monopile (3,500 kJ)	Monopile (2,000 kJ)	Pin pile (2,500 kJ)	Pin pile (1,750 kJ)	Pin pile (1,250 kJ)	NW	224.6	223.3	221.0	222.0	220.4	218.7	NE	224.6	223.3	221.0	222.0	220.4	218.7	S	224.6	223.3	221.0	222.0	220.4	218.7	HVAC	216.	215.	212.	213.	211.	209.
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	N	6	0	4	5	7	8
	HVAC	220.	219.	217.	218.	216.	214.
	S	9	5	0	0	3	6
<p>The MMO notes that a fleeing animal model has been used for both marine mammals (section 3.2.2.5) and fish (section 3.2.2.8). For marine mammals, scientific evidence of displacement suggests it is not unreasonable for the cumulative Sound Exposure Level (SEL) to be calculated based on a fleeing animal exposure model where, as the animal moves away from the sound source, it is exposed to a progressively reducing noise level, e.g. as defined in Lepper <i>et al.</i> (2012). However, the MMO is not aware of scientific evidence which would support fleeing in fish. As such, further evidence should be provided, or alternatively the effects on fish should be modelled for stationary animals.</p> <p>6.9. Section 6 focuses on the assessment of operational noise.</p> <p>Section 6.3.1.5: <i>The operational source levels (as SPLRMS) for the three sites are given in Table 6.2 (Cheesman, 2016), with estimated source levels for Hornsea Three given in the bottom three rows. To predict the operational noise emission at Hornsea Three, the noise level sampled at each of the sites have been taken, and then a linear correction factor has been added to scale up the source levels (Figure 6.1). A linear fit has been chosen to give a worst case estimate due to the lack of available data for larger turbines, and is likely to significantly overestimate the noise output from the largest turbines relative to the smaller ones where empirical data is available.</i></p> <p>The MMO requests further explanation as to why the linear fit is considered to give a worst-case estimate, as shown in Figure 6.1 below.</p>	<p>The Applicant notes the comment with regard to Figures 5.3 to 5.10, however, it should be noted that the assessment is based on a consideration of SPL_{peak} and SEL_{cum} (as detailed in Section 4.11 (see paragraphs 4.11.1.38-39 as an example for harbour porpoise). Therefore, whilst these figures can be reproduced they will not alter the tabulated information within the ES and technical report that has underpinned the assessment. The value of reproducing these figures is therefore, questioned by the Applicant.</p> <p>The Applicant accepts that there are many species of fish that could be exposed to the sound and all may react differently. However, most species are likely to move away from a sound that is loud enough to cause harm (Dahl <i>et al.</i> (2015), Popper <i>et al.</i> (2014)). The species that are most likely to move away would be expected to be those that are most sensitive: pelagic species that have a swim bladder. In respect of the fish noise thresholds that we work to (in Popper <i>et al.</i> 2014) the species most likely to remain stationary (e.g. by burying themselves) are considered to have impact ranges "less than" those calculated, which are designed for the most sensitive species. For example (from Popper <i>et al.</i> 2014): "There is also evidence (e.g., Goertner <i>et al.</i> 1994; Stephenson <i>et al.</i> 2010; Halvorsen <i>et al.</i> 2012c) that little or no damage occurs to fishes without a swim bladder except at very short ranges from an in-water explosive event. Goertner (1978) showed that the range from an explosive event over which damage may occur to a non-swim bladder fish is on the order of 100 times less than that for swim bladder fish."</p> <p>In respect to the noise level trend for operational wind turbines, the available data is so little that the extrapolation is speculative. A linear fit seems to be a worst, reasonable case for the noise increase with turbine scale. It will not increase exponentially, but overall is more likely to increase gently to a limiting asymptote. However as yet we do not have enough data to verify this.</p> <p>The practical results of the assessment is that even given worst case estimated noise levels the ranges of potential impact are negligible; fish would need to remain within 10 metres of the turbine to have a risk of a potential injury. If noise associated with the operational turbines were at such a level to potentially cause injury, it is assumed that fish individuals would move away from the area of impact, avoiding injury. Any risk of injury to fish during turbine operation, even with substantially increased predicted noise levels, would remain very low.</p>						
6.10. Section 6.3.1.6: These predicted levels were	The data available is SPLRMS as shown in Table 6.2 and						

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<p>extrapolated as SELcum values and adjusted for the criteria given in NMFS (2016) and Popper <i>et al.</i> (2014). The MMO notes that these studies give alternative criteria for non-impulsive and continuous noise. Operational noise is considered continuous noise.</p>	<p>Figure 6.1. This was used to compare to the Popper <i>et al.</i> criteria, which showed the noise levels are considerably below any level of concern.</p>
<p>6.11. The MMO recommends that the report should explain what is meant by 'extrapolation' here. Furthermore, the Popper <i>et al.</i> (2014) criteria for continuous sources are based on the SPL rms metric.</p>	<p>The extrapolation is in reference to the cumulative SEL, and noise levels were extrapolated over a 24 hour period for comparison with the NMFS non-pulse thresholds.</p>
<p>Observations:</p> <p>6.12. Section 4.11.1.175: The MMO support that a detailed assessment of Unexploded Ordnance (UXO) would be made as part of a future licence application once it is known whether UXO detonation is required, where, and what size UXO are that require detonation. As part of this, information on the depth of the UXO and current speed should be provided. This will aid in the determination of any EPS license that may be required. The MMO also agree that a sensible approach will be to conduct a separate, new impact assessment for decommissioning closer to the time of decommissioning.</p>	<p>The Applicant welcomes the agreement from the MMO that it is appropriate to licence UXO clearance at a later date once the need for and nature of any such work is clear.</p>
<p>6.13. The impact ranges for PTS and TTS in the tables, though very similar, do not always exactly match those given in the Subsea Noise Technical Report, as shown in the comparison table below. The MMO requests that this is corrected. For example, Table 4.22 shows the harbour porpoise PTS impact ranges (m) for locations Hornsea Three NW and HVAC S for the maximum design and most likely piling scenarios for both monopiles and pin piles:</p> <p>Extract from Table 4.22 showing impact ranges, compared to those provided in the Subsea Noise Technical Report.</p>	<p>These are simply rounding differences – in the subsea noise report values have been reported to the nearest 10 m whereas in the ES chapter the values have been taken from the excel spreadsheets and expressed to the nearest m. Given the resolution of the grid used for noise modelling, expressing to the nearest 10m is appropriate level of rounding. Therefore, it not considered necessary to undertake any corrective measure as it would have no bearing on the assessment outcome.</p>
<p>7. In Principle Monitoring Plan 7.1. Coastal Processes</p> <p>As identified for Hornsea Project Two, potential impacts have been identified on sediment transport in the nearshore zone where the export cable is brought ashore at, in this instance, Weybourne. As the degree of cable protection required in the sub-tidal area has not yet been identified, the MMO suggest that the bathymetry monitoring conditions for the less than 20m contour should be transferred to Hornsea Three.</p>	<p>The Applicant has reflected on the comments received by the MMO (and Natural England) on marine process monitoring and has updated the IPMP (as presented at Appendix 2 to the Applicants response to Deadline I) and also the draft DCO As submitted to the Planning Inspectorate for Deadline I) considers that the updates made will address the concerns raised by the MMO.</p>
<p>7.2. Benthic Ecology</p> <p>The pre-construction monitoring proposed within the Array area is only set up to determine the location of any reef features for micro-siting purposes. Benthic monitoring has not been proposed to assess the operational impacts from the introduction of 300 wind turbine foundations on the habitats and species within and outside the array. Whilst the MMO recognise that broad scale monitoring is not appropriate, targeted monitoring should be undertaken (pre-</p>	<p>The Applicant welcomes the recognition from the MMO that broadscale monitoring of benthic receptors with regard to offshore wind farm development is of limited value.</p> <p>As outlined in section 2.2 of the In-Principle Monitoring Plan (APP-182), options for monitoring are only considered appropriate where the absence of significant residual impacts (following mitigation) has not been agreed, or where there is significant uncertainty in the assessment</p>

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<p>and post-construction) to monitor the secondary impacts within the Array area, outside the array area and at suitable reference sites. It is still unclear what the impacts of such large-scale wind farms are on the marine environment, therefore the MMO strongly advise including temporal targeted (but not only limited to habitats of conservation importance) monitoring.</p> <p>7.3. Monitoring of the cable route is proposed only to determine the success of sensitive cable protection measures within the Wash and North Norfolk Coast SAC, the North Norfolk Sandbanks and Saturn Reef SAC and the MCZ. The MMO recommends that further monitoring should be proposed to determine the impacts of sand wave clearance and boulder clearance on the integrity of the features present within the SACs/MCZ.</p>	<p>conclusions relating to a particularly sensitive feature. In line with the MMO's recommendations for targeted monitoring, as outlined in paragraph 2.3.1.1 of the In-Principle Monitoring Plan, monitoring should have a clear purpose and be designed to provide answers to specific questions where significant environmental impacts have been identified. The Applicant considers the request to monitor representative sites within the Hornsea Three array area, outwith the array area and at representative sites, to effectively be the broadscale monitoring which the MMO acknowledges is unlikely to have the power to detect any change or test any residual uncertainties (noting that the impacts are well understood and uncertainty is low).</p> <p>Following the guiding principles in the In-Principle Monitoring Plan, and on the basis of the conclusions of the assessments presented in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062), targeted monitoring has been proposed for benthic ecology. The pre-construction monitoring commitment outlined in Table 2.25 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], to undertake a pre-construction survey for Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Hornsea Three offshore cable corridor has been proposed to ensure that there are no significant residual risks to Annex I reef habitats. As noted in the response to MMO comment 1.47, the Applicant can commit to extending this monitoring commitment across to the Hornsea Three array area, as well as the offshore cable corridor (i.e., to cover all areas within which construction activity is planned). If identified during pre-construction surveys, any such features would be avoided where possible within the final scheme design, and post construction monitoring undertaken to establish any change to these features.</p> <p>The Applicant confirms that the pre-construction monitoring described above will be undertaken in a timeframe that can precede sandwave and or boulder clearance. Similarly post construction monitoring commitment within the designated sites where such activity has taken place will inform any uncertainty relating to recovery of the features.</p> <p>As outlined in the response to MMO comment 7.1, the Applicant would welcome a discussion with the MMO about how the geophysical surveys described in section 3.2 of the IPMP could be used to inform pre and post construction monitoring, including determining the impacts from sandwave clearance and boulder clearance within designated sites coinciding with the Hornsea Three project area, as requested by MMO.</p> <p>The Applicant has updated the IPMP (as presented at</p>

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	Appendix 2 to the Applicants response to Deadline 1) and also the draft DCO (Revision 1, submitted for Deadline 1] in line with the above.

Annex 7 – Full response to Natural England [RR-097]

Annex 7 – Full response to Natural England (RR-097)

Relevant Representation Comment	Applicant's Response
<p>Introduction</p> <p>1.1. Natural England is a non-departmental public body established under the Natural Environment and Rural Communities Act 2006 ('NERC Act'). Natural England is the statutory advisor to Government on nature conservation in England and promotes the conservation of England's wildlife and natural features¹. Natural England's remit extends to the territorial sea adjacent to England, up to the 12 nautical mile limit from the coastline².</p> <p>Natural England is a statutory consultee:</p> <p>1.2.1. in respect of environmental information submitted pursuant to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 ('the EIA Regs')³;</p> <p>1.2.2. in respect of plans or projects that are subject to the requirements of the Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations') which are likely to have a significant effect on European protected sites – that is, sites designated as Special Areas of Conservation ('SACs') and Special Protection Areas ('SPAs') for the purposes of the EU Habitats and Birds Directives⁴;</p> <p>1.2. 1.2.3. in respect of proposals likely to damage any of the flora, fauna or geological or physiological features for which a Site of Special Scientific Interest ('SSSI') has been notified pursuant to the Wildlife and Countryside Act 1981 (the '1981 Act')⁵; and</p> <p>1.2.4. in respect of all applications for consent for Nationally Significant Infrastructure Projects which are likely to affect land in England.</p> <p>1.2.5. Pursuant to the Conservation of Offshore Marine Habitats and Species Regulations 2017 (the '2017 Regulations') under regulation 28(4)(a) of the 2017 Regulations, where the assessment relates to a European offshore marine site, the competent authority must consult the Joint Nature Conservation Committee (JNCC). Where the assessment relates to a European site (including a European marine site), then the competent authority must consult Natural England, in accordance with regulation 25(3) (b) of the 2007 Regulations.</p> <p>1.3. It is also the Government's policy to consult Natural England in respect of sites listed for the purposes of the Convention on Wetlands of International Importance especially as Waterfowl Habitat signed at Ramsar on 2 January 1971 ('Ramsar sites') as if they were European protected sites⁷.</p>	<p>This is acknowledged by the Applicant</p>

Relevant Representation Comment	Applicant's Response
<p>1.4. The Examining Authority should note that pursuant to an authorisation made on 9 December 2013 by the JNCC under paragraph 17(c) of Schedule 4 to the Natural Environment and Rural Communities Act 2006, Natural England is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for offshore renewable energy installations in offshore waters (0-200 nm) adjacent to England. This application was included in that authorisation and, therefore, Natural England will be providing statutory advice in respect of that delegated authority. However, JNCC retains responsibility as the statutory advisors for European offshore marine sites that are located outside the territorial sea and UK internal waters (i.e. more than 12 nm offshore) and continues to provide Natural England advice on the significance of any potential impacts on interest features of those sites.</p> <p>In determining this application, the Secretary of State will be acting as the competent authority for the purposes of the Habitats Regulations and the 2007 Regulations. The Secretary of State is also a section 28G authority with specific duties under the 1981 Wildlife and Countryside Act in respect of SSSIs.</p> <p>1.6. Natural England's advice in these Relevant Representations is based on information submitted by Ørsted Hornsea Project Three (UK) Ltd., on behalf of Ørsted Power (UK) Ltd., in support of its application for a Development Consent Order ('DCO') in relation to the Hornsea Project Three Offshore Wind Farm ('the project'). The project refers to the construction and operation of an offshore wind farm of up to 2,400 MW with up to 300 turbines located 121 km off the north Norfolk coast and 160 km off the Yorkshire coast, covering an area of approximately 696 km². The export cable makes landfall at Weybourne in Norfolk, and the grid connection at the existing National Grid substation to the south of Norwich in Norfolk.</p> <p>Natural England has been working with Ørsted Hornsea Project Three (UK) Ltd. and other interested parties to provide advice and guidance on the Hornsea Project Three Offshore Wind Farm (further referred to as 'Hornsea Project Three') since 2016.</p> <p>1.8 These Relevant Representations contain a summary of what Natural England considers the main nature conservation, landscape and related issues to be in relation to the DCO application, as well as the Deemed Marine Licences (DMLs) contained therein, and indicate the principal submissions that it wishes to make at this point. Natural England will develop these points further as appropriate during the examination process. Natural England may have further, or additional, points to make, particularly if more information about the project becomes available.</p>	

Relevant Representation Comment	Applicant's Response
<p>1.9. These Relevant Representations provide an overview of the issues and a summary of Natural England's advice. Section 2 of these representations identifies the natural features for which there may be impacts by this application. Section 3 summarises Natural England's overall view of the application. Section 4 sets out Natural England's overarching concerns with this application. Section 5 provides high level comments on topic specific matters, which Natural England considers need to be addressed. Section 6 is intended to identify those issues that should be dealt with by way of DCO requirements and the DMLs. Natural England has also provided an appendix covering more detailed comments on the DCO/DML conditions in recognition that a DCO hearing may occur prior to the submission of written representations.</p>	
<p>1.10. It should be noted that Natural England is very concerned about the number of outstanding substantive issues in this case. Natural England intends, if possible, to continue discussions with Ørsted Hornsea Project Three (UK) Ltd. and seek to resolve concerns through the provision of further evidence and assessment, which can then lead to the agreement of the outstanding issues in statements of common ground. Failing satisfactory agreement, Natural England advises that the matters set out in sections 3 to 5 of these Relevant Representations, will require consideration by the Examining Authority as part of the examination process.</p> <p>1.11. The Examining Authority may wish to ensure that the matters set out in these relevant representations are addressed as part of the Examining Authority's first set of questions, to ensure the provision of information early in the examination process.</p>	<p>This is acknowledged. The Applicant is working with Natural England to develop three Statements of Common Ground (relating to ornithology, marine process & benthic ecology, and all other matters) and has provided Natural England with Clarification Notes where appropriate to facilitate this process and address points raised in this Relevant Representation.</p>
<p>2. The natural features potentially affected by this application</p> <p>2.1. The project affects the marine environment and the countryside between the onshore substation near Norwich and the landfall at Weybourne, North Norfolk, with the wind farm array located in the southern North Sea.</p> <p>2.2. The designated sites relevant to this application are: <i>Natural England provided a series of tables</i></p>	<p>This is acknowledged by the Applicant</p>
<p>3. The overall position of Natural England</p> <p>3.1. Natural England does not consider the documents presented to the Planning Inspectorate to support the application for Development Consent Order (DCO) for Hornsea Project Three to be of sufficient quality and detail to enable a thorough assessment of the impacts on nature conservation issues in line with; the Marine Works (Environmental Impacts Assessment) Regulations 2007 (as</p>	<p>These comments are acknowledged by the Applicant and are responded to below in the topic specific sections.</p>

Relevant Representation Comment	Applicant's Response
<p>amended), the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended), Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017.</p> <p>3.2. Natural England provided a detailed response to the Applicant's Preliminary Environmental Information report (PEIr) in September 2017 raising a number of substantive concerns. With the exception of the baseline data deficiencies Natural England felt the majority of issues were capable of resolution prior to the Applicant's final submission. Despite further engagement through the expert working group process, only a limited number of concerns raised during the pre-application phase of this project have been addressed to Natural England's satisfaction in the final application.</p> <p>3.3. Given the timescales for the submission of Relevant Representations and the extensive number of documents to review, Natural England is unable to provide detailed comments covering the full range of our concerns in relation to this application at this stage. We have therefore sought to provide high-level comments, covering our fundamental issues and main concerns and consequently this representation should not be considered to be an exhaustive documentation of our comments. Further detail will be provided upon the Examining Authority's request and within our written representations.</p>	
<p>4. Overarching concerns.</p> <p>4.1. Natural England has a number of fundamental overarching concerns in relation to this application which are summarised below. These issues need to be addressed in order for a robust assessment to be undertaken. If these issues are not addressed Natural England will be unable to exclude beyond all reasonable scientific doubt that there will be no adverse effect on site integrity for the relevant SACs and SPAs, or that the conservation objectives of the relevant MCZs will not be hindered.</p>	<p>The Applicant is working with Natural England to develop three Statements of Common Ground (relating to ornithology, marine process & benthic ecology, and all other matters) and has provided Natural England with Clarification Notes where appropriate to facilitate this process and address points raised in this Relevant Representation. The Applicant notes that without dedicated resource from Natural England to Hornsea Project Three it is challenging to continue constructive discussions.</p>
<p>4.2. Evidence</p> <p>4.2.1. Natural England has considerable issues with the standard of evidence provided in support of this application.</p> <p>4.2.2. Natural England views the provision of project specific information to be fundamental to any assessment of a project at this scale. The project specific survey data sets within this application are limited for some designated site features (see points 5.2.6 and 5.4.7, for example) and although additional information has been used to inform conclusions (i.e. historic data, data collected outside the</p>	<p>The Applicant's position is that the Environmental Statement has given careful consideration to the use of data to adequately characterise the baseline environment. This has enabled a robust assessment of impacts across the marine environment to be presented. This has involved consideration of the availability of existing, appropriate, datasets and the supplementing of these datasets with project specific data collection, where required. The data used to characterise the baseline environment is detailed in each offshore chapter of the Environmental Statement. In some cases, this has involved the use of pre-existing datasets previously presented in relation to adjacent consented offshore wind</p>

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<p>development zone), Natural England does not feel that this is sufficient to characterise the development site in order to fully understand the impacts of this project.</p> <p>4.2.3. Consequently Natural England does not consider this level of information to be sufficient in the context of the Environmental Impact Assessment (EIA) and Habitat Regulations Assessment (HRA).</p> <p>4.2.4. It is also unclear if the best available evidence is being used throughout the application when determining the likely nature and extent of impacts, with a reliance on the modelling used in historic applications rather than the available post-construction monitoring information. Recent experience from offshore energy projects entering the pre-construction and construction phase has brought to light fundamental flaws in the consent documents which we advise are rectified in future applications including Hornsea Project Three. For example, modelled data from the Environmental Statements of recently constructed projects have been relied upon for Hornsea Project Three, but Natural England is aware that the construction impacts for those projects have been significantly greater than those predicted. Therefore it is imperative that the modelled data is validated using post-consent/construction information before being further relied upon in this process.</p> <p>4.2.5. There are also a number of instances where data is either not presented or incomplete (e.g. see points 5.2.1 and 5.4.13), which is preventing Natural England from being able to understand or comment on the significance of the assessment that the Applicant has undertaken.</p> <p>4.2.6. Natural England has found the information presented is not sufficiently clear and is inconsistent and ambiguous in many places. Consequently it is extremely difficult to understand, assess its significance or arrive at clear conclusions. It is vitally important the information provided in support of the application (and each aspect thereof) is to be accurate and clearly presented in a way that can be easily understood and taken forwards into the construction phase without any ambiguity.</p>	<p>farm developments, but only in instances where these data are appropriate and add value to the baseline characterisation.</p> <p>These comments are acknowledged by the Applicant and are responded to below in the topic specific sections (for example see responses to comments 5.2.6 and 5.4.7).</p>
<p>Project Proposals</p> <p>4.3.1. Natural England recognises that the Applicant wishes to use a Rochdale Envelope approach in order to retain flexibility in the consent that is granted. Consequently we advise that the project parameters are clearly defined and that a realistic worst case</p>	<p>As outlined in section 5.3.3 of Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement [APP-060] the Rochdale Envelope approach followed is consistent with the Planning Inspectorate's (PINS) Advice Note Nine: Rochdale Envelope (PINS, 2012). For each impact assessed within the topic chapters (i.e. Volume 2, Chapters 1 to 11 and Volume 3, Chapters 1 to 10) the</p>

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<p>scenario (WCS) is used to enable the impacts of a development to be fully assessed (noting that the actual impacts will probably lie within a range of values).</p> <p>4.3.2. The wording of the project description associated with this application is confusing and the description of activities provided in subsequent chapters does not always tally with the overarching project description chapter and figures presented within the Development Consent Order (DCO) and/or Deemed Marine Licences (DMLs). This lack of clarity around the parameters of the project means that the activities that are to be undertaken are undoubtedly open to interpretation. Given this level of uncertainty, Natural England is unable to advise appropriately on the significance of the nature conservation and landscape impacts.</p> <p>4.3.3. In order to allow for a realistic assessment of WCS it is important that as much information as possible is provided to enable the assessment to fully consider the impacts. Natural England's view is that evidence should be drawn from the construction of other projects (see point 4.2.4).</p> <p>4.3.4. Throughout the chapters the descriptions are limited in detail in relation to the scale of the proposals included in particular for the marine environment, e.g. boulder clearance, sandwave levelling, cable protection. It is often unclear as to how the WCS has been derived, and consequently it is unclear if the WCS has in fact been presented.</p> <p>4.3.5. For example, there is an assumption that 10% of the cable length will require protection as a WCS. It is unclear how the Applicant arrived at this percentage figure and the extent to which evidence of the ground conditions and previous experience of cable installation in similar areas/designated sites have been a factor in this assumption. Consequently, this figure seems arbitrary.</p> <p>4.3.6. Whilst a percentage assumption offers flexibility to the Applicant, it does not enable a meaningful assessment of the ecological impacts of the installing, maintaining and decommissioning of the cables due to a lack of information on the impacts of cable protection on specific sensitive habitats and species present along the route. Therefore, based on the current level of information, Natural England is unable to advise on the specific nature of the impacts of this activity both within and outside of Marine Protected Areas (MPAs).</p>	<p>maximum design scenario is identified from the range of possible options for each parameter within Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]. This maximum design scenario is then carried through to the impact assessment in those topic chapters, in line with the Rochdale Envelope approach.</p> <p>The approach to evaluation of significance of effect is outlined in paragraph 5.3.5.14 Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement [APP-060]. The matrix approach, correlating magnitude of the impact and sensitivity of the receptor, has been adopted as a guide, with latitude for professional assessment where deemed appropriate in the application of the matrix. Specifically, where the matrix offers a choice of significance levels, professional judgement has been used to determine the most likely outcome.</p> <p>In paragraph 2.9.2.5 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] it is clarified that, in cases where a range is suggested for the significance of effect, there remains the possibility that this may span the significance threshold (i.e. the range is given as minor to moderate). In such cases the final significance concluded in the assessment is based upon the expert's professional judgement as to which outcome delineates the most likely effect, with an explanation as to why this is the case. This is consistent with the methodology presented in Environmental Statement Volume 1, Chapter 5: Environmental Impact Assessment Methodology [APP-061].</p> <p>Updated explanatory text has been inserted into the relevant assessments in Volume 2, Chapter 2: Benthic Ecology [APP-062] of the Environmental Statement since the publication for the Preliminary Environmental Information report in order to clarify why, in instances where there is a choice in the matrix table, an effect has been considered as minor rather than moderate. See paragraphs 2.11.2.28, 2.11.2.161 and 2.11.2.165 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] for examples of where this approach is demonstrated.</p> <p>Further information on the relationship between the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058] is detailed in the Applicant's response to the Planning Inspectorate on the 25 July 2018 outlines the. This document is located at https://infrastructure.planninginspectorate.gov.uk/wp-</p>

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<p>4.3.7. We therefore cannot agree with the conclusions of this application, nor can we rule out the potential for adverse effect on site integrity of European designated sites and significant impacts to nationally designated sites.</p>	<p>content/ipc/uploads/projects/EN010080/EN010080-000802-20180723_HOW03_S58_Attach02_PDESTable.pdf</p> <p>Further consideration is given to these concerns in the following topic specific sections below.</p>
<p>4.4. Assessment of Impacts</p> <p>4.4.1. It is Natural England's view that the data and predicted impacts should be presented in a way that allows the full range of uncertainty (e.g. around input data, analysis, methodology) to be understood and evaluated. It is necessary to have a good understanding of these uncertainties to be able to make an informed assessment of the significance of potential impacts.</p> <p>4.4.2. Natural England does not feel that sufficient precaution has been built into the analysis to address the uncertainties arising from the lack of site specific data and detailed proposals. However, building in sufficient precaution/mitigation measures to allow for the uncertainties is likely to change the proposal and therefore may affect the viability of this project and/or subsequent projects when considered in-combination.</p>	<p>The Applicant has addressed these comments in the topic specific sections below</p>
<p>4.4.3. Taking the cable protection example, the absence of site specific data and the use of an arbitrary percentage figure would mean that a WCS assessment would need to assume that all of the 10% is installed on each of the most sensitive features within the MPA or cable corridor. This would involve running a number of different feature based scenarios. Where a scenario has the potential to hinder the conservation objectives of an MPA, consideration of options to minimise the impacts to an acceptable level is required. Again there would need to be a number of different options presented to enable adverse effect on integrity to be fully ruled out. Without sufficient supporting evidence however, it is unclear if following this approach would ultimately provide sufficient certainty for Natural England to rule out the potential for adverse effect on integrity beyond reasonable scientific doubt.</p>	<p>This concern from Natural England is responded to below at points 5.3.6 and 5.4.14.</p>
<p>4.4.4. Furthermore, Natural England does not agree with the methodology used for the analysis in a number of cases (e.g. see points 5.2.2 and 5.4.14 for further details). This provides a further layer of uncertainty to any conclusions drawn and compounds any errors in modelling data used in the analysis.</p>	<p>Please see individual responses below in relation to this concern, specifically those regarding points 5.2.2 and 5.4.14.</p>
<p>4.4.5. Additionally, Natural England does not agree with the approach taken to the assessment of impacts over the lifetime of the</p>	<p>Please see individual topic responses below in relation to this concern, particularly 5.4.14.</p>

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<p>project. The Applicant has assessed the impacts of the project in three phases – construction, operation and maintenance and decommissioning and has considered each phase in isolation, thereby failing to consider cumulative impacts over time. The implications of a 'phased build' over a number of years have not been fully considered and is also unclear whether any particular impact is considered to be temporary or long term/persistent. Consequently Natural England cannot agree with the conclusions made in these assessments and we strongly suggest that these assessment sections are rewritten to comprehensively and satisfactorily assess the impacts throughout the lifetime of the project</p>	
<p>4.5. Cumulative/ in-combination assessment</p> <p>The level of uncertainty arising as a result of the issues raised above (see 4.3 – 4.4) means that the cumulative and in-combination assessments are compounding errors. Therefore, it is not feasible to reach a conclusion on the significance of the effects of the project alone and in-combination. As well as the uncertainty this provides in relation to Hornsea Project Three, it will also impact on the in combination assessment for other plans and projects seeking consent.</p>	<p>These comments are acknowledged by the Applicant and are responded to below in the topic specific sections (for example see responses to comments 5.2.7 and 5.5.7.</p>
<p>5.1. DCO and DML</p> <p>The application is the first opportunity Natural England has had to review the proposed Development Consent Order (DCO) and Deemed Marine Licences (DMLs). Given there are several significant unprecedented proposals/ conditions included within the DCO and DMLs, we advise that DCO/DMLs should have been provided prior to application to allow for discussion and consideration within the pre-application process. This is in keeping with the principles of the Planning Act 2009 and the front loaded process that was envisioned.</p>	<p>This is acknowledged by the Applicant.</p>
<p>5.1.1. Document sign-off condition. Natural England notes that the Applicant has included a condition in both DMLs that requires all post-consent documentation to be signed off within 8 weeks of a report being submitted. It is our view, that such condition is extremely restrictive and leaves no room for potential discussions that may be required post-consent. The DMLs also state that failure to reply on time could lead to the developer submitting the matter to arbitration.</p>	<p>The Applicant wishes to ensure an efficient and expeditious approval process for the discharge of conditions. However, we note Natural England's concerns, and propose the following compromise, which would require the amendment of condition 12 of the generation assets DML:</p> <p><i>"12.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 11 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.</i></p> <p><i>(2) The MMO shall determine any application for approval consent made under condition 11 this article</i></p>

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	<p><i>within a period of four months eight weeks commencing on the date the application is received by the MMO, unless otherwise agreed in writing with the undertaker.</i></p> <p><i>(3) Where the MMO is minded to refuse an application for approval consent made under condition 11 and notifies the undertaker accordingly, or the Secretary of State fails to determine the application for consent under this article within the period prescribed in paragraph (2), the undertaker may refer the matter for determination in accordance with article 36 (arbitration) of the Order.</i></p> <p><i>(4) The licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 11, unless otherwise agreed in writing by the MMO."</i></p> <p>The similar amendments would also be required to condition 13 of the transmission assets DML.</p> <p>The effect of the amendments would be that applications to discharge conditions are submitted no later than four months before commencement and those applications must be determined within that four month period, unless an extension of time is agreed between the parties.</p>
<p>5.1.2. Arbitration provision. With regard to the arbitration provision in the DCO, arbitration conditions in the DMLs and the arbitration rules schedule, Natural England does not believe the provision made for arbitration within this DCO is appropriate. Natural England's expert advice is given pursuant to its statutory duties. It cannot be bound by the findings of another organisation or individual if that contradicts its expert opinion. Natural England is, therefore, unable to agree to a mechanism which compels it to abide by an outcome which it does not believe is appropriate in its expert opinion.</p>	<p>The SoS has previously considered who should be a party to arbitration provisions in a DCO. In respect of both the Triton Knoll Offshore Wind Farm Order 2013 and the Burbo Bank Extension Offshore Wind Farm Order 2014, Natural England submitted that it should be excluded from those provisions on the basis that the exercise of NE's statutory powers should not be subject to arbitration. In both cases, the SoS did not agree.</p> <p>At para 7.3 of the Triton Knoll decision letter the SoS states: "The Panel also asked the Secretary of State to consider whether SNCBs should be removed from the provisions for arbitration covered by Article 12 of the draft Order at Appendix E (headed "Arbitration") [ER 5.11.20]. To maintain consistency with other offshore wind farms approved under the Planning Act 2008 since the close of the Panel's Examination, the Secretary of State has decided that the arbitration provisions should apply to SNCBs and has therefore modified the article in the Order accordingly."</p> <p>The outcome in Triton Knoll was noted by the ExA in its report on Burbo (as noted in para 7.45 and 7.46 of the Report): "This draft article provides for the appointment of an arbitrator if a dispute arises in respect of any provision of the DCO. Early draft DCOs excluded NE from the operation of the provision, pursuant to an opinion</p>

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	<p>provided by NE to the Triton Knoll Offshore Wind Farm Examining Authority that the exercise of its statutory powers should not be subject to arbitration and should only be adjudicated upon by the court. However, the Secretary of State in the Triton Knoll decision decided not to exclude NE from the arbitration provision in that DCO, on the basis that all issues and parties should be equally subject to arbitration on the same basis. I proposed to delete the exclusion of NE from the arbitration provision in my draft DCO. The applicant and NE did not object to this revision which was sustained in the applicant's draft DCO Version 6 [APP-099]. I am content with the current drafting of this article." The SoS endorsed the ExA's conclusion in the made Order.</p> <p>Therefore, Examining Authorities and the SoS have already opined on this point as highlighted above and concluded that "all issues and parties should be equally subject to arbitration on the same basis". The argument advanced by NE that it should be excluded from those provisions on the basis that the exercise of NE's statutory powers should not be subject to arbitration, has been rejected by the SoS at least twice in the Triton Knoll and Burbo DCOs.</p>
<p>5.1.3.Arbitration Costs. It is also noted that, within this provision, an award of costs may be made against Natural England. While it is acknowledged that the wording used is reasonably standard for arbitration agreements, Natural England considers that it is inappropriate for a Statutory Body to be subject to additional outside costs while performing its statutory function.</p>	<p>The costs provisions are fair and are similar to those found in other appeal related costs awards. Paragraph/provision 6(4) states that "the Arbitrator will award recoverable costs on the general principle that costs follow the event, having regard to all material circumstances, including such matters as exaggerated claims and/or defences, the degree of success for different elements of the claims, claims that have incurred substantial costs, the conduct of the parties and the degree of success of a party". This affords the arbitrator the discretion to award costs, or not, having regard to matters set out above.</p>
<p>5.1.4.Confidentiality Clause. In relation to the confidentiality clause of the arbitration schedule: Natural England is subject to the requirements of the Freedom of Information Act 2000 ('FOIA') and the Environmental Information Regulations 2004 ('EIR').</p> <p>Therefore Natural England may be obliged to release documents in response to an FOIA or EIR request including any file notes. In respect of any FOIA or EIR request, Natural England is responsible for determining at its absolute discretion whether any information it holds, whether commercially sensitive information or otherwise, is exempt from disclosure in accordance with the provisions of the FOIA or the EIR or is to be disclosed in response to a request for information. Natural England cannot therefore guarantee confidentiality or agree to be bound by such a requirement.</p>	<p>The Applicant accepts that this could be amended to allow disclosure to enable a party to comply with disclosure obligations under legislation, e.g. the Freedom of Information Act 2000.</p>
<p>5.1.5. Offshore preparation works. Additional to the concerns on arbitration, Natural England cannot agree to the definition of</p>	<p>The Applicant has reflected on this point, and given the control in Condition 11 of the dMLs (as highlighted in bold</p>

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<p>'offshore preparation works' as currently provided within the draft DCO and DMLs. The definition allows works such as sandwave levelling and boulder clearance to be conducted without any regulatory oversight or control of the methodology. These works form a significant part of the impact of the project, including a significant part of the impact to designated sites, and must be subject to appropriate regulatory review and sign off prior to any works commencing.</p>	<p>below) are happy to ensure that "commence" captures offshore site preparation works: <i>11.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) has been submitted to and approved in writing by the MMO</i></p>
<p>Natural England has provided further detailed comments on our concerns regarding the draft DCO and DML within Annex A.</p>	<p>This is acknowledged, please see responses in relation to Annex A.</p>
<p>5.2. Offshore ornithology</p> <p>The table below provides a summary of Natural England's key concerns.</p> <p>5.2.1 Baseline data Collection:</p> <p>Due to the potential for considerable variability of seabird numbers and distribution in the offshore environment, characterising the use of a project area by a species requires multiple years of data. Natural England therefore consistently advises across all offshore wind farm projects that a minimum of two years of site specific baseline survey data (covering two complete 'bird seasons') should be used.</p> <p>The site-specific baseline survey data to inform the offshore ornithology assessments within this application comprise 20 months of data. Having less than two years of data will increase the uncertainty around the offshore ornithology impact assessment and will increase the risk that Natural England will not be able to agree with the impact assessment conclusions presented by the Applicant. Furthermore, the Applicant has chosen to only partially analyse their Digital Aerial Survey data from their 2016-17 surveys, giving them a 10% coverage of the area rather than a potential 20%. Given that the full two years of data are not available for this application, Natural England queries why only 10% of aerial data has been analysed while up to 20% could potentially have been analysed?</p> <p>Natural England does not agree with the Applicant that this is sufficient for baseline characterisation.</p> <p>5.2.2 Existing baseline data analysis:</p> <p>The Applicant has sought to address the evidence gap by incorporating historical boat-based survey data collected at various spatial and temporal scales across the Hornsea Zone. However, it is Natural England's view that the Applicant's hierarchical data selection method for integrating densities/ numbers of species derived from digital aerial and boat-based survey data is flawed, and consequently has limited confidence in its application.</p>	<p>The baseline characterisation for those months for which two surveys have been conducted (April to November) was agreed in the Evidence Plan. This is detailed in paragraph 4.3.2.3 and Section 4 of the Ornithology EWG meeting minutes 27.02.2018 presented in Appendix D of Consultation Report Annex 1 - Evidence Plan [APP-035].</p> <p>The months for which two surveys have not been conducted fall outside of the breeding season for all but one of the key species in the assessment. Outside of the breeding season, seabird populations are more mixed and impacts on local breeding colonies are therefore diluted. This is illustrated by the apportioning values used for relevant species, with these not above 10% meaning that considerably higher densities of birds (i.e. higher than those in the breeding season) would need to be present at the Project site in order for a significant impact to occur. In addition, and evidenced through contextual data, variability in non-breeding periods is lower than during the breeding season. Although the Applicant accepts that having only one month of data for December to March will increase the uncertainty associated with assessments incorporating these months however, this does not prevent predicted impacts from being assessed. It should be noted that assessments including December to March incorporate available aerial survey data for these months in addition to contextual data collected as part of an extensive boat-based survey programme covering the former Hornsea Zone (an area which includes Hornsea Three).</p> <p>A process was initiated through consultation with Natural England and the RSPB in order to reduce uncertainty by incorporating an extensive contextual dataset (both in terms of temporal and spatial scale) covering Hornsea Three (see Consultation Report Annex 1 - Evidence Plan [APP-035]). It is considered that the approach presented adequately captures the variability in seabird populations that is likely to occur in those months for which only one year of data was collected.</p>

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	<p>Discussions in relation to the baseline characterisation of Hornsea Three have been ongoing throughout the Evidence Plan process. A clarification note Appendix 7 to the Applicant's response to Deadline 1 has been provided to Natural England. This explores the likely variability to be expected in seabird populations at Hornsea Three and seeks to address some of the issues raised by Natural England both as part of their relevant representation and during EWG meetings. This analysis looks at, the likely densities/populations of key species at Hornsea Three that would be required for a significant impact to occur and the application of an alternative hierarchical approach (used to calculate densities and population estimates) as advocated by Natural England as part of EWG meetings. The note concludes that the use of either the original or alternative hierarchical approaches makes no material difference to the conclusions of the assessments presented for Hornsea Three both as part of Volume 2, Chapter 5 Offshore Ornithology of the Environmental Statement [APP-065] and the RIAA [APP-051].</p> <p>The aerial survey methodology, including the proposed survey coverage, was presented to Natural England as part of the second EWG meeting (13/04/2016) of the Evidence Plan process. Natural England stated they were happy with the proposed methodology, although highlighted the risk with collecting less than 2 years of data (Section 4 of the Ornithology EWG meeting minutes 13/04/2016 presented in Appendix D of Consultation Report Annex 1 - Evidence Plan [APP-035]). A survey coverage of 10% is considered sufficient to accurately describe the abundance of seabirds at a project site. Increasing survey coverage would increase the precision of the abundance estimates calculated and would not decrease the uncertainty associated with only having one year of data for relevant months. This level of survey coverage has been accepted at numerous other offshore wind farm projects with no known objections raised by any stakeholder.</p>
<p>5.2.3 Collision Risk Modelling (CRM):</p> <p>The Applicant has used Option 3 of the Extended Band Model (Band 2012) to assess the predicted impacts on gannet, kittiwake, lesser black-backed gull and great black-backed gull from collisions with turbines in the Hornsea Project Three Study Area.</p> <p>The SNCBs have outstanding concerns regarding the Extended Band Model's (Option 3) sensitivity to flight height distribution data and the uncertainty this component introduces to variation in estimates of collision (JNCC et al., 2014). Therefore, Natural England advises that the Basic Band Model Option 2 should be used for the CRM for all species. Natural England also does not agree</p>	<p>The Applicant considers that the use of a 98% avoidance rate is appropriate and is in line with the use of the Extended model at other offshore wind farm projects (e.g. Hornsea Project Two). There is now empirical evidence, collected as part of the Offshore Renewables Joint Industry Programme (ORJIP) (Skov et al. 2018), that suggests the use of a 98% avoidance rate is precautionary.</p> <p>Although collision risk estimates calculated using Option 3 have been presented, these are presented alongside collision risk estimates calculated using Options 1 and 2</p>

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<p>with the way that nocturnal activity factors have been used in the CRM for some species.</p> <p>As this has not been done in the present application, Natural England is unable to provide advice on the current CRM.</p>	<p>in all project alone assessments (for example see Table 5.26 in Volume 2, Chapter 5 Offshore ornithology of the Environmental Statement [APP-065]). The assessments presented for the Project alone consider the collision risk estimates from all of these Options and do not rely solely on the results from Option 3 (for example see paragraph 5.11.2.106 in Volume 2, Chapter 5 Offshore Ornithology of the Environmental Statement [APP-065]).</p> <p>It is not clear why Natural England do not support the use of the Extended model for lesser black-backed gull and great black-backed gull as there is an agreed avoidance rate (see Cook et al. 2014 and JNCC et al. 2014) for these species.</p> <p>If the Basic model is to be used, the Applicant recommends that Option 1 be used, with this Option incorporating site-specific data which more accurately describes the flight height distribution of birds present at Hornsea Three.</p> <p>The nocturnal activity factors used for some species are based on empirical evidence as detailed in Appendix D of Volume 5, Annex 5.3: Collision Risk Modelling [APP-109]. It is widely accepted, including by SNCBs in Scotland, that the percentage rates assigned to the nocturnal activity rates presented in Garthe and Huppopp (2004) by Band (2012) lead to over-estimates of collision risk with the rates proposed by Band (2012) not based on any scientific evidence. The use of percentage rates was also not the intention of Garthe and Huppopp (2004) with these scores not intended to represent quantifiable rates of nocturnal activity rather they were intended to indicate that those bird species that scored higher were more likely to show more nocturnal flight activity than those that scored lower (Furness et al. 2018).</p> <p>A recently published paper (Furness et al., 2018) presents nocturnal activity rates for gannet based on empirical evidence. A similar exercise is also being conducted for kittiwake, with preliminary results presented in the planning application for the Norfolk Vanguard offshore wind farm. The rates presented support the use of lower nocturnal activity rates as applied in the collision risk modelling for Hornsea Three. A clarification note (Appendix 10 to the Applicant's submission to Deadline 1) was provided to Natural England (on 10.10.2018) that presents collision risk modelling using information on species-specific parameters (flight speed, nocturnal activity rate and avoidance rate) that has been published since the submission of the Hornsea Three application. For some</p>

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	<p>species this note identifies considerable reductions in collision risk estimates as a result of using best available evidence for the aforementioned species-specific parameters. In addition, information relating to a number of other species-specific parameters (flight speed and avoidance rate) have recently been published (Skov <i>et al.</i> 2018). The Applicant has investigated the implications for collision risk modelling due to changes in nocturnal activity, flight speed and avoidance rate based on what is now considered to be the best available evidence with the aim to reduce uncertainty. This is presented in the Collision Risk Estimate Refinement clarification note (Appendix 10 to the Applicants response to Deadline I).</p>
<p>5.2.4. Displacement (seasons & summing of seasons): Natural England has the following main points to note: Natural England does not agree with seasonal definitions for several species, in particular gannet and puffin, relevant to the displacement assessment. The SNCB recommended approach to Page 15 of 30 displacement assessment is to use the mean seasonal peak. Natural England disagrees with the mean seasonal peaks used by the Applicant to calculate displacement for gannet and puffin. □ As previously advised in the Natural England's Section 42 response, the Joint SNCB guidance on assessing displacement (MIG-Birds, 2017) recommends that displacement impacts calculated for individual seasons should be summed across seasons to allow assessment of the annual impact on the population of a species. As this has not been done in the present application, Natural England is unable to provide advice on any of the species identified for displacement assessment.</p>	<p>The seasonal definitions used throughout assessments for all species (with the exception of puffin) are consistent with those advised and used by Natural England as part of their assessments produced for Hornsea Project Two (see Natural England's submissions at Deadline 3 and Deadline 5, specifically paragraphs 3.47 to 3.51 for Hornsea Project Two). It is not clear why Natural England's position has changed as no new publically available evidence has been published. It is important to note that the factors that may suggest connectivity between FFC pSPA and Hornsea Three would be more evident at Hornsea Project Two than at Hornsea Three as Hornsea Project Two is located closer to FFC pSPA.</p> <p>The Applicant has based the seasonal definitions for key species at FFC pSPA on survey data (collected to support planning applications for offshore wind farms throughout the English North Sea) and contextual information on the movements of birds. This is presented in RIAA Annex 3: Phenology, connectivity and apportioning for features of FFC pSPA [APP-054] and is considered to better reflect the phenology of birds at Hornsea Three (i.e. where impacts will occur).</p> <p>The Applicant considers that the summing of seasonal displacement impacts represents an overly precautionary approach. However, the data required to calculate a total displacement impact is presented throughout the application to enable Natural England to undertake their own more precautionary assessment, if required.</p>
<p>5.2.5. Accounting for uncertainty and variability: There is uncertainty around the predicted impacts in the assessments presented in the Applicant's Environmental Statement and the Report to Inform Appropriate Assessment (RIAA). Some of this comes from natural variability and uncertainty in the input data (e.g. densities of birds at Hornsea Project Three, flight heights etc.) and some of which is due to imperfect understanding of how</p>	<p>Discussions relating to the way in which uncertainty and variability should be considered as part of collision risk modelling have been undertaken as part of EWG meetings. It was originally proposed that the update to the Band (2012) CRM (Masden, 2015) should be used. However, errors were subsequently discovered with this model. The approach applied at other offshore wind</p>

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<p>systems work (e.g. avoidance rates and collision models, effects of displacement on mortality of birds etc.). In order to be able to make an assessment of the significance of potential impacts on populations it is necessary to understand and, where possible, take account of this uncertainty.</p> <p>Natural England advises that the assessments of displacement and collision mortality should both use the information on uncertainty and variability in the input parameters (e.g. bird densities, flight heights, avoidance rates) to allow consideration of the range of values predicted impacts may fall within, and to allow an assessment of confidence in the conclusions made regarding adverse effects on site integrity and significance of impacts for populations.</p>	<p>farms (using confidence limits associated with input parameters) was therefore applied following the advice of Natural England (see Appendix D, Section D.6, Item 9 in Consultation Report Annex 1 - Evidence Plan [APP-035]).</p> <p>Collision risk estimates were calculated using confidence metrics associated with density data, flight height distribution and avoidance rate are presented in Volume 5, Annex 5.3: Collision Risk Modelling [APP-109]. The uncertainty and variability associated with these collision risk estimates has been taken into account in the assessments presented in both the ES and RIAA (for example see paragraph 5.11.2.107 in Volume 2, Chapter 5 Offshore ornithology of the Environmental Statement [APP-065]). The Applicant has also produced a clarification note (Appendix 10 to the Applicant's response to Deadline 1) which uses recently published evidence in relation to nocturnal activity, flight speed and avoidance rate with the aim to reduce the level of uncertainty associated with collision risk estimates.</p> <p>The use of a mean-peak populations for displacement analysis is considered to take into account the year to year variation in seabird abundance with this approach consistent with that advised by JNCC et al. (2017). It is not considered appropriate to use the confidence limits associated with population estimates to calculated mean-peak populations as such confidence metrics are independent and describe the variability around individual population estimates. Averaging these confidence intervals is therefore not a valid statistical approach and does not describe the variability around the mean-peak population estimate.</p>
<p>5.2.6. Definition of breeding season:</p> <p>Natural England has consistently advised that for species where breeding birds are predicted to be present in the project area, that the breeding season months follow those presented in Furness (2015) under 'breeding season' and not the 'migration-free breeding season', except where colony or site specific information suggests that a different set of months is appropriate for defining colony attendance.</p> <p>Natural England place considerably higher confidence and emphasis on the use of colony specific data to inform colony specific breeding seasons, while Hornsea Project Three focused substantially on using at sea abundance data (from a variety of offshore wind farms in the area) to define seasons.</p> <p>As such, and as previously advised, Natural England do not agree with the seasonal definitions for gannet, kittiwake and puffin.</p>	<p>The key colony of interest for Hornsea Three assessments is FFC pSPA. This colony is located 150 km from Hornsea Three.</p> <p>The Applicant has not used the migration-free breeding seasons as presented in Furness (2015) to define seasonal extents for use in the assessments conducted for Hornsea Three. Instead the Applicant has based the seasonal definitions for key species at FFC pSPA on survey data (collected to support planning applications for offshore wind farms throughout the English North Sea) and contextual information on the movements of birds. This is presented in RIAA Annex 3: Phenology, connectivity and apportioning for features of FFC pSPA [APP-054] and is considered to better reflect the phenology of birds at Hornsea Three (i.e. where impacts will occur).</p>

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	<p>Natural England have previously advised that the seasons presented in Furness (2015) represent the phenology of birds throughout the UK (i.e. from colonies in the south of England to colonies on the Shetland Isles) with timings of birds at more northerly colonies different to those at southerly colonies. The use of these seasons would therefore be contrary to Natural England's request to use colony-specific data and would likely significantly over-estimate any potential impacts at certain colonies.</p> <p>There are no suitable colony-specific seasonal definitions that can be used as part of the assessments for FFC pSPA and the Applicant has contacted the RSPB to confirm this. The RSPB have confirmed that although data has been collected that would allow for the phenology of birds at FFC pSPA to be defined, this has not been undertaken.</p> <p>The seasonal definitions used throughout assessments for all species (with the exception of puffin) are consistent with those advised and used by Natural England as part of their assessments produced for Hornsea Project Two (see Natural England's submissions at Deadline 3 and Deadline 5, specifically paragraphs 3.47 to 3.51 for Hornsea Project Two). No new publicly available evidence has been published, clarity is therefore required from Natural England and justification as to the scientific reasoning as to why their position has now changed.</p>
<p>5.2.7. Assessment of cumulative & in-combination effects: Cumulative and in-combination impacts and the <i>approach</i> to impact assessment are a key area of concern for Natural England. The key concerns are summarised below:</p> <ul style="list-style-type: none"> ▫ Use of Extended Band Model collision figures for gannet and kittiwake for some project figures; ▫ Application of Extended Band Model options to certain projects in the cumulative assessment for lesser black-backed gull and great black-backed gull (e.g. Option 4 applied to Hornsea Project One and Hornsea Project Two; Option 3 for Hornsea Project Three); ▫ Retrospective application of correction factors to existing collision figures for projects as a proxy for lower nocturnal activity levels than used in the original CRM; ▫ Retrospective 'proportional' changes to collision figures for projects based on assumptions that consented turbine configurations represent a lower collision risk than the Rochdale Envelope defined during the consenting process for a project; ▫ Use of MacArthur Green (2017) ratio correction factors to adjust collision figures for projects based on 'as built' versus consented turbine layouts; 	<p>Cumulative and in-combination collision risk totals calculated using the Basic Band model will be submitted at Deadline I alongside consideration of the implications for the assessments conducted for Hornsea Three.</p> <p>An appropriate avoidance rate is available for use with the Extended model for lesser black-backed gull and great black-backed gull and therefore the use of Extended model outputs with this avoidance rate considered to be appropriate.</p> <p>The retrospective application of correction factors has been used to highlight the uncertainty inherent in cumulative and in-combination totals. The approach taken highlights considerable over-estimation in cumulative and in-combination totals. These corrections have been used to qualitatively inform the overall conclusions presented in Volume 2, Chapter 5 Offshore Ornithology of the Environmental Statement [APP-065] and Report to Inform Appropriate Assessment [APP-051]. The Applicant would welcome more clarity on the position of Natural England in relation to the qualitative use of these correction factors within the conclusions drawn in</p>

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<p>¶ Exclusion of impacts from Tier 3 projects in the CEA (Tier 3 includes Norfolk Vanguard and Thanet Extension);</p> <p>¶ Conducting qualitative rather than quantitative in-combination displacement assessments for certain species</p> <p>¶ The proportions of birds that have been apportioned to Flamborough and Filey Coast (FFC) pSPA during the breeding season from the different North Sea projects;</p> <p>¶ Cumulative assessment of impacts under Environmental Impact Assessment (EIA) does not incorporate impacts across the whole annual cycle for a species at an appropriate scale.</p> <p>¶ The assessment of EIA impacts on a season by season basis, at varying population scales, and therefore with varying project impacts included. Natural England advise that assessment of impacts should be undertaken at an appropriate scale (e.g. North Sea) across the whole year for each relevant species.</p>	<p>the Hornsea Three EIA and RIAA. A clarification note that explains and explores the uncertainty associated with the difference between assessed and as-built turbine scenarios has been provided to Natural England and can be found at Appendix 7 to the Applicant's response to Deadline 1.</p> <p>At the time of submission, final collision risk estimates for Norfolk Vanguard and Thanet Extension were unavailable. Collision risk estimates were available as part of PEI documentation however, these estimates are likely to have been subject to considerable change and therefore were not included. These have now been updated, please see the Applicant's Response to WQ1.15.3 as submitted for Deadline 1.</p> <p>The apportioning values used for relevant species/projects are consistent with those applied by Natural England as part of their assessments undertaken for Hornsea Project Two (see Natural England's submissions at Deadline 3 for Hornsea Project Two). Where relevant, apportioning values have been updated to reflect the final position at a project (e.g. the Dogger Bank projects) or the availability of additional data or an updated approach (e.g. Hornsea Project One)</p> <p>It is not considered appropriate to sum seasonal impacts in the EIA as this will likely represent an over-estimate of the annual impact. Seasonal estimates are however, presented which allow Natural England to undertake an annual assessment, if required.</p>
<p>5.2.8. Population modelling approaches and population impacts:</p> <p>The Applicant has considered the significance of the predicted in-combination mortality impacts on FFC pSPA by reference to population modelling work undertaken by MacArthur Green (2015b) for Hornsea Project Two. The Applicant has used outputs from these population viability analysis (PVA) models for gannet, kittiwake and guillemot populations. Natural England does not consider that the PVA models produced for Hornsea Project Two are suitable to inform the assessments for Hornsea Project Three.</p>	<p>The Applicant would welcome further clarity from Natural England on why the population models used by the Secretary of State to support the awarding of consent at Hornsea Project Two are 'not suitable' for use at Hornsea Three. The population models produced for Hornsea Project Two use a stochastic approach and use demographic rates and population sizes that represent the most recent estimates of these parameters.</p> <p>Natural England have requested that population models be conducted using a matched runs approach (not previously used at Hornsea Project Two). However, population models that do not use this approach are not unsuitable with the difference between a matched runs approach and unmatched runs approach negligible (especially in relation to median estimates and for use in assessments) when enough model runs are undertaken. The Applicant has explained this to Natural England as part of EWG meetings (see the Ornithology EWG</p>

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	<p>meeting minutes 27.02.2018 presented in Appendix D of Consultation Report Annex 1 - Evidence Plan [APP-035]).</p> <p>A clarification note detailing PVA modelling incorporating a matched runs approach (Appendix 9 to the Applicant's response to Deadline 1) has been provided to Natural England with the respective outputs examined to identify any material differences between outputs from matched and non-matched approaches. As assumed, this model made predictions that are effectively the same as those predicted using the extrapolations of the Hornsea Two model and made no difference to the conclusions reached in the RIAA [APP-051].</p> <p>The Applicant awaits Natural England's position on these models.</p>
<p>5.2.9. HRA apportioning: Natural England has outstanding concerns regarding the approach Hornsea Project Three has taken to apportioning, and we do not agree with the figures presented for gannet, kittiwake and puffin. Consequently we are unable to agree with the conclusions of the HRA for FFC pSPA.</p>	<p>The approach to apportioning for all species is consistent with that agreed with Natural England during the examination of Hornsea Project Two (see Natural England's submission at Deadline 5, specifically paragraphs 3.52 to 3.58 for Hornsea Project Two). The Applicant requests further clarification and scientific justification from Natural England as to why the desired approach to apportioning now differs to that approved for Hornsea Two.</p>
<p>5.2.10. Age class data: Natural England previously requested (NE Discretionary Advice Service (DAS) dated December, 2017) that Hornsea Project Three provides age class data month by month for the full breeding seasons as defined by Natural England due to a lack of agreement. We also requested that proportions of unaged birds are specifically presented (month by month) for each relevant data set for both boat based and (where appropriate) aerial survey data. This information is required for Natural England to establish suitable apportioning figures. To date these data have not been provided.</p>	<p>The Applicant has provided Natural England with a clarification note detailing age class data (Appendix 3 to Deadline I submission). The proportion of unaged birds for relevant species is included in Annex 3: Phenology, connectivity and apportioning for features of FFC pSPA [APP-054] (see for example paragraph 1.4.2.8). The apportioning approach has considered numerous apportioning values with the final values used considered to be suitably precautionary based on a considerable amount of scientific evidence.</p>
<p>5.2.11. HRA Screening concerns and LSE Conclusions: Natural England commented on the Applicant's HRA screening methodology on a number of occasions (NE DAS dated February, 2017, and Section 42 response). The Likely Significant Effect (LSE) test is a 'coarse filter', identifying potential effect pathways that warrant further consideration through Appropriate Assessment. Generally, a feature should not be screened out unless it can be clearly demonstrated that there is no impact alone or in-combination. The structure of the HRA screening document means that those plans or projects that could contribute to in-combination effects are only considered after the test of LSE has been applied. This potentially misses interactions, that whilst not LSE on their own,</p>	<p>The screening approach undertaken by the Applicant is considered to have identified all of the relevant sites and features for consideration in the RIAA. The screening process has considered the potential for in-combination effects on SPAs distant to Hornsea Three and, for the majority of SPAs, a conclusion of no LSE was reached due to a lack of direct or indirect connectivity with Hornsea Three or due to any impact from Hornsea Three being of a negligible magnitude (see the HRA Screening Matrices submitted as part of Appendix 3: Response to The Planning Inspectorate's Section 51 Advice (08th June 2018) and RIAA Annex 2 - Additional SPA Screening (APP_053)).</p>

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<p>might be an LSE in-combination when considered in tandem with other developments.</p> <p>5.2.12 HRA conclusions:</p> <p>The issues and uncertainties raised above mean that, on the basis of the information presented by the Applicant, Natural England cannot conclude beyond reasonable scientific doubt the absence of an adverse effect on the integrity on the SPAs and pSPAs assessed by the Applicant. Further, Natural England considers there are additional SPAs and associated features that are missing from the HRA.</p>	
<p>5.3. Marine processes</p> <p>The table below provides a summary of Natural England's key concerns.</p> <p>5.3.1 Natural England notes that the Applicant considers the impacts of sandwave clearance during construction to be of minor significance in Environmental Impact Assessment (EIA) terms on the basis that they are of local spatial extent, of short to medium term duration and high reversibility.</p> <p>However, it is our view that limited empirical evidence is presented to support the assumptions made in relation to the scale of impacts including duration and recoverability and therefore we have low confidence in conclusions drawn.</p> <p>The conclusions appear to be based on a scenario whereby dredge disposal takes place within close proximity and is retained in the sediment system, but there is no modelling provided to demonstrate this. There is also reference to the fact that as worst case it could take 'months to years' for a new equilibrium to be established.</p> <p>There is also reference to a worst case scenario (WCS) whereby sediment is disposed further way and therefore 'lost from the system'. Again limited data is provided in relation to this scenario and the justification is based on the scale of loss in relation to the North Norfolk Sandbanks and Saturn Reef (NNSR) SAC.</p>	<p>The Applicant acknowledges the comments made regarding the impacts of sandwave clearance during construction. The Applicant has provided Natural England with a Clarification Note (Appendix 11: to Deadline I submission 'Sandwave Clearance Clarification Note') to further support the conclusions provided in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061] regarding this point and to address the points raised. More specifically, the 'Sandwave Clearance Clarification note' (Appendix 11 to Deadline I submission) expands on the empirical evidence from the field referred to in the Environmental Statement.</p> <p>The Applicant is also able to provide responses below and in Row 2, to the points raised by Natural England. The assessment presented in Volume 2, Chapter 1: Marine Processes of the Environmental Statement (APP_061) is suitably supported by sediment dynamics theory, geomorphological processes theory and a range of empirical evidence from the field. The conceptual approach taken is considered to be robust.</p>
<p>5.3.1 (cont.) It should be noted that the removal of approximately 1,804,434 tonnes of material thought the project area is significantly greater than the average annual aggregates licence with allows removal of around 250,000 to 400,000 tonnes, of which the vast majority occurs outside of any protected sites and not directly on Annex I features. Therefore, the sandwave clearance proposals alone are on a greater scale and extent than other marine industry activities</p> <p>We acknowledge the sandwave clearance data provided by the Applicant from Race Bank offshore wind farm indicated a partial recovery after a 4 month period, but it is unclear from this study if a full recovery will occur. Furthermore, no indication is provided as to the scale over which sandwave clearance occurred at Race Bank so Natural England are unable to draw a direct comparison.</p> <p>Natural England considers it important to adequately quantify and assess the associated impacts. However, based on the evidence presented the conclusions are subjective and it is Natural England's view that with such a large amount of material being removed from a</p>	<p>An assessment is provided of a scenario whereby dredged sediment is disposed of away from the location of sandwave dredging (paragraph 1.11.5.11 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]). This assessment draws on consideration of the very large scale and dynamically resilient nature of the sandbank and sandwave system alongside the relatively very small scale of the localised dredging activities.</p> <p>The partial recovery of sandwaves observed at Race Bank is consistent with the basis and assumptions of the assessment made in Volume 2, Chapter 1: Marine Processes of the Environmental Statement. Partial recovery is observed to have occurred in the predicted manner, in a comparable system, within a timescale shorter than that predicted for more complete recovery. Having confirmed that the relevant processes are occurring, there is no reason to assume that recovery will not continue until a new equilibrium state is achieved at</p>

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<p>protected site, there needs to be higher confidence in the potential impact before significant impacts can be ruled out.</p>	<p>these locations. These Race Bank monitoring data are investigated in further detail within the 'Sandwave Clearance Clarification Note' (Appendix 11 to Deadline I submission) and include a comparison of the sandbank systems within the Race Bank and Hornsea Three project areas in order to demonstrate that the Race Bank monitoring evidence is appropriate to inform the Hornsea Three impact assessment.</p> <p>The remaining uncertainty in this assessment is considered to be minor and mainly relates to the exact nature and timescale of site specific local sandwave recovery. This is controlled by the very local detail of sediment transport (scale of metres) over the timescales for recovery (months to years), which is difficult to predict accurately.</p>
<p>5.3.2 The draft DML indicates that up to 2.4 km² of cable protection for the array and another 3 km² for the cables, meaning that a potential 5.4km² area could be covered in rock by the project. For context, the width of a motorway is on average 55 m, so 3 km² will be the same as a 55 km stretch. It is therefore essential that potential impacts are fully understood in order to determine the potential significance in EIA terms.</p>	<p>As per Schedule 12, Part 3, Paragraph 5 (4 and 5) of the draft DCO [APP-027], the maximum footprint of cable protection (excluding cable crossings) shall not exceed 1,540,700 m² and the maximum footprint of cable protection associated with cable crossings shall not exceed 747,500 m². This is in line with the maximum design scenario considered in Table 1.11 of Volume 2, Chapter 1: Marine Processes of the environmental statement [APP-061] and Table 2.14 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. On the basis of the Applicant's experience at other offshore wind farms with cable protection it is more likely to be present in localised, discrete sections of the Hornsea Three array area and offshore cable corridor, as assessed within the relevant topic chapters of the Environmental Statement. (e.g. paragraph 2.11.2.12 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062].</p>
<p>5.3.2 (cont.) The array/offshore cable corridor area is characterised by sandwaves and mega ripples. As a result of this highly mobile environment and these large bedform features it is essential that export and array cables will be positioned correctly as to avoid excessive scour. Any rock protection should be considered a last resort and needs to consider the level of sediment transport in the area, and the orientation of the rock protection compared to the local sediment transport direction/ ripple field. Natural England remains concerned about the impacts from cable protection on sediment transport and coastal processes in relation to the north Norfolk coast where the proposed cable route runs parallel to the coast.</p>	<p>The Applicant is in agreement with Natural England that the preference is always to bury cables as this offers the best protection for cables. As was presented to the Marine Processes, Benthic Ecology and Fish and Shellfish Ecology EWG on 23 February 2017, Hornsea Three will endeavour to maximise the chance of burial success through a number of measures including: i) establishing a sound understanding of the site through geophysical and geotechnical investigations; ii) establishing the risk to the cable through the Cable Burial Risk Assessment (CBRA); iii) preparing the site (i.e. clearing boulders and sandwaves); and iv) using the right tool for the soil type. The inclusion of cable protection requirements within the draft DCO [APP-027] for Hornsea Three is necessary to cover those areas where burial may fail. The exact specification of cable protection will be provided to Natural England, through the Cable Specification and Installation Plan (as committed to in Schedule 11, Part 2, Condition 11(h) and Schedule 12,</p>

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	<p>Part 2, Condition 12(h) of the draft DCO [APP-027]) and this will give consideration to the presence of mobile sediments and potential for scour.</p> <p>The Applicant has provided Natural England with a 'Cable Protection Clarification Note' (Appendix 6 to Deadline I submission) to further validate the conclusions provided in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061] regarding the effect of cable protection on marine processes. This clarification note focusses on available supporting evidence from field and laboratory studies. The evidence presented in this note expands on the evidence from the field referred to in the Environmental Statement and is consistent with and confirms the basis, assumptions and conclusions of the assessment provided in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. In line with the Hornsea Project Three - Natural England High Level Roadmap, this was provided to Natural England by 9 October 2018.</p> <p>The Applicant also notes that additional commitments are being made regarding monitoring of cable protection measures within designated sites, including bathymetric surveys, which would be appropriate to demonstrate any accumulation of sediment on cable protection (should this occur).</p>
<p>5.3.2 In Natural England's experience, standard cable burial techniques such as using a plough have resulted in trenches being formed that are taking longer than anticipated to infill. The probably of this occurring should be considered further as well as the recoverability of both the sediment levels and associated communities. This is especially true if a mass flow excavator is used as currently there is not empirical data presented to support its' use in the Greater Wash and southern North Sea.</p>	<p>Trenching using ploughs or mass flow excavators will naturally retain nearby any sediment volume displaced from the trench. Based on the characterisation of the baseline environment in the Hornsea Three array area, persistence of trench depressions was not considered to be a likely potential impact due to the general natural mobility of the seabed sediments. There is considered to be a high likelihood of recoverability of seabed type and levels by natural processes.</p> <p>Paragraphs 2.11.1.12, 2.11.1.16 and 2.11.1.32 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] consider the implications of seabed depressions (e.g. from jack up footprints and/or cable trenches) on benthic ecology receptors, including infaunal and epifaunal community composition using relevant monitoring data from other offshore wind farms. 'The Wash and North Norfolk Coast SAC Clarification Note' (Appendix 5 to Deadline I submission) provides additional evidence on the recovery of the seabed from cable installation and other offshore operations, in the nearshore part of the Hornsea Three offshore cable corridor, which validates the assessments presented within the Environmental Statement.</p>
<p>5.3.3 (cont.) There is uncertainty in relation to the frequency at which the maximum reduction in magnitude of the wave height by 28% will occur, Natural England does not believe that this level of reduction is</p>	<p>Estimates of wave height reduction have been conservatively modelled with respect to the maximum design scenario for Hornsea Three as discussed in</p>

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<p>insignificant and questions what the potential associated impacts are likely to be.</p>	<p>paragraph 1.11.8.20 et seq. of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. Cumulative impact scenarios also include the consented indicative layout scenario with the maximum number of gravity base foundations for Hornsea Project Two, and the final approved layout of monopiles for Hornsea Project One. This scenario is considered to be conservative, as it assumes gravity base foundations (i.e. the foundations with the effect on wave height) will be installed throughout Hornsea Project Two and Hornsea Three. Other realistically possible development scenarios would produce a smaller magnitude and extent of potential effect than the maximum design scenario.</p> <p>A maximum local reduction in wave height of 28% (described in paragraph 1.13.6.17 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061], corresponds to the cumulative effect of Hornsea Three with Hornsea Project One and Hornsea Project Two, with waves from the east (through the long axis of all three projects). As shown in Table 1.8 and Figure 1.5, Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061], winds (driving waves) from the east occur only relatively infrequently (approximately 5% of the time).</p> <p>As shown in Figure 1.21, Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061], the area of maximum effect on wave height is relatively small and is associated with and confined to the downwind edge of Hornsea Project Two. For other wave directions and more generally in relation to the effect of Hornsea Three, maximum local reductions are more typically 10 to 15% in localised areas offshore, within and adjacent to Hornsea Three and Hornsea Project Two array areas. Wave height effects recover rapidly with distance in all cases and effects at and near to adjacent coastlines are less than 5%, which is not practically measurable and is within the range of natural variability. Continuous changes in the direction of waves mean that the greater reported magnitudes of effect will only occur intermittently and infrequently at any particular location. The areas associated with the highest levels of potential wave height reduction are relatively deep and sediment transport processes are normally dominated by tidal processes; therefore, intermittent and infrequent changes to the surface wave climate will have limited potential to affect the sediment transport regime. Overall, the potential associated impacts on sediment transport both offshore and at adjacent coastlines are assessed to be of similarly small magnitude (i.e. not measurable and/or within the range of natural variability).</p>
<p>5.3.4 The proposed amount of sandwave clearance both within the NNSSR SAC and in the offshore export cable corridor overall is of</p>	<p>The potential physical impacts on sandwaves and their subsequent potential for recovery are assessed in</p>

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<p>great concern to Natural England and JNCC. Although the assessment states that < 0.2 % of the SAC will be impacted, there is no real indication of what these impacts will be, particularly on a biological level (no linkages to the benthic chapter) and how any impacts may propagate across the site.</p>	<p>paragraph 1.11.5.3 et seq. of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. No propagation of impacts over distances beyond the local scale of the clearance (order of tens to one hundred metres) was expected.</p> <p>As noted in response to NE RR 5.3.1 (see row 1), the Applicant acknowledges the concerns raised regarding the impacts of sandwave clearance during construction. A 'Sandwave Clearance Clarification Note' (Appendix 11 to Deadline I submission) has been provided on this subject which presents (i) further detail regarding the empirical evidence from laboratory experiments and field observations referred to in Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061] and (ii) explanation of the methodology used to calculate the volumes of sandwave material to be cleared and deposited along the Hornsea Three offshore cable corridor.</p> <p>From a biological perspective, the potential impact of sandwave levelling on the benthic ecology of the North Norfolk Sandbanks and Saturn Reef SAC is considered in paragraph 2.11.1.39 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], with specific consideration of the sensitivity of benthic receptors (i.e. benthic infaunal and epifaunal species and communities) at paragraph 2.11.1.60 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062].</p>
<p>5.3.4 (cont.) Natural England advises if any sandwave clearance does take place, the material that is to be disposed of should remain within the overall sandbank system, and deposited upstream of the tidal currents and be 'intelligently' placed so that it quickly infills the excavated depressions. Disposal should also avoid sensitive habitats such as Sabellaria spinulosa reef.</p>	<p>The Applicant acknowledges the need to ensure sandwave material is deposited appropriately within the North Norfolk Sandbanks and Saturn Reef SAC to ensure no direct impacts on Sabellaria spinulosa reef habitats identified following pre-construction surveys of the Hornsea Three offshore cable corridor (as outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]). The Cable Specification and Installation Plan (as committed to in Schedule 11, Part 2, Condition 11(h) and Schedule 12, Part 2, Condition 12(h) of the draft DCO) [APP-027] will include full details of sandwave clearance activities within the Hornsea Three boundary and details of disposal locations, avoiding Annex I reef habitats within the North Norfolk Sandbanks and Saturn Reef SAC.</p>
<p>5.3.4 (cont.) JNCC's recent conservation advice package for the SAC highlights a restore objective for the Annex 1 sandbank feature that the site is designated for (JNCC, 2017). The Applicant must therefore demonstrate that their proposals will not contribute to the further deterioration of the features of the site, through the provision of a robust project plan and by defining clear project parameters.</p>	<p>The various assessments of the potential impacts of sandwave levelling consistently conclude that impacts will be localised, temporary, will recover in time, not significant in EIA terms and will not lead to an adverse effect on the integrity of the features of the SAC.</p> <p>In relation to the objective to restore Annex I sandbank features, the measures noted above and anticipated recovery of habitat following sandwave clearance means</p>

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	<p>that wider recovery of this habitat within North Norfolk Sandbanks and Saturn Reef SAC is not expected to be adversely affected. As outlined above, the Cable Specification and Installation Plan will include full details of sandwave clearance activities within the North Norfolk Sandbanks and Saturn Reef SAC, including the selection of disposal locations to avoid Annex I reef habitats within the North Norfolk Sandbanks and Saturn Reef SAC.</p>
<p>5.3.5 Natural England notes the potential for sandwave clearance within the Wash and North Norfolk Coast (W&NNC) SAC spanning an area of approximately 9000 m², and dredge disposal of approximately 265,474 m² of material. Natural England does not consider this to be insignificant.</p> <p>As there are no baseline data for this part of the cable route we are unable to advise on the nature and scale of any associated impacts or potential mitigation that may be required.</p>	<p>The calculation of these figures is considered to be precautionary with conservatism built-in as a result of the use of desktop data sources to supplement site specific survey data when calculating the sandwave clearance volumes. Clarification of the methodology used to calculate the amount of sandwave clearance volumes was provided to Natural England via a 'Sandwave Clearance Clarification Note' (Appendix 11 to Deadline I submission) has been provided to Natural England by 9 October 2018.</p> <p>Figure 1.13 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-062] shows the bathymetry data along the Hornsea Three offshore cable corridor. This includes site specific bathymetry data for the entire Hornsea Three offshore cable corridor, with the exception of the two offshore cable corridor re-routes, where site specific bathymetry data were not collected prior to the submission of the DCO application. In these areas, desk based data sources were used and these are set out in Table 1.5 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. This includes bathymetry data from UKHO (available through the INSPIRE portal), as well as surveys undertaken to inform seabed characteristics within the North Norfolk Sandbanks and Saturn Reef SAC and Cromer Shoal Chalk Beds MCZ. These desk based sources provide an adequate baseline characterisation for the purposes of informing a robust EIA. The response to NE RR 5.4.6 (see row 19), provides justification of the benthic ecology baseline characterisation.</p> <p>The potential physical impacts on sandwaves and their subsequent potential for recovery are assessed in paragraph 1.11.5.3 onwards of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061].</p> <p>As noted in response to NE RR 5.3.1 (see row 1), a 'Sandwave Clearance Clarification Note' (Appendix 9 to Deadline I submission) has been provided on the subject of sandwave clearance to expand on the empirical evidence from the field referred to in Volume 2, Chapter 1: Marine Processes of the Environmental Statement. The further evaluation of this empirical evidence is consistent with and confirms the basis, assumptions and conclusions of the assessment provided in the</p>

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	<p>Environmental Statement.</p> <p>The nature of the assessment is robust and broadly applicable over a range of environmental settings and is therefore considered also appropriate for the Wash and North Norfolk Coast SAC.</p>
<p>5.3.6 It is indicated that up to 10% of the cable route within designated sites may require some form of cable protection as a WCS. As indicated above, it is unclear how this figure has been derived, and as such it is unclear if this in-fact represents the worst case in terms of the potential amount of protection required. In order for Natural England to advise on the potential impacts of cable protection in designated sites in the context of marine processes we would require further information on the potential locations of cable protection and the local seabed and sea state conditions. Related to potential changes to marine processes is cumulative impact that this may have on benthic habitats and communities</p> <p>Consequently there is insufficient information to rule out adverse effect on integrity at this time.</p>	<p>The assumption that 10% of total cable length within designated sites will require protection is considered to be conservative and is based on the Applicant's considerable experience from a number of projects, including those within The Wash and other parts of the UK continental shelf. As discussed with the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG on 23 February 2018, the preference is always to bury cables (discussed further in response to NE RR 5.3.2 in row 4). Where cable burial is unsuccessful, other attempts to ensure burial under sediments will be employed prior to deployment of cable protection, which is only used as a last resort. As such, it is not possible to provide detailed information on the precise locations of cable protection within designated sites at this time. As outlined in response to NE RR 5.3.2 (see row 4), the Cable Specification and Installation Plan will provide the exact specification and locations of cable protection and this plan will be provided to the MMO for approval in consultation with Natural England.</p> <p>The effect of the presence of cable protection measures on marine processes, including sediment transport processes is considered in paragraph 1.11.8.52 et seq. of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. This considers a maximum design scenario for both the volume and footprint of cable protection and the elevation and potential for blockage of sediment transport processes, for individual sections of cable protection and for a number of parallel sections of cable protection. Based on this maximum design scenario, no significant effects on sediment transport processes were predicted to occur.</p> <p>The Applicant has provided a Cable Protection Clarification Note (Appendix 6 to Deadline I submission) to Natural England, providing further clarification of the evidence available for the effects of cable protection on sediment transport processes and clarification of the assumption that a maximum of 10% of the offshore export cables may require protection.</p>
<p>5.4. Benthic ecology</p> <p>The table below provides a summary of Natural England's key concerns.</p>	<p>The protected features of the North Norfolk Sandbanks and Saturn Reef SAC are the Annex I habitats Sandbanks which are slightly covered by sea water at all time and Reefs. These are fully considered within Section 5 of the Report to Inform Appropriate Assessment (RIAA; APP-051); with consideration of attributes and targets of each Annex I habitat in Appendix A to that document)</p>

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<p>5.4.1 We do not believe that the Applicant has either provided enough evidence for, or assessment of, impact to protected features or site integrity for the NNSSR SAC. As such, we cannot agree that the project is unlikely to have any significant effect on features or site.</p>	<p>and Section 2.11 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062].</p> <p>The impact assessment presented in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] has considered all of the designated benthic features of the North Norfolk Sandbanks and Saturn Reef SAC. The risk posed by the construction of Hornsea Three, to the restoration objective for Annex I <i>S. spinulosa</i> reef is considered to be low. This is on the basis that no Annex I reef was recorded within the part of the Hornsea Three offshore cable corridor that coincides with the North Norfolk Sandbanks and Saturn Reef SAC during the baseline characterisation surveys and any residual risks to reef which may develop prior to construction will be controlled via the mitigation measures adopted as part of the project (see Table 2.18 in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement). Specifically, these include a pre-construction survey to be undertaken to provide a detailed assessment of <i>S. spinulosa</i> along the export cable route which will enable appropriate mitigation measures to be designed and discussed with the statutory consultees to avoid direct impacts to <i>S. spinulosa</i> reef where possible. Indirect impacts to Annex I reef features of the North Norfolk Sandbanks and Saturn Reef SAC, from increased suspended sediment concentrations and sediment deposition, have also been fully assessed in paragraph 2.11.1.117 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and are not predicted to be significant.</p> <p>With regard to the Annex I sandbank features of the North Norfolk Sandbanks and Saturn Reef SAC, the assessment of effects associated with temporary habitat loss/disturbance are outlined in paragraph 2.11.1.39 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. Furthermore, impacts to sandbank systems from sandwave clearance activities are fully assessed in paragraph 1.11.5.3 <i>et seq.</i> of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061] which concludes that the sandwave clearance works are not predicted to affect the overall form and function of the sandwave system and that impacts would be temporary in the short to medium term with recovery of the seabed to a new equilibrium state within months to years (see response to NE RR 5.3.1 in row 2 for further discussion of this). Paragraph 1.11.8.52 <i>et seq.</i> of Volume 2, Chapter 1: Marine Processes of the Environmental Statement also considers the potential for cable protection to cause a blockage of sediment transport and, in summary, any impacts on sandbanks arising from changes to the sediment transport regime are predicted to be temporary</p>

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	and of very limited local spatial extent (see response to NE RR 5.3.2 in row 4 and NE RR 5.3.4 in row 9 for further discussion of this).
<p>5.4.1 (cont.) JNCC's latest view on condition is that the sandbank and reefs features are in unfavourable condition and should be restored to favourable condition. Restoration of the features require an overall reduction, or removal, of pressures associated with human activities that cause impacts to biological and physical feature characteristics. As such, any human activities which causes pressures resulting in changes to these may present a risk to the site's restoration.</p> <p>We note that there is no expectation that the Applicant should demonstrate recovery of the site. Recovery is an objective for all sectors placing pressure on the site. We do, however, expect the Applicant to demonstrate the risk levels that they believe their proposed operations will present to the restoration of the extent and distribution of the sandbank and reef features.</p>	<p>In relation to the restore objective for Annex I sandbank features, the measures noted above in row 11, and the anticipated recovery of habitat following sandwave clearance means that wider recovery of this habitat within the North Norfolk Sandbanks and Saturn Reef SAC is not expected to be adversely affected. With regard to Annex I reef habitat within the SAC, the planned pre-construction surveys will allow direct impacts to be minimised as noted above. On this basis, the risk posed by Hornsea Three, to the restoration objective for Annex I sandbanks is considered to be low.</p>
<p>5.4.2 Based on the information presented on the proposals, the SNCBs (Natural England & JNCC) cannot currently provide an evidence-based opinion on the scale of the potential impacts to the Annex I Sandbanks feature of the NNSSR SAC.</p> <p>We cannot currently exclude adverse effect on integrity.</p>	<p>See rows 12 and 14 for responses to NE RR 5.4.1.</p>
<p>5.4.3 Based on the information presented on the proposals and flawed methods used for assessment, the SNCBs cannot currently provide an evidence-based opinion on the scale of the potential impacts to the Annex I Sabellaria spinulosa reef feature of the NNSSR SAC.</p> <p>It is our view that the impacts to Annex I Reef have been potentially underestimated and therefore the proposed mitigation measures to avoid reef are not fit for purpose. Therefore, we cannot exclude adverse effect on integrity.</p> <p>We strongly suggest re-analysis using the approach that all other industries take when operating in areas of offshore Sabellaria reef, and that is the use of the JNCC reef layer with 500m buffers added to allow for change in reef extent and distribution.</p> <p>JNCC has continued to update their Annex I Reef layer, and the Applicant should be aware that one further Sabellaria data point and further area to be managed as reef has been added within the cable corridor since we last provided them with the data layer. This can be made available to the Applicant on request.</p>	<p>Annex I reef features were not recorded within the Hornsea Three offshore cable corridor during the Environmental Impact Assessment baseline surveys, the scope of which were agreed with the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG on 1 February 2017. It was therefore assumed that the methodology for characterising the baseline was not flawed and that the evidence resulting from the baseline surveys was adequate for the purposes of the EIA and RIAA. However, as per best practice and in response to a request by Natural England, an assessment of an impact occurring to potential future Annex I reef (should this develop prior to construction) was undertaken as presented in paragraph 2.11.1.43 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]. This was based upon the best available data at the time with assumptions and limitations clearly stated.</p> <p>The purpose of this exercise was to provide a high-level risk assessment, as advised by Natural England in the Marine Processes, Benthic Ecology and Fish and Shellfish Ecology EWG meeting on 23 February 2018, in order to future proof the assessment to cover the possibility of <i>S. spinulosa</i> reef developing in the intervening time between the Hornsea Three characterisation and the pre-construction Annex I reef surveys.</p>

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	<p>The exercise also demonstrates that the Hornsea Three offshore cable corridor is of sufficient width to allow for micrositing around potential Annex I reef features which may develop prior to construction. The impact assessment (Table 2.21 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062]) outlines a number of scenarios where by zero to six cables are installed through Annex I reef habitats mapped using the core reef approach (as shown in Figure 2.9 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement). In the case of six cables being installed through the reef habitat, this is highly unlikely to happen as the Applicant's first position is to avoid direct impacts on these Annex I habitats, wherever possible.</p> <p>Residual risks to Annex I reef features of the North Norfolk Sandbanks and Saturn Reef SAC, should these develop within the Hornsea Three offshore cable corridor prior to construction, will be controlled via the designed in mitigation measures adopted as part of Hornsea Three as outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. As per Schedule 12, Part 2, Paragraph 16 (2)(ii) of the draft DCO [APP-027], the Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits at the time of construction (i.e. rather than based on where reef has been historically recorded). Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible, including from sandwave clearance disposal activities. In addition, the Applicant is willing to commit to post construction monitoring of Annex I reef features in proximity to Hornsea Three construction activities; these commitments will be detailed in an updated In Principle Monitoring Plan.</p> <p>The Applicant has requested the latest reef layer from JNCC on a number of occasions but has not yet received a response.</p>
<p>5.4.4 It is Natural England's view that the core reef approach used to assess impacts on Annex I Reef within NNSSR SAC does not follow Natural England's guidance and therefore is not fit for purpose.</p>	<p>As outlined in paragraph 2.11.1.53 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062), the limited number of datasets available for the area of the North Norfolk Sandbanks and Saturn Reef SAC coinciding with the Hornsea Three offshore cable corridor is a key limitation associated with the application of the core reef approach to the Hornsea Three assessment. As per best practice, the assessment of an impact occurring to potential future Annex I reef as presented in paragraph 2.11.1.43 <i>et seq.</i> of Volume 2, Chapter 2: Benthic</p>

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	<p>Ecology of the Environmental Statement, was based upon the best available data at the time of writing with assumptions and limitations clearly stated.</p> <p>As discussed in paragraph 2.7.1.13 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement, Annex I <i>S. spinulosa</i> reef was not recorded within the Hornsea Three offshore cable corridor during the site-specific surveys. The purpose of this exercise, therefore, was to provide a high-level risk assessment, as advised by Natural England in the Marine Processes, Benthic Ecology and Fish and Shellfish Ecology EWG meeting on 23 February 2018, in order to future proof the assessment to cover the possibility of <i>S. spinulosa</i> reef developing in the intervening time between the Hornsea Three characterisation and the pre-construction Annex I reef surveys. As outlined above in response to NE RR 5.4.3 (see row 15), the exercise also demonstrates that the Hornsea Three offshore cable corridor is of sufficient width to allow for micrositing around potential Annex I reef features which may develop prior to construction.</p> <p>It should also be noted that the Applicant has made a number of commitments to control the residual risk to any Annex I reef habitats which develop prior to construction, these are outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. The Applicant has committed to undertake a pre-construction survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits (as per Schedule 12, Part 2, Paragraph 16 (2)(ii) of the draft DCO) [APP-027]. Should such reef features be identified during pre-construction surveys of the Hornsea Three offshore cable corridor, appropriate measures will be discussed with statutory consultees to avoid direct impacts to these features, where possible.</p>
<p>5.4.5 Although it is acknowledged at early stages of route refinement that Hornsea Project Three aimed to avoid impacts on the W&NNC SAC, Natural England questions why W&NNC SAC is not mentioned any further in the 'refinements' sections, even though the Preliminary Environmental Information report (PEIr) export cable route version and the boundary had overlap with the site.</p>	<p>As discussed in paragraph 2.6.1.4 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP_062), after the publication of the PEIR, updates in the form of re-routes were made to the Hornsea Three offshore cable corridor. In the PEIR, approximately seven km of the Hornsea Three offshore cable corridor (42 km of export cable associated with up to six cables) was routed through The Wash and North Norfolk Coast SAC and 13.9 km of the Hornsea Three offshore cable corridor (83.4 km of export cable associated with up to six cables) was routed through the Cromer Shoal Chalk Beds MCZ.</p> <p>The feedback received from Natural England and The Wildlife Trust (TWT) during Section 42 statutory consultation at PEIR outlined significant concerns with regards to the Cromer Shoal Chalk Beds MCZ. In their response, Natural England stated that, based on the</p>

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	<p>information provided, the Hornsea Three export cable installation would have a significant impact on the interest features of the site as a result of the likely direct loss of habitat and loss in the quality of the surrounding habitat, which would hinder the conservation objectives for the site. Natural England's Section 42 response also advised that, depending on the interest features of the designated site it may be preferable in some instances for the cable route to go through one site over another. Natural England suggested that the marine interest features of The Wash and North Norfolk Coast SAC near to Weybourne are less sensitive than those within the Cromer Shoal Chalk Beds MCZ and, therefore, further consideration should be given to the cable route in relation to minimising environmental impacts.</p> <p>Following the feedback from Natural England and TWT, a re-route of the Hornsea Three offshore cable corridor in the nearshore area was proposed which substantially reduced the length of offshore cables within the Cromer Shoal Chalk Beds MCZ. The proposed nearshore re-route reduced the length of the offshore cable corridor running through the Cromer Shoal Chalk Beds MCZ to one km (i.e. 6 km of export cables from up to six cables). The knock-on effect of this was that the length of the offshore cable corridor located within The Wash and North Norfolk Coast SAC was increased from 7 km to 10.9 km (an increase of 23.4 km of export cables associated with up to six cables). The details of this proposed nearshore re-route were presented in the supplementary information document was issued for further Section 42 consultation in November 2017 as summarised within Section 4.12 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059]. The assessments presented within relevant offshore topic chapters of the Environmental Statement and the RIAA were based on the Hornsea Three offshore cable corridor including the nearshore re-route discussed above.</p>
<p>5.4.6 Whilst Natural England acknowledges that in taking forwards the alternative route the Applicant has reduced the known impacts to designated sites i.e. by relocating cable crossing outside of designated sites which would require cable protection, the total impacts from all associated activities on each designated site and/or feature still need to be thoroughly considered in the assessment.</p>	<p>The Applicant welcomes Natural England's acknowledgement that the offshore cable corridor re-routes, which were proposed following Section 42 feedback on the PEIR and taken forward for the DCO application, have reduced the potential impacts of Hornsea Three on designated sites.</p> <p>In terms of the project-specific data used to support the assessment of the cable re-route in the nearshore area, as outlined in paragraph 2.6.1.4 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], it was discussed with the Marine Processes, Benthic Ecology and Fish Ecology EWG on 4 December 2017 that the Hornsea Three offshore cable corridor re-route in the nearshore area coinciding with The Wash</p>

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	<p>and North Norfolk Coast SAC would be robustly characterised for the purposes of Environmental Impact Assessment using a combination of Hornsea Three site specific data and desktop data sources in this area. Paragraph 2.7.6.2 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement outlines the desktop datasets which were used to extend the nearshore biotope maps generated from the Hornsea Three site specific benthic ecology data to provide a baseline characterisation for the purposes of Environmental Impact Assessment. This desktop data showed that the sediment types were broadly similar across the area, with sandy sediments inshore grading into coarse/mixed sediments further offshore within The Wash and North Norfolk Coast SAC. This consistency provided confidence in the extrapolation of biotopes into areas where there had been no site-specific sampling and confidence in the sufficiency of this information for the purposes of the impact assessment.</p>
<p>5.4.6 (cont.) It is Natural England's view that insufficient project specific data and/or information has been provided with regards to the near-shore alternative route and its interactions with the designated sites to agree with either assessments and/or the conclusions of no significant impact.</p>	<p>Noting Natural England's comments raised here, the Applicant would highlight that, since the DCO application was submitted, the Applicant has undertaken site specific drop down video sampling within the part of the Hornsea Three offshore cable corridor that coincides with The Wash and North Norfolk Coast SAC, in order to validate the baseline and predictions made within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP_062]. The results of this survey have confirmed the broad scale sediment types within this part of the Hornsea Three offshore cable corridor (i.e. sand and gravel sediments of varying proportions). This survey also included assessment of Annex I reef habitats (i.e. stony reef and <i>S. spinulosa</i> reefs) and found no evidence of reef habitats within this part of The Wash and North Norfolk Coast SAC. The full findings of the survey have been provided Natural England via a 'Wash and North Norfolk Coast SAC Clarification Note' (Appendix 5 to Deadline I submission)).</p>
<p>5.4.7 Natural England has the following concerns with the impact assessment: i) Consideration of sub-features of The W&NCC SAC Natural England would like to note that for The Wash and North Norfolk Coast SAC Annex I feature 'Sandbanks which are slightly covered by seawater all the time' has a number of sub-features associated with it. It is our understanding that the Applicant refers to those sub-features as 'supporting habitat', which is inaccurate. In the case of this SAC the sub-features are components of the Annex I feature and should therefore be assessed as such.</p>	<p>In response to Natural England's first point, the analysis of historic and site specific data did not indicate the presence of the Annex I habitat 'Sandbanks which are slightly covered by sea water all the time' coinciding with the Hornsea Three offshore cable corridor within the boundary of the site. Therefore, as outlined in paragraph 2.11.1.69 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP_062 for the purposes of the benthic ecology assessment, a precautionary approach was adopted whereby all subtidal sediment within The Wash and North Norfolk Coast SAC has been assumed to comprise supporting habitat for Annex I sandbanks. All sub-features of the Annex I habitat 'Sandbanks which are slightly covered by seawater all the</p>

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	<p>time' habitat are assumed to be part of the sandbank habitat complex and their consideration is therefore inherent in the assessment of Annex I sandbank features. The assessment was undertaken by evaluating changes to the representative biotopes of the sandbank habitat complex and therefore, even if not explicitly mentioned individually, the sub-features are assessed as represented by the biotopes.</p>
<p>5.4.7 (cont.)</p> <p>ii) Extent of Annex I features in The W&NNC SAC We are pleased to note that the Applicant assumed 100% overlap of the cable route with the site features for the purpose of defining the magnitude of impact. However, without project specific data we can't determine the extent of each feature to inform any mitigation measures and rule out other Annex I habitats being present along the cable route.</p>	<p>In response to Natural England's second point, the sub features of the Annex I sandbank habitat are shown as biotopes in Figure 2.5 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], and are delineated within the Hornsea Three offshore cable corridor. As per the response to NE RR 5.4.6 (see row 19), the findings of the validation survey undertaken in July 2018 have been provided to Natural England via a 'Wash and North Norfolk Coast SAC Clarification Note' (Appendix 5 to Deadline 1 submission). The results of this survey have validated the baseline presented within the Environmental Statement, with mixed sand and gravel sediments characterising the area and no evidence of Annex I reef habitats. To manage any residual risks to Annex I habitats, the pre-construction Annex I habitat surveys, which the Applicant is committed to undertaking (see Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement) will enable the extent of these habitats to be further mapped prior to construction and will also determine the presence of any other Annex I habitats within the area. The outputs of these pre-construction surveys will be used to ensure direct impacts on reef features are avoided (Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement) and where such features are found in proximity to where cables are installed, to establish any change following cable installation.</p>
<p>5.4.7 (cont.)</p> <p>iii) Ability to install cables We question how much weight has been given to the sub-features in the overall assessment not only for ecological impacts purposes, but also the ability to install cables. Data from other offshore windfarm projects within the same designated site, is showing that cables have been sub-optimally buried within the same features which may lead to further remedial works that would have significant impacts to the site. Therefore, we disagree with the interpretation to inform the worst case scenario (WCS). And there is still a high risk of significant impacts to designated features from cable installation and associated activities. Especially given that data was presented to the expert working group on 3 December 2017 that showed that there is shallow bed rock between 20 cm and 3 m below the seabed which would mean that the cables would be sub-optimally buried across a large proportion of the designated sites.</p>	<p>With regard to Natural England's third point, as discussed in the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG meeting on 23 February 2018, the Applicant's preference would be to bury the cable and therefore the Project Design envelope includes a range of methods which could be used to achieve this, including rock cutting or pre-trenching for areas of stiff clays/ chalk (as is currently being employed on Hornsea Project One). These range of methods were included in the consideration of the maximum design scenario and therefore the impact assessment has fully considered the potential effects of cable installation and associated activities for Hornsea Three. As outlined in response to NE RR 5.3.2 (see row 4), the Cable Specification and Installation Plan will provide details of burial techniques based on detailed, site specific geophysical and geotechnical information and a detailed ground model.</p>

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	<p>The Applicant would re-iterate that the preference is always to bury cables as this offers the best protection for cables. This plan will be provided to the MMO for approval, in consultation with Natural England, prior to the commencement of construction. In addition, as per the Applicant's response to the NE Relevant Representation A10, the Applicant will include an additional commitment in the dML to allow for appropriate reporting of the location and volumes of cable protection.</p>
<p>5.4.8 It is Natural England's view that the relevant authority will need to carry out a full MCZ Assessment to determine whether the project has a potential to hinder the conservation objectives of the sites. For Cromer Shoal Chalk Beds MCZ conservation advice, including conservation objectives, operational advice and sensitivity assessment is now available on Natural England's Designated Sites System⁸ and these should be used to inform the assessment.</p>	<p>The Applicant acknowledges Natural England's comment but would highlight that, as discussed in section 2.3.2 of Volume 5, Annex 2.3 – Marine Conservation Zone Assessment of the Environmental Statement [APP-104] the draft Conservation Advice Package for Cromer Shoal Chalk Beds MCZ was provided by Natural England to the Applicant during the pre-application phase (in May 2017). As such, the conservation objectives were fully considered in the Stage 1 assessment (see section 5.1 of Volume 5, Annex 2.3 – Marine Conservation Zone Assessment of the Environmental Statement) and therefore there is sufficient detail to inform the full MCZ Assessment to be undertaken by the relevant authority.</p>
<p>5.4.9 It should not be assumed that excavated material from the Horizontal Directional Drilling (HDD) and cable laying activities would be allowed to be stored within the Cromer Shoal MCZ. Regardless of avoiding sensitive protected features, there is potential for material to be transported and deposited on sensitive designated features, such as subtidal chalk reef.</p> <p>Whilst Natural England recognises that the Applicant has included options with the Rochdale envelope to potentially reduce the impacts to the MCZ such as HDD Natural England remains concerned about the potential impacts of HDD exit pits and associated activities on the protected features of the MCZ. It is our view that the WCS has not been fully assessed for the nearshore works.</p>	<p>As outlined in Table 2.14 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] and Table 5.2 of Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement [APP-104], the maximum design scenario for temporary habitat loss in the nearshore area from the installation of cables in the Hornsea Three intertidal area considered the installation of all cables via open cut trenching. The total potential temporary subtidal habitat loss associated with this method is greater than the temporary subtidal habitat loss associated with horizontal directional drilling (HDD) which would require the excavation of up to eight exits pits below mean low water springs (each up to 30 m in length and up to 30 m in width) and associated material disposal and jack-up activities in the vicinity of the exit pits (i.e. up to five jack-ups per exit pit equating to a total of 181 m²).</p> <p>Natural England made comments during the Evidence Plan process regarding impacts associated with HDD operations. In response to these comments, and as discussed in the assessment of temporary habitat loss/disturbance within the Cromer Shoal Chalk Beds MCZ (see paragraph 2.11.1.85 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and paragraph 5.1.2.8 of Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement), impacts associated with HDD activities were also considered such that effectively, two maximum design scenarios for temporary habitat loss/disturbance in</p>

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	<p>the nearshore area have been assessed (i.e. one for open cut trenching and one for HDD). Paragraph 2.11.1.85 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and paragraph 5.1.2.8 of Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement provide a quantification of the potential temporary habitat loss/disturbance from the HDD operations and shows that the potential extent of habitat loss/disturbance would be approximately a quarter that of the maximum design scenario for open cut trenching.</p> <p>With respect to sediment deposition associated with HDD activities, the Applicant refers Natural England to the assessment of cable installation in the nearshore (paragraph 2.11.1.109 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement) which describes the potential elevations in suspended sediment concentrations (SSC) as very limited in extent (within a few tens of metres) and rapidly dispersing with no measurable thickness of accumulated materials on existing substrate. Paragraph 5.1.2.15 of Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement [APP-104] further assesses the effect of deposition of materials excavated from HDD exit pits and highlights that any excavated materials will comprise sands and gravels of the same type as the surrounding seabed with mobilisation occurring at the same rate as the surrounding area. The mobilisation will occur naturally over the duration that the pits would be open (i.e. 4 months) allowing re-distribution towards a naturally stable equilibrium. An assessment of the potential impacts of sediment deposition is presented in paragraph 2.11.1.127 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and paragraph 5.1.2.37 of Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement. As outlined in Annex 3.2: Dredging and Disposal: Site Characterisation of the Environmental Statement [APP-086], the habitats present within the part of the Cromer Shoal Chalk Beds MCZ coinciding with the Hornsea Three offshore cable corridor are not considered to be particularly sensitive to disposal of dredged material and therefore this area was included in the proposal disposal sites as part of the dML.</p>
<p>5.4.10 Please note, that the site is now considered a proposed MCZ (pMCZ) after it was included in Tranche Three of MCZ consultation, which was announced on 8 July 2018.</p>	<p>Point noted and the site will be referred to as Markham's Triangle pMCZ going forward.</p>
<p>5.4.11 We do not consider that the benthic analyses is appropriate for characterising Markham's Triangle pMCZ, or that Markham's Triangle survey evidence has been used appropriately. We request</p>	<p>As discussed in paragraph 3.1.3.32 of Volume 5, Annex 2.1: Benthic Ecology Technical Report of the Environmental Statement [APP-102], the results of the</p>

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<p>the Applicant to clarify, why:</p> <ul style="list-style-type: none"> · The Cefas/Defra evidence for Markham's Triangle was not used in the characterisation of the Hornsea Project Three array area. 	<p>2012 Cefas/Defra survey of Markham's Triangle pMCZ were reviewed and the data used to inform the baseline characterisation of this part of the Hornsea Three benthic ecology study area. Furthermore, as described in paragraph 2.4.2.4 of Volume 5, Annex 2.1: Benthic Ecology Technical Report of the Environmental Statement, the raw data from this survey were made available to the Applicant. The Particle Size Analysis data were incorporated into the dataset for the Hornsea Three benthic ecology study area to establish the sediment type in that region and the faunal dataset was broadly analysed to determine the similarity of the communities in the site with those within the Hornsea Three array area. Although the faunal data were not included in the multivariate analyses for the Hornsea Three benthic ecology study area, an analysis was undertaken on Markham's Triangle pMCZ data, together with all site specific infaunal data, to establish how the datasets compare and ultimately determine whether the Markham's Triangle dataset supports the characterisation of the Hornsea Three array area, in the context of the assigned biotopes. This analysis is presented in paragraph 4.1.4.26 <i>et seq.</i> of Volume 5, Annex 2.1: Benthic Ecology Technical Report of the Environmental Statement.</p>
<p>5.4.11 We request the Applicant to clarify, why:</p> <ul style="list-style-type: none"> · The biotopes provided in JNCC Report 608 (Sotheran <i>et al.</i>, 2017) were not used in the analyses, instead considering only suggested biotopes for the survey points within the pMCZ; · Suggested biotopes for the Cefas / Defra data are quite dissimilar to the biotopes within JNCC Report 608. 	<p>During the pre-application phase (i.e. Marine Processes, Benthic Ecology and Fish and Shellfish Ecology EWG meetings, with the final EWG meeting in February 2018), the Applicant was not made aware of the biotope analysis available in the JNCC report 608, which was published in September 2017 (Sotheran <i>et al.</i> 2017). Had Natural England/JNCC shared this report with the Applicant then the results would have been incorporated into the baseline characterisation for the part of the Hornsea Three array area that coincides with Markham's Triangle pMCZ. The Applicant has now reviewed the Sotheran <i>et al.</i> 2017 report and note that the SS.SMx.CMx biotope was recorded in association with the Subtidal mixed sediment and the SS.SSa.CFiSa.EpusOborApri biotope was recorded in the Subtidal coarse sediments and Subtidal sands in the part of the Hornsea Three array area that coincides with Markham's Triangle pMCZ. As shown in Figure 4.6 of Volume 5, Annex 2.1: Benthic Ecology Technical Report of the Environmental Statement [APP-102], the Applicant mapped predominantly the SS.SMx.OMx.PoVen biotope in this part of Markham's Triangle pMCZ with areas of SS.SMx.CMx.MysThyMx in mixed sediments. The latter broadly corresponds with the mixed sediment biotope identified in Sotheran <i>et al.</i> 2017.</p> <p>Although the SS.SSa.CFiSa.EpusOborApri biotope was not mapped by the Applicant in the baseline</p>

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	<p>characterisation for Markham's Triangle, this biotope was mapped elsewhere in the Hornsea Three array area (and wider Hornsea Three benthic ecology study area). Also, as shown in Table 2.13 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-102], this biotope has been included as a representative biotope under the Subtidal coarse sediment VER and, as such, has been included in the assessment. As discussed in Paragraph 2.11.1.24 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement, sensitivity of the biotopes described in Sotheran <i>et al.</i> (2017) are similar to those described in the part of the Hornsea Three array area that coincides with Markham's Triangle pMCZ for the impacts considered in Section 2.11 of that chapter, i.e. similar vulnerabilities to impacts such as habitats loss/disturbance and recovery rates which are in line with the timescales predicted for other mixed and coarse sediment communities.</p> <p>Although there may be differences in the biotopes assigned within the Markham's Triangle, section 2.7.6 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-62] outlines that one of the limitations of biotope classification is that the underlying data is a snapshot of the benthic community collected at a given survey location and assignment of a code is subjective and open to interpretation. It is for this reason that biotopes are often grouped into a broadscale habitat classification for the purposes of undertaking the impact assessment, noting that for the pMCZ assessment further detail was provided with regard to the sensitivity of component biotopes. Irrespective of the differences in biotope classification, the assessment on the pMCZ was undertaken on best available information at the time of assessment. These minor differences in the biotope classifications would not change the overall conclusions of the Environmental Impact Assessment or MCZ assessment due to the similarities in biotope sensitivity, including recovery potential following disturbance.</p>
<p>5.4.12 We do not believe that the scale and magnitude of the impacts from the offshore wind farm installation activities have been adequately assessed, therefore we cannot agree that the project is unlikely to have any significant effect on the designated features of the Markham's Triangle pMCZ.</p> <p>It is the SNCB view that the features should be assessed separately and instead of using one feature as proxy for the whole site (unless shown to be applicable). This is equally relevant for the Marine Processes assessment of the pMCZ.</p>	<p>As outlined in paragraph 2.9.3.1 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-62], in addition to the assessment on the broad valued ecological receptors (VERs; i.e. Habitats A, B, C, D and E and ocean quahog <i>A. islandica</i>), where relevant, an assessment has also been undertaken separately on the VERs that comprise features of MCZ/pMCZs (and Annex I habitat features of SACs). As outlined in Table 2.13 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement, for the Markham's Triangle pMCZ this included Subtidal coarse sediments, Subtidal sand and Subtidal mixed sediments. In response to Section 42 consultation comments received from Natural England, the assessment for designated sites was</p>

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	<p>updated to include a specific assessment of the component biotopes of each of the broadscale habitats types within Markham's Triangle pMCZ (e.g. Subtidal coarse sediment characterised by the PoVen and MysThyMx biotopes; see paragraphs 2.11.1.96 et seq. of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and paragraph 5.2.2.9 of Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement [APP-104] for an example of this approach). Therefore, the Applicant can confirm that the features of Markham's Triangle pMCZ were assessed separately, rather than using one feature as a proxy, in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and Volume 5, Annex 2.3: Marine Conservation Zone Assessment of the Environmental Statement.</p>
<p>5.4.13 Natural England has considerable amount of questions for the Applicant on their analysis and interpretation of benthic survey results. We had the opportunity through the Benthic Expert Working Group to provide initial comments to the Applicant on the quality of their benthic analysis. Where the Applicant has provided a response, we remain uncertain that the analyses have been undertaken to the standards that we would expect in a development of this nature. Some of the concerns include:</p> <ul style="list-style-type: none"> - Survey data and evidence used needs to be the most up to date and be presented to support statements; <p>We have outstanding questions on how the survey data have been analysed and interpreted as we have found errors in results and determining significance of impacts especially in relation to biotopes and Valued Ecological Receptors (VERs).</p>	<p>The Applicant would welcome a discussion with Natural England on any specific concerns that they have regarding the benthic ecology baseline characterisation surveys or the data analyses and interpretation, including where Natural England thinks there may be errors in results. This would enable the Applicant to provide comprehensive responses to Natural England's concerns.</p> <p>With respect to survey data and evidence being the most up to date, the Applicant would direct Natural England to the responses to NE RR 5.4.6 (in row 19 relating to characterisation of The Wash and North Norfolk Coast SAC) and NE RR 5.4.11 (in rows 26 and 27 relating to the use of most up to date information for Markham's Triangle pMCZ). The Applicant would also note that the approach to the Hornsea Three benthic ecology baseline characterisation was discussed and agreed with the Marine Processes, Benthic Ecology and Fish and Shellfish Ecology EWG throughout the pre-application phase including the scope of the baseline characterisation surveys which were agreed with the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG on 1 February 2017.</p> <p>In relation to the use of VERs, as detailed in Table 2.6 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the assessment presented in the final impact assessment was substantially revised since PEIR to address Natural England's comments. This has included revisions to the VERs to better align with designated features of the relevant protected areas in proximity to Hornsea Three. Each assessment section was amended to include separate sections for the consideration of impacts to the features of designated sites. In addition, as requested by Natural England, further information on the sensitivity, recoverability etc. of the component biotopes of the designated features was also presented in Section 2.11</p>

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	of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. This has allowed for a more transparent and auditable impact assessment to be presented for each designated site and their protected features, in line with feedback received from stakeholders (including Natural England) during Section 42 consultation.
<p>5.4.14 Natural England disagrees with how the impact assessment has been carried out due to the lack of explanation and detail around the proposed activities and assessment of significance. It is our view that:</p> <ul style="list-style-type: none"> · More clarity is required on cable burial activities to fully understand the impacts; · Elements of phased build approach that have not been fully explored in the WCS for cable installation as it only considers it to be a one-off activity; · Based on knowledge from built projects, it is Natural England's view that realistic WCSs are not being presented in the ES, especially with regards to cable protection in designated sites; · Full and total impact assessment through the lifetime of the project has not been provided. 	<p>Paragraphs 2.11.1.13 to 2.11.1.17 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] sequentially describe the pre-construction activities relating to cable burial (e.g. sandwave clearance and boulder clearance), and the cable installation itself, that have been assessed for benthic ecology. The parameters associated with these activities are itemised in row 1 of Table 2.14 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and full details and descriptions of the pre-construction activities and cable installation methods is presented in Sections 3.6.2 and 3.6.6 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-58], respectively.</p>
<p>5.4.14 (cont.)</p> <p>It is our view that:</p> <ul style="list-style-type: none"> · Elements of phased build approach that have not been fully explored in the WCS for cable installation as it only considers it to be a one-off activity; 	<p>Table 2.14 and paragraph 2.11.1.6 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (ASPP-062) outlines the assumptions relating to the phased build approach, with respect to cable installation, that have been assessed as part of the maximum design scenario. An assessment of the impacts of phased cable installation is presented in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement where it is outlined that, following completion of cable installation there will be no potential for repeat direct physical disturbance to the footprint of seabed previously impacted by cable burial as this would pose a risk to the integrity of the cable. The potential for repeat habitat disturbance would, therefore, be limited to that associated with the deposition of fine sediments from cable installation works in adjacent areas which is assessed in paragraph 2.11.1.100 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement.</p>
<p>5.4.14. (cont.)</p> <p>It is our view that:</p> <ul style="list-style-type: none"> · Based on knowledge from built projects, it is Natural England's view that realistic WCSs are not being presented in the ES, especially with regards to cable protection in designated sites; 	<p>With respect to the maximum design scenario for cable protection in designated sites, the Applicant would reiterate that the assumption that 10% of total cable length within designated sites will require protection is considered to be precautionary and is based on the Applicants considerable experience from a number of projects, including those within The Wash and other parts of the UK continental shelf (further clarification has been provided to Natural England through the 'Cable Protection Clarification Note', Appendix 6 to the Applicant's response to Deadline 1). As discussed with</p>

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	<p>the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG on 23 February 2018 and outlined in previous responses, the preference is always to bury cables.</p>
<p>5.4.14. (cont.) It is our view that: · Full and total impact assessment through the lifetime of the project has not been provided.</p>	<p>The potential for disturbance and repeat disturbance to benthic habitats from cable installation, across the lifetime of the project, has been fully assessed in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] as follows:</p> <ul style="list-style-type: none"> - disturbance from pre-construction activities (e.g. sandwave clearance and boulder clearance) in paragraphs 2.11.1.13 to 2.11.1.16 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - disturbance from cable installation in paragraph 2.11.1.17 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - localised remedial cable reburial works during the construction phase in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - repeat disturbance from cable installation to areas previously impacted by pre-construction activities (e.g. sandwave clearance and boulder clearance) in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - potential for repeat disturbance from cable installation across a phased construction period in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - disturbance from cable remedial burial and cable repair works during the O&M phase in paragraphs 2.11.2.148 to 2.11.2.150 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; and - disturbance associated with the removal of cables in paragraph 2.11.3.3 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. <p>All assessments relating to the potential for repeat disturbance associated with cable installation, maintenance and decommissioning conclude that the areas likely to be impacted are limited and it is important to reiterate that the majority of the cables will be buried and will remain buried.</p>
<p>5.4.14. (cont.) It is our view that: · Based on knowledge from built projects, it is Natural England's view that realistic WCSs are not being presented in the ES, especially with regards to cable protection in designated sites;</p>	<p>With respect to the maximum design scenario for cable protection in designated sites, the Applicant would reiterate that the assumption that 10% of total cable length within designated sites will require protection is considered to be precautionary and is based on the Applicants considerable experience from a number of projects, including those within The Wash and other parts of the UK continental shelf (further clarification has been provided to Natural England through the 'Cable Protection Clarification Note', Appendix 6). As discussed</p>

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	with the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG on 23 February 2018 and outlined in previous responses, the preference is always to bury cables.
<p>5.4.14. (cont.)</p> <p>It is our view that:</p> <ul style="list-style-type: none"> · Full and total impact assessment through the lifetime of the project has not been provided. 	<p>The potential for disturbance and repeat disturbance to benthic habitats from cable installation, across the lifetime of the project, has been fully assessed in Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062] as follows:</p> <ul style="list-style-type: none"> - disturbance from pre-construction activities (e.g. sandwave clearance and boulder clearance) in paragraphs 2.11.1.13 to 2.11.1.16 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - disturbance from cable installation in paragraph 2.11.1.17 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - localised remedial cable reburial works during the construction phase in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - repeat disturbance from cable installation to areas previously impacted by pre-construction activities (e.g. sandwave clearance and boulder clearance) in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - potential for repeat disturbance from cable installation across a phased construction period in paragraph 2.11.1.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; - disturbance from cable remedial burial and cable repair works during the O&M phase in paragraphs 2.11.2.148 to 2.11.2.150 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement; and - disturbance associated with the removal of cables in paragraph 2.11.3.3 <i>et seq.</i> of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. <p>All assessments relating to the potential for repeat disturbance associated with cable installation, maintenance and decommissioning conclude that the areas likely to be impacted are limited and it is important to reiterate that the majority of the cables will be buried and will remain buried.</p>
<p>5.4.15 It is not clear, why it is assumed that the 25% WCS of additional cable protection will only be added to the areas already impacted by cable protection at the construction phase. We note that the dynamic nature of the seabed in the project area could mean that cables may get exposed in areas where they were initially buried into mobile sediments. Could the Applicant clarify, whether their assumption means that the 10% cable protection WCS at construction is still applicable to the O&M phase of the project?</p>	<p>As outlined in row 4 of Table 2.14, and paragraph 2.11.2.3 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], the replenishment of cable protection and cable/pipeline crossings during the operation and maintenance phase will not result in any additional long term habitat loss. It is assumed that replenishment works will be additive in areas in which cable protection was laid during construction (i.e. that cable protection replenishment will involve replenishment of protection on top of cable protection previously</p>

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	<p>installed over the Hornsea Three cables). Therefore, the maximum design scenario that up to 10% of the total length of export cables within designated sites will require cable protection is applicable throughout the O&M phase of the project.</p> <p>Regarding the potential for cable exposure in mobile sediments, the Applicant would always seek to bury the cable below reference seabed level taking into account seabed mobility. This would minimise the risk of exposure during the lifetime of the project. Burial success is measured against this reference seabed level, rather than the surface of mobile features. Any protection required in these areas would be included in the maximum design scenario of 10% of the total length of export cables. Appendix 6 to the Applicant's response to Deadline 1 provides a clarification of the assumption that a maximum of 10% of the offshore export cables may require protection.</p>
<p>5.4.16 We note that the use of matrices to determine significance is not precautionary as 'minor' significance is used when 'moderate-minor' impact is shown in a matrix. Natural England notes that choosing to conclude 'minor' impact may result in downplaying the potential impact on sensitive habitats. In addition, on a number of occasions in the Benthic Ecology Chapter the magnitude of impact is defined as 'minor' where the impact is 'of local extent, long term, continuous and irreversible during the lifetime of Hornsea Three'. It is not clear how this definition relates to the magnitude categories presented in Table 5.3 of Ch. 5 (EIA Methodology). It is our view that this inconsistency may result in underestimation of the impacts on benthic receptors.</p>	<p>The matrix used for the assessment of the significance of the effect, as outlined in Table 2.17 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], provides a suggested significance level which is based on a correlation of the magnitude of the impact and sensitivity of the receptor. As discussed in paragraph 2.9.2.5 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement, where a range is suggested for the significance of effect, there remains the possibility that this may span the significance threshold (i.e. the range is given as minor to moderate). In such cases the final significance is based upon expert professional judgement as to which outcome delineates the most likely effect. Therefore, where a range is given in the matrix, the assessment does not automatically conclude the higher significance level as there must be sufficient justification to support the conclusion, whether it is for the lower level or the higher level. This approach is consistent with the methodology outlined in Section 5.3.5 of Volume 1, Chapter 5: Environmental Impact Assessment Methodology of the Environmental Statement [APP-060], where it is stated that the matrix approach should be adopted as a guide, with latitude for professional assessment where deemed appropriate in the application of the matrix. The approach was also discussed with Natural England during the Benthic Ecology, Marine Processes and Fish and Shellfish Ecology EWG meeting on 4 December 2017 (see Appendix C.6 in the Consultation Report, Annex 1 - Evidence Plan [APP-035]).</p> <p>For example, the assessment of the impact of temporary habitat loss on ocean quahog (<i>Arctica islandica</i>), as presented in paragraph 2.11.1.38 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement,</p>

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	<p>concluded that the magnitude of the impact was minor and the sensitivity of the species was high, therefore according to the matrix table the significance could be minor or moderate. A significance of effects of minor adverse was concluded on the basis that the impact would only result in a very small proportion of habitat loss for this species in the context of the wider region (0.009%) and because the Hornsea Three project area had very low abundances of this species; this justification is presented in the conclusion of significance in paragraph 2.11.1.38 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement. Other examples of where additional justification is provided where there was a choice between two levels of significance are presented in paragraphs 2.11.1.99, 2.11.2.12, 2.11.2.28, 2.11.2.37, 2.11.2.42, 2.11.2.168, 2.11.2.173, 2.11.3.14, 2.11.3.48, 2.11.3.52, 2.11.3.55 and 2.11.3.59 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement.</p>
<p>5.4.17 The Applicant has not provided any evidence to support the statement that 'sensitive scour and cable protection' actually works. Unless it can be shown that such methods allow a decrease in the overall cable laying impacts, these measures cannot currently be viewed as viable mitigation. For example: Table 2.31 in the Benthic Ecology chapter includes a proposed O&M monitoring commitment to 'to determine the effectiveness of the designed-in mitigation measures proposed for sensitive cable protection within designated sites.' Natural England questions the validity of the mitigation measures proposed for the project, and associated impact assessment, if the Applicant is not confident in the effectiveness of these measures at this time.</p>	<p>The measures adopted as part of the project design, as outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP_062) include the proposed employment of sensitive cable and scour protection within the areas of designated sites. The cable protection measures proposed in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement were selected on the basis that the cable protection grain sizes are reflective of the grain sizes surrounding environment. The Applicant highlights that these measures have been included as the use of such material may encourage the burial of the scour/cable protection by the surrounding sediment. The process by which this may occur is described in paragraph 1.11.8.52 <i>et seq.</i> of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. Subsequently, local communities associated with the habitat features of designated sites (i.e. infaunal communities where sediment accumulation occurs; epifaunal communities in the case of appropriate cable protection) are likely to colonise these areas, potentially providing some limited recovery of communities in areas where cable protection is placed and reducing the extent of long term habitat loss. These measures have been adopted as part of the project design in response to discussions with the Expert Working Group regarding the impacts of cable protection on benthic ecological receptors within designated sites. As outlined in previous responses, clarification has been provided to Natural England via the 'Cable Protection Clarification Note' (Appendix 6 to the Applicant's submission to Deadline 1). This clarification note includes evidence on the potential for recovery of local benthic communities into areas</p>

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	<p>affected by the cable protection measures proposed for Hornsea Three, supporting the assumption that the proposed rock protection measures would limit habitat loss effects where these are deployed, in contrast to other cable protection measures (e.g. concrete mattresses, larger grain sizes etc.).</p> <p>As outlined in Table 2.18 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement [APP-062], these measures may provide the opportunity for limited recovery of the communities within the areas affected. It is in response to the deemed uncertainty regarding the potential for the recovery of communities associated with cable protection, that O&M phase monitoring has been proposed as outlined in Table 2.31 of Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement.</p>
<p>5.5. Marine mammals</p> <p>The table below provides a summary of Natural England's key concerns.</p> <p>5.5.1. We note that no consideration has been given to at-source noise mitigation of piling noise, such as bubble curtains or isolation casing. It is recognised that some of the mitigation measures are not necessarily suited to all environmental conditions. However, the current industry knowledge outlines the wave height limit for bubble curtain operation to be 3 m, and for survival 5 m; wind speeds up to 30 m/s and currents up to around 1.5 m/s (K. Kloske, pers. comm).</p> <p>Figures from the Marine Processes chapter suggest that the conditions within the Hornsea Project Three array area are within the operating limits of existing bubble curtain solutions therefore these options should be explored.</p>	<p>The Applicant has not made a specific commitment to the use of at-source noise mitigation (such as bubble curtains or isolating casing) on the basis of the conclusions of the ES (no significant effects on marine mammal receptors as a result of underwater noise impacts).</p> <p>The Applicant is not aware of any other offshore wind farm consent in the UK with a commitment of that nature either.</p> <p>The Applicant has committed to the standard embedded measures to reduce underwater noise impacts, in the form of a soft start procedure to piling and a MMMP.</p> <p>Furthermore, the Applicant can confirm that it made a commitment within the draft dMLs (at Schedules 11 and 12, Part 2, Condition 11/12 (4, 5 and 6) in relation to the SNS SCI). This commitment required the undertaker to apply appropriate mitigation, if at that time (once it is clear what the final scheme design comprises and over other activities may overlap with the construction of Hornsea Three) , it transpires that there is an in-combination risk to the site integrity. The nature of this mitigation is not limited to any one form (noting that the options identified within the condition comprise:</p> <p><i>(a) seasonal restrictions to piling;</i></p> <p><i>(b) scheduling of piling, having regard to previous, ongoing and future piling associated with other offshore developments, based on an updated assessment of cumulative impacts;</i></p> <p><i>(c) the use of alternative foundation methodologies, such as jacket foundations or gravity base foundations;</i></p> <p><i>(d) the use of noise reduction at source technologies; and</i></p> <p><i>(e) the use of other relevant technologies or methodologies that may emerge in the future.)</i></p>

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	<p>The Applicant notes that this Condition has been updated (based on comments received by Natural England and the MMO) to reflect a commitment to a Site Integrity Plan which affords the same protection as cited above. The refined Condition will be included within the updated draft DCO to be submitted at Deadline I.</p> <p>At source noise mitigation options are therefore, not ruled out at this stage. However, given that (if required) other forms of mitigation may be more effective and therefore, retaining maximum flexibility is important.</p>
<p>The maximum hammer energy assessed in the Environmental Statement (ES) should be detailed within the design parameters on the Development Consent Order (DCO) and/or Deemed Marine Licences (DMLs). This is the best available metric to ensure the noise generated from piling does not exceed that assessed within the project envelope. Given the discussions and amendments that have been requested on other projects, this needs to be included on the face of the consent to ensure this important maximum parameter is only amended through an appropriate variation process.</p>	<p>The Applicant has reflected on this matter and can confirm that it has now included reference to the maximum hammer energy (5,000kJ) in the dML and which is reflected in the updated DCO (Revision 1 submitted at Deadline 1).</p>
<p>The DMLs have proposed the inclusion of a mitigation condition for harbour porpoise in the Southern North Sea cSAC/SCI similar to that included in Hornsea Project Two. Natural England notes that a Marine Mammal Mitigation Protocol will be provided to remove the risk of potential death and/or injury to marine mammals. In addition, the Project should have a Site Integrity Plan – a live document, which needs to be updated prior to construction to inform the relevant authority's Appropriate Assessment of disturbance to harbour porpoise.</p>	<p>The Applicant welcomes Natural England's acknowledgement of the measures that it has put in place with regard to the SNS SCI and the MMMP.</p> <p>The Applicant agrees that it is necessary to provide sufficient information to the regulatory authority (prior to the commencement of construction) to establish the risk to site integrity once final design and precise nature of other activity taking place within the SCI at that time, is clear.</p> <p>However, it is noted that in practice, under the existing Condition (11/12 (4, 5 and 6) the undertaker will come forward (prior to commencement of works) and demonstrate whether there is a risk to integrity of the SCI or not based on the final scheme design and precise knowledge of what other projects (within proximity to the SCI) are undertaking activities at the same time. The documentation produced to evidence this has (in practice (for example Hornsea Project One)) been in suitable form to inform a regulatory AA.</p> <p>It will therefore, serve the same function as a SIP document. Notwithstanding this, the Applicant is willing to replace the current wording with a commitment for a SIP. An outline SIP has been prepared by the Applicant as submitted at Appendix 15 to the Applicants response to Deadline I.</p>
<p>Could the Applicant clarify if the numbers in Table 4.51 of the Marine Mammals chapter are the total number of animals injured from multiple UXO detonations? The total number will impact the magnitude scoring for each species and possibly the overall significance of the effect.</p>	<p>The numbers presented in table 4.51 are the number of animals expected to be in the impact range of a single detonation as per standard practice for quantification of the potential impact of noise generating activities (the same approach was taken to the assessment of piling noise). We recognise that over several detonations the</p>

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<p>Natural England also questions why the lower SCANS III densities have been used, which would result in smaller numbers of animals affected.</p>	<p>total number of animals that could be affected could be higher than this but multiplying this number by the total number of UXO detonations would result in an overestimate of potential impact. noting that there is uncertainty in the nature, location of the UXO and in the timing of each detonation, but given the likely spatial and temporal scale of the detonations there is a large potential for the same animals to be affected on multiple occasions. The total number of animals that may be affected over all detonations is impossible to predict (as is also the case with piling) without detailed models of animal movement (which are not available). Therefore, the assessment of magnitude is partly based on the number of animals affected by a single detonation, consideration of the total number that may be affected is considered qualitatively by taking into account the duration and the frequency of the impact.</p> <p>SCANS III densities were used because the impact area extended well beyond the area covered by the site specific surveys and given the range of porpoise density estimates presented in Table 4.8 and Table 4.12, this was deemed to be the most appropriate value for the broad spatial scale required for assessment and the uncertainty in the location and number of any UXO present and requiring detonation. Because a licence to detonate UXO is not being sought at this stage, this was deemed to be sufficient to characterise the risk at a high level.</p>
<p>The conclusion for Tier 1 and 2 combined assessment states: moderate for the duration of the piling (~12 yrs) but minor in terms of long term population level effects, therefore not an issue in terms of the Environmental Impact Assessment (EIA). Natural England does not agree with this conclusion. There will be changes to the local abundance and distribution of the population for the duration of the piling, and there is currently no understanding as to how an individual or the population will respond to long term piling (for the lifetime of an animal) in a site that is of importance to them and whether long term displacement could occur. In addition, there is no assessment of Tier 3, which would further increase the potential number of porpoises affected.</p>	<p>The Applicant does not agree that there is currently 'no understanding' as to how animals will respond in the long term. There is a growing body of data that suggests local recovery of harbour porpoise density is rapid, even over relatively long timescales and even in high density areas in the southern North Sea (e.g. see Brandt et al., 2018¹). There have also been indications from monitoring at Beatrice that the local response may diminish over the course of construction periods that last several months. Porpoises are also capable of very high foraging rates and can rapidly compensate for short term reductions in food intake (Kastelein et al in prep). The evidence for this was recently discussed in detail at the recent expert elicitation workshop held in Amsterdam in association with the INPAS symposium - a report is currently being drafted and will be shared as soon as is possible. It is unlikely that individual animals will experience repeated disturbance over their lifetime as a result of cumulative long-term piling activity. All available tagging data</p>

¹ Brandt, M.J., Dragon, A.C., Diederichs, A., Bellmann, M.A., Wahl, V., Piper, W., Nabe-Nielsen, J. and Nehls, G., 2018. Disturbance of harbour porpoises during construction of the first seven offshore wind farms in Germany. *Marine Ecology Progress Series*, 596, pp.213-232.

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	<p>suggests that harbour porpoises regularly move very large distances and don't show a large degree of site fidelity. Studies have also shown that porpoises have a varied diet and can exploit a variety of prey species. It is therefore unlikely that long term displacement from a particular area, even if it were to occur (but note comments above about rapid local recovery), would result in a significant biological consequence for the individual. The current best scientific approaches to predicting population impacts suggest that population level consequences may be limited, even for the currently envisaged scale of development in the North Sea. The assessment undertaken within the ES has been based on this as best scientific evidence and expert judgement. The Applicant accepts that there a number of uncertainties in relation to this modelling which is why a commitment has been made to undertake appropriate monitoring to help address such uncertainty. However it is important to note that both the iPCoD modelling framework and the assessment of pile driving noise impacts more generally takes a very precautionary approach on a number of uncertain parameters and therefore the end result of this process is likely to be an overestimate of the real potential for impact an example of the assessment precaution is presented in Appendix 14 to the Applicants response to Deadline I).</p> <p>With regard to the lack of a quantified assessment of Tier three - this contains projects which at the time of the assessment were without sufficient available information on the foundation construction envelope to assess with any confidence. A meaningful assessment of these could not therefore, be carried out.</p>
<p>5.5.7 We note that the Cumulative Effects Assessment has assessed Hornsea Project Three with other wind farms, as well as Hornsea Project Three with seismic surveys, but not all noisy activities together (e.g. wind, seismic and UXO detonation combined).</p>	<p>The Cumulative Effects Assessment assessed Hornsea Project Three with respect to different underwater noise types rather than all together recognising differences in the nature of the underwater noise and therefore differences in the nature and extent of impacts between the different activities and therefore it is difficult to assess together in any meaningful way. In addition there were differences in the amount of information available on the potential nature and extent of future noisy activities that made it difficult to assess holistically. Underwater noise is assessed in three ways in the CEA:</p> <ol style="list-style-type: none"> 1) Disturbance from pile driving at Hornsea Project Three with disturbance pile driving at all other wind farms 2) Underwater noise related disturbance from foundation piling and other construction activities at Hornsea Three with underwater noise from oil and gas seismic surveys

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	<p>3) Underwater noise from UXO clearance, foundation piling and all other construction noise at Hornsea Three alongside UXO clearance by other projects and other marine construction activities.</p>
<p>5.5.8. Conclusions of the RIAA:</p> <p>While Natural England agrees with the assessment that the Hornsea Project Three windfarm alone will not adversely affect site integrity given the relatively small disturbance footprint within the site, Natural England does not agree with the conclusions of the in-combination assessment, as presented in the Report to Inform Appropriate Assessment (RIAA).</p> <p>Various scenarios (sequential and concurrent piling), including minimum and median in combination spatial overlaps, total over 20% of the cSAC/SCI area. These total numbers do not take into account seismic or UXO detonations within the tables. In addition to that, there are two wind farm project that are at the Preliminary Environmental Information report (PEIr) stage, but are on overlapping construction timeframes with Hornsea Project Three, that have not been included within the assessment. It cannot be shown at the present time that there will not be an adverse effect on site integrity from the projects that are in development. This is not an issue unique to Hornsea Project Three and work will need to be undertaken to reduce the noise levels of multiple wind farms potentially developing at the same time, nevertheless, this should be reflected in the ES.</p>	<p>The Applicant welcomes Natural England's agreement on the conclusion for the Project alone. With regard to the in-combination assessment the Applicant cross refers Natural England (and the Ex.A) to Appendix A of the "All other Matters" SoCG between both parties. Within that Appendix, further detail is presented on the following points all of which apply to the matters raised here by Natural England:</p> <ul style="list-style-type: none"> - the consequence of cumulative (and in-combination disturbance); - the likelihood of all activities across different Tiers coinciding and the risk of compounding precaution and making Type one errors from adding all of these together (as detailed within Appendix 14 o the Applicant's response to Deadline I); and - the dML control measure (now in the form of a commitment to a Site Integrity Plan) that will ensure appropriate mitigation is applied and approved to adequately reduce any contribution to an in-combination effect in the unlikely scenario that risk to site integrity is identified prior to commencement of works. <p>The Applicant acknowledges that projects within the planning phase have moved forward since the time of writing of the application material / point of submission. The Applicant has prepared a note (as submitted at Appendix 14 to the Applicant's response to Deadline I) to confirm the implications of any such changes in EIA and or HRA terms. It is noted that these changes do not affect the overall conclusions of the HRA for the in-combination effects on the southern North Sea SCI.</p>
<p>5.5.9 Screening out cable and pipeline installations:</p> <p>Natural England does not agree that cables and pipeline installations should be screened out of the CEA (6.6.1.7). Such projects may also have to carry out UXO detonations within the cSAC/SCI and therefore should be assessed in combination with other noisy</p>	<p>The Applicant's in-combination assessment has sought to present a quantification of all effects where specified within each relevant application document. If a project has not presented quantified information within its application material with regard to UXO clearance and or</p>

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<p>activities. In addition, the RIAA does not assess the combined impact of the project alone in terms of disturbance from various noisy activities arising just from Hornsea Project Three, such as piling and UXO clearance.</p>	<p>seismic survey work then it is not appropriate for the Applicant to generate hypothetical numbers on their behalf. On the basis that no information was available on the need for and detail of any UXO clearance from such works the Applicant considers it correct to have screened them out. If any when such activity comes forward and identifies a need to undertake UXO clearance work it will need to apply for an appropriate licence to do so. At that juncture that activity will need to have due regard to any potential additional activity taking place that may result in an in-combination effect.</p> <p>Notwithstanding this, it is noted that the Applicants in-combination assessment did recognise that such activity may have the potential to occur (see paragraphs 6.7.2.19 to 6.7.2.27 of the RIAA, [APP-051], and provided detail on the SNCB advocated effective deterrence ranges (EDR) for such activity. However, in the absence of specific information on the nature, location and or, timing of any such activity no quantified assessment could be undertaken.</p>
<p>5.5.10 Averaging piling across seasons: Natural England does not agree with the proposed approach to average the piling days across all seasons (see section 6.5.2.66 of the RIAA). Based on our experience, more work is likely to happen in summer months and developers would normally want to finish the works as early as possible. Therefore, we question whether averaging the piling across the whole year presents a realistic WCS. It is our view that a realistic worst case would be to start on the first day of the summer season and look the maximum number of piles that could feasibly be installed in that season.</p>	<p>Construction activity is likely to occur throughout the year noting that the most sensitive component of the installation process to weather conditions, is the blade lift and therefore, foundation installation is often scheduled to ensure that the installation of blades can occur before the winter months. Notwithstanding this point, even if all of the activity from the Project alone were to take place within the summer months there could be no risk to site integrity as thresholds could not be reached and this has been evidenced in the Applicants response to Ex.A Question 1.2.105.</p>
<p>5.5.11 Projects scoped in: Even though Norfolk Boreas and East Anglia Two and One North have not submitted their PEIRs at the present time, they have submitted scoping reports and should be acknowledged qualitatively as potentially overlapping with the Hornsea Project Three construction schedule, especially since the MORL Western development area is also at a scoping stage (4.13.1.79). Natural England also notes the RIAA chapter where all projects that have submitted a scoping report are included within Tier 2. Natural England supports the definitions within the RIAA. i.e. any project that has submitted a scoping report is included within Tier 2. However, the definition of the tiers also changes in section 6.6.1.13</p>	<p>As identified in response to comment 5.5.8, the Applicant has provided a Clarification Note (as presented at Appendix 14 to the Applicant's response to Deadline I) to update the CEA and In-combination assessments, where relevant and the Applicant cross refers Natural England and the Ex.A to this note for further detail.</p> <p>The tiering definitions presented in Volume 2, Chapter 4: Marine Mammals [APP-064] and Section 6 of the RIAA [APP-051] are identical. The difference arises due to the tiering definitions provided in Section 4 of the RIAA. The Applicant considers that there is a much greater degree of uncertainty associated with the information provided</p>

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<p>of the RIAA. Please can clarification be provided for the differences between (and within) the two chapters.</p>	<p>for projects that are only at scoping stage due to potential changes that may occur in relation to site-specific data, project design, etc. These projects should therefore be placed into a different tier to those that have submitted a consent application that represents a definitive project design with associated impact assessments.</p>
<p>5.6. Onshore ecology</p> <p>The table below provides a summary of Natural England's key concerns.</p> <p>5.6.1 We do not consider that there is sufficient information on groundwater impacts from Hornsea Project Three for us to provide a comment on the impact assessment of the project alone. Therefore, we are not able to comment on any likely in-combination effects with Norfolk Vanguard Offshore Wind Farm cable route. Natural England advises that impacts, which may arise in combination on the internationally designated features via changes to groundwater supply, should be considered and mitigation measures put in place to minimise any likely significant effects. Currently, the ES only considers the in-combination effects on narrow-mouthed and Desmoulin's whorl snail.</p>	<p>Natural England's concerns relating to groundwater impacts have been resolved in Table 4.1 of the Natural England SoCG, and it is also agreed that there will be no in-combination impacts with Norfolk Vanguard/Boreas Offshore Wind Farm cable route with regards to surface water run off, sediment pollution and hydrological impacts.</p>
<p>5.6.2 It is Natural England's view that the Environmental Impact Assessment (EIA) does not have sufficient detail around the potential impact on groundwater flows for us to provide detailed comments at this stage. The proposal is to carry out Horizontal Directional Drilling (HDD) very close to the designated site in terms of potential hydrological connectivity about 360 m). Therefore, we request further detailed information and impact assessment.</p> <p>The proposal to HDD under the Blackwater Drain which feeds into Booton Common SSSI will avoid surface water quality impacts on the interest features, provided there is no accidental pollution from HDD operations. However, there may be a risk from water-borne pollution arising from chemical spills, leakages etc. during construction.</p>	<p>A number of mitigation measures have been identified to reduce the potential for impacts on surface water hydrology and groundwater, and on this basis, effects on Booton Common SSSI were not identified to be significant during construction or operation.</p> <p>Following Natural England advice, the site specific crossing method statement for the HDD of Blackwater Drain (at Booton Common) will be developed in consultation with the Environment Agency and Natural England. Paragraphs 3.1.1.1, 6.4.1.10 and B.1.1.3 of the CoCP [APP-179] have been updated post-application to secure this commitment. This is noted in Table 4.1 of the Statement of Common Ground.</p> <p>Issues relating to pollution control have been agreed in Table 4.1 of the Natural England SoCG.</p>
<p>5.6.3 North Norfolk Coast SPA/Ramsar site will not be directly impacted by the proposal. However, pink-footed geese which are a feature of the internationally designated sites use neighbouring fields in the winter to forage (known as functionally-linked land) and may be affected during the construction of the cable route. If construction works take place September-April, then some loss of feeding habitat and/or displacement of birds may take place depending on the location of sugar beet fields. We note the Applicant proposes to submit a pink-footed goose mitigation plan to Natural England in the 12 months prior to construction if works are proposed for the period November to January. We are not able to comment on the likely effectiveness of this plan without further detail. Our recommendation is that avoidance measures, such as timing or crop rotation should be considered first, as outlined in best practice of mitigation hierarchy. We advise that sugar beet is not planted in the season</p>	<p>A Pink-footed Goose mitigation plan will be prepared and submitted to Natural England for approval in the 12 months preceding commencement (post-consent). This is likely to include a decision tree process in line with adaptive management principles, which will determine triggers for appropriate levels of mitigation (i.e. ECoW watching brief, toolbox talks for construction teams, restricting more intrusive construction works in certain locations). It is not appropriate to deliver further detail pre-consent as factors such as crop regime, construction timelines and construction processes, all of which determine the mitigation proposed, will be confirmed post-consent.</p>

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<p>prior to construction in those fields within a 500 m radius of the landfall and the cable route in areas known to be used by pink-footed geese. It is not clear whether this approach has been considered, and if so, why the Applicant does not propose to implement it.</p>	
<p>5.6.4 Natural England notes that the cable will be installed by HDD immediately adjacent to the Kelling Heath SSSI. We advise there must be no incursion of surface water run-off and temporary construction works, including fencing, vehicles, storage of materials etc. onto the Kelling Heath SSSI during construction, operation or decommissioning. If mitigation measures for any species (e.g. for reptiles), are proposed within the SSSI, assent will be required from Natural England. We advise that light spill onto the SSSI should be kept to a minimum.</p>	<p>The Applicant has agreed with Natural England in Table 4.1 of the Statement of Common Ground that appropriate measures to control impacts associated with surface water run-off from construction are proposed.</p> <p>HDD compounds are included within the onshore order limits for all major HDDs, such as the HDD adjacent to Kelling Heath SSSI. As stated in section 4.1.7.14 of the Outline CoCP, HDD compounds will have 'appropriate drainage and sediment control measures... to control surface run-off from the compound'. There will be no direct impact of the onshore cable corridor on Kelling Heath SSSI. As construction includes full reinstatement of all temporary works, which include HDD compounds, no impacts are anticipated during operation. Any decommissioning works of the onshore export cable corridor would be subject to a separate application at the appropriate juncture.</p> <p>Following input from Natural England, the following clarification text has been added to paragraph 6.4.1.3 of the Outline CoCP (new text shown in underline):</p> <p>6.4.1.3 <i><u>"The detailed design of the surface water drainage scheme would be based on a series of infiltration/soakaway tests carried out on site and the attenuation volumes outlined in supporting Flood Risk Assessments (FRAs) (volume 6, annex 2.1: Onshore Infrastructure FRAs). The tests will be undertaken prior to construction and in accordance with the BRE Digest 365 Guidelines. Measures to avoid or minimise sediment and potential contaminants from entering surface water will be designed to accommodate 1 in 100 year plus climate change worst case storm events."</u></i></p> <p>On the basis that no direct impact on Kelling Heath SSSI is anticipated, there are no further mitigation measures proposed for this location.</p> <p>Lighting associated with HDD works will be directional to minimise light spill in any direction other than where necessary for the safe operation of HDD plant. The detailed lighting strategy for the construction phase will be submitted as part of the final CoCP for the approval of the local planning authority under Requirement 17 of the dDCO.</p>
<p>5.6.5 Natural England expresses concern that no bats are shown as present on Alderford Common SSSI. It is our understanding that they are present with a well-established roost, hibernaculum and a feeding area. Not identifying this site is a potentially significant omission in the surveys (and questions the adequacy of other</p>	<p>Access was not granted for bat surveys on the south west of Alderford Common SSSI, as shown in Figure 2.10, Bat Surveys [APP-136]. However, the presence of the well-established roost is noted on Page 6 of Annex 3.1, Desk Study and Phase 1 Habitat Survey [APP-129].</p>

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<p>ecological surveys). Measures to avoid disturbance will need to be implemented here.</p>	<p>Where practicable, areas identified as containing protected species, including roosting bats, have been protected by siting the onshore cable corridor alignment to provide an appropriate buffer from construction and operational works. The width of these buffer zones will be developed in accordance with standard industry requirement and best practice guidance.</p> <p>Measures to avoid disturbance (general) are documented in the Outline CoCP [APP-179] and Outline Ecological Management Plan [APP-180] (hereafter Outline EMP).</p> <p>The Applicant has reviewed the Outline Code of Construction Practice [APP-179] and added the following wording to paragraph 6.5.1.6: <u>"Construction lighting in the vicinity of bat roosts and hedgerows where high or very high levels of bat activity have been recorded will follow best practice guidelines produced by the Bat Conservation Trust (Bat Conservation Trust, 2011)".</u></p>
<p>5.6.6 Surface water run-off from the full width of the working corridor is not clearly or consistently addressed, nor are the potential impacts, which are underestimated as being short or medium term and reversible. The outline Code of Construction Practice (CoCP) is the only place in the documents runoff and its control is actually addressed. Effective design and implementation in the context of local conditions of all pollution control measures is imperative to mitigate pollution and invasive non-native species/disease risks. Ongoing consultation with Environment Agency and Natural England will be vital to ensure pollution and run off control measures are effective and appropriate for local conditions. Without it the measures and claims in other chapters cannot be considered robust.</p>	<p>Issues relating to surface water run-off, pollution control and biosecurity have been agreed in Table 4.1 of the Natural England SoCG.</p> <p>Details of measures relating to pollution prevention are described in the Outline CoCP and Outline EMP. Measures include the provision of a pollution incident response plan and a drainage management plan to minimise potential pollution effects.</p> <p>It is noted that paragraph 6.4.1.17 (last bullet point) of the Outline CoCP includes a provision for ongoing consultation with the Environment Agency and Natural England during the construction period to promote best practice and to implement proposed mitigation measures.</p> <p>Management of construction works, including for surface run off, will comply with the necessary standards and consent conditions as identified by the Environment Agency. Measures to be adopted for the avoidance of pollution during the operation of onshore infrastructure are set out in Volume 3, Chapter 2: Hydrology and Flood Risk.</p> <p>The applicant has discussed flood management with the Lead Local Flood Authority (Norfolk County Council), including the approach to following Sustainable Urban Drainage Systems (SuDS) principles, as detailed in Ciria C741, which have been considered throughout the onshore design and supporting documentation. A SoCG is being advanced with NCC, which encompasses flood management, with an expectation this can be agreed on imminently.</p>
<p>5.6.7 The Applicant proposes to 'minimise production of silt and contaminated water where practicable'. It is our view that minimising run off from exposed ground and stockpiles will be vital and we require more clarity over the mitigation measures that will be used</p>	<p>Issues relating to surface water run-off and sediment pollution have been agreed in Table 4.1 of the Natural England SoCG. Paragraph 6.4.1.17 (final bullet point) of the Outline CoCP [APP-179] states: 'Consultation with</p>

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<p>and their effectiveness is required to have confidence in assessments of effects. Complying with Ciria guidance is an appropriate starting point but actual measures need to be effective within the local context (topography, soils, rainfall, pathways, receptors etc.). Note: Ciria C692 has been superseded by Ciria C741.</p>	<p><i>the Environment Agency and Natural England to be ongoing throughout the construction period to promote best practice and implement proposed mitigation measures.'</i></p>
<p>5.6.8 Natural England notes that a single flood event that would overwhelm protection measures could deposit large amounts of sediment into watercourses. This situation would not readily reversible nor would the impacts be of short term duration. Recent rainfall data show of the 11 intense rainfall events (>31 mm/day) in the last 26 years 9 have been in the last 10 years. Therefore, run off control measures should be designed to cope with this type of event as a minimum.</p>	<p>Issues relating to surface water run-off and sediment pollution have been agreed in Table 4.1 of the Natural England SoCG.</p> <p>Flood control measures and pollution prevention measures are detailed in Paragraphs 6.4.1.6 through to 6.4.1.17 of the Outline CoCP. In line with Natural England's advice, the following clarification text has been added to paragraph 6.4.1.13 of the outline CoCP [APP-179]: <u>'Measures to avoid or minimise sediment and potential contaminants from entering surface water will be designed to accommodate 1 in 100 year plus climate change worst case storm events.'</u></p> <p>The location of storage areas for example have been sited away from watercourses and flood zones where possible to minimise this risk. There are two locations where the boundary of the storage area is located within a flood zone associated with nearby rivers. This is noted in the Outline CoCP (paragraph 4.1.7.11), which then confirms that in these locations, the use and layout of these storage areas will be carefully managed to minimise the risk of contaminants entering the watercourses.</p> <p>As part of post consent/ pre-commencement of works, the Outline CoCP (paragraph 4.1.2.1) notes that if requested by the Local Planning Authority or Environment Agency, layout plans of the construction compounds will be provided, showing sensitive areas and buffer zones (e.g. ecological habitats or protected species), and areas where storage of potential pollutants (e.g. fuels, oils and other chemicals) will be avoided.</p>
<p>5.6.9 Natural England agrees with the conclusions of a moderate-adverse significant effect of the permanent loss of best and most versatile (BMV) soils between 23.66-50 ha. We question why the outline CoCP does not address management of BMV soils when it has been identified as a significant effect. We advise the Applicant that detailed guidance is available in Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and we recommend that this is followed.</p>	<p>Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078] set out designed-in measures adopted as part of Hornsea Three to manage soils.</p> <p>The Outline CoCP commits to a soil management strategy being implemented (prior to the commencement of onshore works) to ensure that recognised good practice is effectively implemented on site, with soil handling operations will be supervised on site. This management applies to all soils, including BMV.</p> <p>The applicant has reviewed the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and the principal of the measures that it recommends (in particular those documented in Section</p>

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	5 of that guidance – 'Soil management during construction' are already captured in the projects Outline CoCP.
<p>5.6.10 No draft licences had been submitted to Natural England prior to the application submission. However the Applicant states that 'there are no known issues that would prevent a European Protected Species (EPS) license being granted'. The Applicant needs to have obtained a Letter of No Impediment (LONI) for each EPS, otherwise the Examining Authority can have no certainty that a licence will be granted.</p>	<p>The Applicant is developing the documentation required to secure the LONI. This will be submitted to Natural England shortly.</p>
<p>5.7. Seascape and Landscape</p> <p>The table below provides a summary of Natural England's key concerns.</p> <p>5.7.1 It is Natural England's view that there is insufficient information in the application to determine impact from the onshore cable corridor on special qualities of the Norfolk Coast Area of Outstanding Natural Beauty (AONB). A key special quality of the Norfolk Coast AONB is 'Exceptionally Important, Varied and Distinctive Biodiversity, based on Locally Distinctive Habitats'. A key characteristic of the landscape character type Coastal Towns and Villages, CTV1: Weybourne to Sheringham within Norfolk Coast AONB is 'Small fields, hedgerows and woodland, which provide an enclosed structure for this intimately scaled rural landscape'. Natural England would expect to see a detailed analysis of the impacts on key landscape elements within the AONB which contribute to biodiversity and landscape character, such as hedgerows and woodland and other seminatural habitats. At this present time the ES does not include information about where there will be a long term/persistent loss of key landscape features, such as veteran trees and important hedgerows within the AONB, and there is no detail provided of the steps that have been taken to minimise the loss.</p> <p>We understand that following completion of construction, there would be a period of a minimum of five years for the new hedgerow planting to fully mature. This means that the time for the landscape to recover is temporary long term. In addition to the impact of the cable route, the construction impacts of any joint bays, link boxes, compounds etc. within the AONB should be assessed in full.</p>	<p>While it is considered that sufficient information is presented in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] to determine the impacts from the onshore works on the Norfolk Coast Area of Outstanding Natural Beauty (AONB), the Applicant has drafted a clarification note on impacts specific to the Norfolk Coast AONB [Appendix 23 of the Applicant's response to Deadline I].</p> <p>In respect to tree and hedgerow loss along the onshore cable corridor, details of the measures designed in to the project to minimise impacts are identified in Volume 1, Chapter 3: Project Description, Volume 3, Chapter 4: Ecology and Nature Conservation [APP-075], the Outline CoCP [APP-179], Outline EMP [APP-180] and Outline Landscape Management Plan [APP-181]. These measures include the use of trenchless technology to avoid direct impacts on the features. Where works are required to hedgerows, these will be minimised, with the course of action for each hedgerow to have been pre-determined and outlined in the Outline EMP and Outline LMP.</p> <p>Construction impacts arising from compounds located within the AONB are assessed as they are included within the maximum design scenario set out in Table 4.6 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076].</p>
<p>5.7.2 There is likely to be a significant impact on the visual amenity of users of the national trails from the cable landfall, particularly during construction and decommissioning.</p> <p>Section 4.11.1.26 of the Landscape and Visual Resources chapter states that construction activities could potentially require temporary closure or diversion of these routes. The offshore activity associated with the landfall and works in the intertidal zone would be visible from the national trails. We agree that the sensitivity of users is very high and we consider that the effect on them would be significant for</p>	<p>Potential impacts of the construction works along the onshore cable corridor, including landfall works, on visual receptors including users of local routes (roads and public rights of way), are assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. Effects were not assessment to be significant. As set out in Table 4.7, impacts during construction associated with the offshore elements of Hornsea Three were scoped out of the assessment due to the short to medium term and temporary nature of the</p>

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<p>the duration of the construction. There are no details of what measures might be taken to mitigate for any adverse visual impacts and whether any footpath improvements might be required for the diversion.</p>	<p>impacts. As a result of these conclusions, no mitigation measures beyond those designed-in to Hornsea Three (set out in Table 4.12 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] and Table 6.28 of Volume 3, Chapter 6: Land Use and Recreation) are considered necessary.</p> <p>Details of interactions with PRow and linear routes, including management measures to be applied at specific locations will be provided in a Public Rights of Way Management Plan which will form part of the final Code of Construction Practice. This will be developed post-consent once a contractor has been appointed. Initial discussions have however been undertaken with Norfolk County Council, and proposed diversions for the Norfolk Coast Path have been provided to the North Norfolk Trails Partnership, of which Natural England is member, for comment.</p>
<p>5.7.3 There is no mention of whether the Offshore HVAC Booster Station will be lit and visible at night. The representative visualisations should include night time views if the station will be lit.</p>	<p>Lighting and marking of the offshore HVAC booster station(s) will be required and would be in accordance with IALA guidance. Effects of the offshore HVAC booster station(s) on land based receptors are assessed in Volume 6, Annex 4.7: Effects of the Offshore HVAC Booster Station. This confirmed that given the distance of the proposed offshore HVAC booster station search area from shore and the limited extent to which it would be visible, the landscape and visual effects from an offshore HVAC booster station on land-based receptors would not be significant. On this basis, it is not considered necessary to prepare night-time visualisations.</p>
<p>5.8. In Principle Monitoring Plan (IPMP)</p> <p>Natural England believes that the hypotheses to be answered as part of the offshore wind farm monitoring plan need to be clearly set out in the IPMP and should be based on the conservation objectives for the designated sites and the key concerns relating to the HRA. In addition the IPMP does not allow for the consideration of residuals concerns that the SNCBs currently have in relation to the impacts of this project and remain concerned that the monitoring will not support any industry learning in relation to impacts and recovery and/or inform the undertaking of any required remedial/restoration works that may be required. Natural England looks forward to further discussion with the Applicant and the other interested parties on this matter.</p>	<p>Whilst the Applicant does not agree with the concept that the IPMP would not enhance the knowledge base around key uncertainties, the Applicant will work with Natural England to update the IPMP further.</p>
<p>6. Matters that must be secured by requirements in the Development Consent Order (DCO)</p>	<p>Noted</p>

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<p>6.1. In light of the fundamental concerns we have highlighted with this application, Natural England does not feel able to advise on matters to be secured through the DCO at this time.</p>	
<p>Annex A – Detailed comments on the Development Consent Order and Deemed Marine Licenses</p> <p>In addition to the main concerns listed in Natural England's Relevant Representation, we would like to bring the Examining Authority's attention to the following issues as identified from reviewing the Hornsea Project Three Development Consent Order (DCO) and Deemed Marine Licenses (DMLs).</p>	<p>Noted</p>
<p>A.1. Unexploded Ordnance (UXO) detonations are mentioned within Vol. 1 Ch. 3 Project Description, however, no maximum number or size is given and no mention of UXO is made within the DCO/DML. We note that UXO is therefore not part of the consent and a separate Marine Licence and potentially a European Protected Species (EPS) licence will therefore be required.</p>	<p>The Applicant confirms that a separate UXO clearance licence will be sought prior to the commencement of construction activity, once it is known how many (if any) and what nature any UXO within the areas within which construction activity will takes place, requires clearance.</p>
<p>A.2. We note that similar to other parts of the application submitted the figures for total offshore platforms, cable length, cable protection, scour protection and disposal volumes do not add up between the DCO, DMLs and the Environmental Statement (ES) project description. Additionally the cable protection related to cable crossings does not seem to be included in either of the two DMLs. The applicant needs to ensure the ES project description, DCO and DMLs all total the same volumes and quantities.</p>	<p>The Applicant's response to the Planning Inspectorate on the 25 July 2018 outlines the relationship between the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]. This document is located at https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-000802-20180723_HOW03_S58_Attach02_PDESTable.pdf</p> <p>It should be noted that Schedule 11, Part 2, Condition 3(1) includes the volume of cable protection, excluding cable protection required for cable crossings, in Work No.1(c) (i.e. the array cables) and Work No.2(c) (i.e. interconnector cables) and Schedule 12, Part 2, Condition 1 includes the volume of cable protection, excluding cable protection required for cable crossings, in Work No.2 (i.e. interconnector cables and export cables) and Work No.3 (i.e. export cables). In order to clarify that Schedule 11, Part 2, Condition 3(1) and Schedule 12, Part 2, Condition 1 does not include cable protection required for cable crossings, it is proposed that the Draft DCO [APP-027] is updated to state: "the volume of their cable protection (excluding cable crossings) [...]"</p>

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<p>A.3. Natural England is concerned that no figures for the maximum amounts of permitted sandwave levelling and boulder relocation are included anywhere within the DCO/DMLs, save as a potential aggregate within the disposal figures. It is our view that such approach is not appropriate, or adequate, to ensure the limits of the worst case scenario assessment are adhered to. For sandwave levelling it is important the licence states both the area of impact and the volume of impact.</p>	<p>The volume of sandwave and boulder clearance are included in the Draft DCO [APP-027] as follows:</p> <ul style="list-style-type: none"> - Schedule 1, Part 1, Requirement 1(c) includes for the removal of material from the seabed for the construction of Work Nos 1 to 5 and the disposal of up to 3,563,133 cubic meters of inert material of natural origin within the Order limits produced during [...] cable installation preparation such as sandwave clearance, boulder clearance [...]. - Schedule 11, Part 1, Condition 2(f) includes for the disposal [...] of up to 1,344,318 cubic metres of inert material of natural origin produced within Work No. 1. - Schedule 12, Part 1, Condition 2(f) and (g) includes for the disposal [...] of up to 2,218,816 cubic metres of inert material of natural origin produced [...] within Work Nos. 2, 3, 4 and 5. <p>The sandwave and boulder clearance material will be disposed of within the disposal site (specifically Works Nos. 1, 2, 3, 4 and 5) as outlined within the Draft DCO [APP-027].</p> <p>The Applicant's response to the Planning Inspectorate on the 25 July 2018 (link provided above) provides further information on the relationship between the disposal volumes quoted in the Draft DCO [APP-027] and Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058].</p>
<p>A.4. Natural England does not agree with the proposed approach of removing the condition for submitting a design plan to the MMO if it 'is within the scope of the ES'. Given the number of times Natural England and the MMO have had a different opinion to that of the developer on what is within an approved project envelope, removing such a condition would be inappropriate, in our view. There is a potential risk of the envelope not being checked as no response is required, and it will mean Natural England is not even consulted on the design plan.</p>	<p>The Applicant has reflected on this matter further and will amend the condition so that a design plan is required to be submitted for approval by the MMO.</p>

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Relevant Representation Comment	Applicant's Response
<p>A.5. The standard approach of all offshore wind farms is to conduct a preconstruction survey to ensure there are no habitats of ecological importance and where they are present every effort should be made to avoid impacting on them. The Generation DML also has no pre-construction or post construction monitoring requirement to identify any features of ecological importance. The DMLs do not include a requirement to micro-site around habitats of ecological importance outside of European designated sites (only reference to micro siting outside the sites relates to archaeological features). It is Natural England's view that the lack of micro-siting and monitoring requirements is not appropriate. We also question how the project intends to micro-site within a European site if no pre-construction survey to identify ecological features is proposed under the Generation DML. The lack of surveys outside of designated sites could also lead to disposal activities occurring affecting ecologically important habitats.</p>	<p>The Applicant does not agree that there is a standard approach to benthic monitoring within the offshore wind sector. However, and notwithstanding this, the Applicant can confirm that it will update the dML and IPMP to reflect a commitment to monitoring of key ecologically important features throughout the transmission and generation assets (both pre and where necessary post construction). The Applicant recognises that the dML wording relating to identification of designated features / annex I habitat that should be mitigated through micrositing can be improved and this will be updated within both the generation and transmission assets dML.</p> <p>The Applicant intends to extend the existing condition within the transmission assets dML (16(2) (ii) <i>details of a survey to determine the location, extent and composition of any Annex I reefs within SACs and/or biogenic or geogenic reefs outside SACs within the Order limits.</i>) to the generation assets and ensure that where necessary post construction monitoring is carried out under both dMLs.</p> <p>The micrositing commitment as part of the design plan (Condition 11/12(1)(a)(vi)) will be expanded to capture Annex I habitat micrositing and will be linked updated pre-construction geophysical & benthic survey conditions that will serve inform the location and extent of any features that require micrositing..</p>
<p>A.6. The generation DML Part 2 Condition 11 (2) (f) secures the monitoring requirements within pre-construction plans. However, this condition is linked to the standard pre-construction timing requirement of 4 months before commencement. Clearly this is inappropriate given monitoring will need to be conducted well in advance of this date.</p>	<p>The Applicant agrees that the monitoring plans will need to be submitted for approval an appropriate timescale in advance of that particular monitoring activity taking place and that the dMLs have been updated to reflect this.</p>

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Relevant Representation Comment	Applicant's Response
<p>A.7. The DMLs both have a requirement for pre-construction plans under condition 11 or 12 to be submitted for approval four months before construction. Natural England notes that this timeline was set in place by Round 1 offshore wind farms. It no longer represents a sufficient amount of time for the Round 3 projects as the significant increase in size and complexity of these developments, in combination with the phased approach developers are taking, leads to a very high volume of documentation to review in a short space of time. It is our view that this should be extended to a minimum of six months, or potentially eight to give appropriate time for review of large complex plans, for comments to be made and for several iterations to be reviewed.</p>	<p>The Applicant notes that Orsted always seeks to submit plans for approval as far in advance as reasonably practicable. However, as final scheme design and installation contractor appointment can happen quite late in the process there is a risk that bringing submission of plans forward risks the need to resubmit plans at a later date. A process which is counter productive for all parties.</p> <p>4 months is considered a well established and reasonably balanced timescale for this process.</p> <p>However, the Applicant recognises the resource constraints that Natural England is under and proposes to address those resource constraints through entering into a framework agreement with Natural England. The intention is that the framework agreement is similar to a planning performance agreement and would allow the Applicant and Natural England to plan in advance the necessary resource requirements and associated costs.</p>
<p>A.8. Post consent monitoring proposed in the DMLs is very limited in detail in relation to benthic, ornithology and marine mammals and there is insufficient detail provided in the In-Principle Monitoring plan. This should therefore be updated.</p> <p>Natural England also requests that timescales for provision of monitoring reports are defined in the DCO/DMLs. This is for the regulator and the SNCBs to be able to compare the site specific monitoring data against the worst case scenario impacts assessed in the ES. We propose that four months after completion of a survey presents a reasonable timeframe for submitting the monitoring report for review.</p>	<p>As identified above the Applicant will work with Natural England to update the IPMP and will also update the dMLs with regard to the monitoring commitments to ensure that pre- and post construction aspects are clear (notwithstanding the need to retain flexibility if strategic monitoring is taken forward for mammals and/or birds).</p> <p>The Applicant agrees that provision of monitoring reports 4 months following completion of each monitoring campaign is a reasonable request and will reflect this in the updated dML</p>
<p>A.9. A condition requiring the developer to update the noise registry following works has not been included. This condition is a standard requirement to keep the noise registry updated and relevant. This is especially important for Schedule 11 given the significant number for foundations involved. However, the condition should be included on all DMLs where potential piling or UXO detonations are proposed.</p>	<p>The Applicant will include an updated condition to reflect this with its dMLs for piling (in line with the wording provided by the MMO). If and when the undertaker seeks a Marine Licence for UXO clearance then it is reasonable to assume that an equivalent condition will be included within that licence, but the Applicant does not intend to include such a condition within this DCO as UXO clearance does not form part of the licenced activities.</p>
<p>A10. Natural England recommends inclusion of a new condition to allow for appropriate reporting on the location of all cable protection, including volumes of cable protection. This reporting is required to ensure the cable protection deployed is within the permitted levels and to inform the need for decommissioning of cable protection and cables in the future.</p>	<p>The Applicant has included an appropriate condition to this effect within the updated dMLs (DCO Revision 1 as submitted at Deadline 1)</p>
<p>A.11. We note that the DMLs and the DCO should not include any direct reference to Natural England, rather the official text should state 'relevant SNCBs' throughout the schedules.</p>	<p>The Applicant has the updated dMLs to this effect (DCO Revision 1 as submitted at Deadline 1)</p>

Annex 8 – Full response to Norfolk Coast Partnership [RR-101]

Annex 8 – Full response to Norfolk Coast Partnership (RR-101)

Relevant Representation Comment	Applicant's Response
<p>I am responding to the Orsted consultation on Hornsea Project Three of November-December 2017 on behalf of the Norfolk Coast Partnership, guardians of the Norfolk Coast Area of Outstanding Natural Beauty and the North Norfolk Heritage Coast.</p> <p>Orsted plans show the cable coming ashore at Weybourne and heading south, crossing the A148 in the High Kelling area. In this area, the southern boundary of the AONB skirts the north side of Holt then runs eastward along the A148 road. Thus the onshore cable will run through a strip of the AONB between Weybourne and Holt, a direct distance of approx. 7.5km. The North Norfolk Heritage Coast designation stops at Kelling Hard, just to the west of the planned cable landfall. The AONB seaward boundary in this area is at low water mark and the Heritage Coast designation stretches seaward, with no official seaward boundary, so we also have some interest in the initial length of the offshore cable route.</p> <p>In addition, this is a very environmentally-sensitive area with SPA, SAC, SSSI, EMS and MCZ designations involved or close by.</p> <p>My comments relate to the potential effects of the development on the landscape quality of the Norfolk Coast Area of Outstanding Natural Beauty and North Norfolk Heritage Coast (referred to collectively as 'the AONB'), with consideration also given to development beyond its boundaries where this may have impacts on the views from the AONB and indirect impacts on the landscape of the AONB. Other than these considerations, I have not commented on the impact of this windfarm and cable route outside of the AONB boundary. I have not assessed or commented on any impacts on the wider marine environment. I have not assessed or commented in detail on impacts on the wildlife of the area.</p> <p>The current 2014-19 Norfolk Coast AONB Management Plan has a Policy (PC5) to 'Support the development of renewable energy in the area in ways and locations that contribute to the area's local economy and jobs and maintain its natural beauty.' However, the National Planning Policy Framework emphasises that the impact of a proposed development is an important consideration, including the cumulative landscape and visual</p>	<p>The comments outlined in this section of the relevant representation provide context to, and/or reflect those set out in further detail below. As such the Applicant has responded to each of the detailed points below.</p> <p>As set out in paragraph 4.11.1.9 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076], the value of the landscape within the North Norfolk AONB is generally considered to be of high value due to the national designation of the landscape. This has fed into the assessment, and it is considered that sufficient information is presented in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076] and Volume 6, Annex 4.4: Qualities of Natural Beauty of the Norfolk Coast AONB of the Environmental Statement [APP-145] to determine the impacts on the Norfolk Coast AONB. However, this is expanded upon in Appendix 23 to the Applicant's response to Deadline 1 to provide clarification on how conclusions have been reached in the Environmental Statement relevant to the special qualities of the AONB. Collectively, the various technical chapters of the Environmental Statement demonstrate that no significant effects are anticipated on the AONB.</p>

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Relevant Representation Comment	Applicant's Response
<p>impacts. It states that 'Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty'.</p> <p>As renewable energy schemes, and particularly large wind power schemes, can have a highly significant impact on the natural beauty of the landscape, we approach each project on an individual basis.</p>	
<p>AC v DC</p> <p>We note that AC technology involves a wider cable route, more cables, use of an onshore cable relay station and/or an offshore station. Thus we suggest the use of DC technology is preferable. We suggest that the criteria for selection of AC or DC technology should be based on 'best value for money' rather than 'least cost', taking into a number of other factors including impact on the local area and community.</p>	<p>Please see Appendix 22 to the Applicant's response to Deadline 1, which relates to transmission technology.</p>
<p>Onshore</p> <p>We question the decision to come ashore at Weybourne, given the long onshore cable route required to connect to the National Grid. We also question why the previous route, of the Dudgeon cables or Hornsea One or Two, cannot be reused or other collaborative ways of working be investigated to minimise local disruption.</p>	<p>Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059] of the Environmental Statement sets out the process of identifying a landfall location. Volume 4, Annex 4.1: Grid Connection and Refinement of the Cable Landfall for Hornsea Project Three [APP-092] (Stages 3-4), Sections 1.2.3 and 1.2.4, set out the criteria which were considered in order to identify the strategic landfall area. The criteria included consideration of a range of technical, environmental, deliverability and socio-economic considerations to be avoided, minimised or specific requirements to be met.</p> <p>Further refinement of the landfall location was informed by environmental surveys, technical and feasibility studies and consultation as set out in Section 4.8 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059]. The offshore cable corridor route in the nearshore area was also a key consideration, which was influenced by a number of constraints and the overarching principles set out in Section 4.9 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059].</p> <p>On the basis of the information presented in the Volume 1, Chapter 4: Site Selection and Consideration of Alternatives, the landfall location identified in Volume 1, Chapter 3: Project Description [APP-058] of the Environmental Statement is considered to be the most suitable.</p>

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Relevant Representation Comment	Applicant's Response
<p>Landscape</p> <p>It is apparent that the construction of the onshore elements of Hornsea Three has the potential to impact on landscape and visual amenity. Orsted are proposing a number of measures to reduce the landscape and visual impacts, retain landscaping where possible and enhance and compliment landscape features going forward. It is requested that good communications are maintained with the Norfolk Coast Partnership and other relevant organisations to ensure that these measures remain appropriate and are effectively implemented.</p>	<p>Impacts on landscape are assessed in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076], whilst impacts on ecology are assessed in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. A number of mitigation measures have been identified to reduce the potential for impacts to the surrounding area such as replacement hedgerow planting (further details provided in paragraph 4.3.6.5 and 5.3.3.2 of the Outline Ecological Management Plan, APP-180) and mitigation planting to supplement natural screening at the onshore HVAC booster station and HVDC converter/HVAC substation (further details provided in the Outline Landscape Management Plan [APP-181], and Appendix 23 to the Applicant's Deadline I submission: Impacts of the Qualities of Natural Beauty of the Norfolk Coast AONB). A final Ecological Management Plan and Landscape Management Plan, developed in accordance with the Outline EMP and LMP respectively, will be developed and submitted for approval by the relevant local planning authority secured by Requirements 10 and 8 of the dDCO [APP-027]. No works can commence until each of these plans have been so approved.</p> <p>The Applicant will continue to engage with interested parties, including the Norfolk Coast Partnership.</p>
<p>We have identified a number of sensitive landscapes and habitats and request that the impact on these is minimised through careful planning and delivery. These sites include (working south from the landfall site):</p> <ul style="list-style-type: none"> - Weybourne Cliffs SSSI - The shingle beach and shingle ridge, where its natural movement and profile should not be disrupted - The reedbed and pond to the west of the beach car park – which the Norfolk Coast Partnership is seeking funding for a community project to restore - Weybourne Beck (aka Spring Beck) – which has a published Catchment Management Plan (available from Norfolk Coast Partnership or Norfolk Rivers Trust) - Kelling Heath SSSI – a valuable heathland landscape - The Glaven River, running to its source near Selbrigg Pond – a rare chalk river with its northern stretch running through the AONB to the sea, of high ecological value and sensitive to pollution (e.g. run off during construction) 	<p>Consideration has been given to the potential impacts on designated sites, and sensitive sites in the relevant topic specific chapters of the Environmental Statement. In respect to those identified in this relevant representation, these features are considered in the following chapters:</p> <ul style="list-style-type: none"> • Weybourne SSSI, Kelling Heath SSSI – potential impacts assessed in Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement (APP-073); and • Spring Beck and River Glaven – potential impacts assessed in Volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement (APP-074). <p>In respect to the shingle beach and shingle ridge, impacts on the landfall and beach are assessed in all relevant chapters of the Environmental Statement. In particular Volume 2, Chapter 1: Marine Processes assess potential impacts on the hydrodynamics, sediment transport and beach morphology in the nearshore area (see paragraph 1.11.7.11, APP-061).</p> <p>The reedbed and pond located to the west of the beach car park is outside of the onshore Order Limits and would not be directly impacted by Hornsea Three. As such this feature has been screened out of the assessments presented within the Environmental Statement.</p>
<p>Ecology</p> <p>Orsted describe a range of measures to mitigate any effects on the area's ecology (with specific reference to biosecurity, invasive species, protective buffer zones, trees and hedgerows, amphibians and reptiles, water voles, otters,</p>	<p>Measures to mitigate and manage potential impacts on ecology are set out in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) as well as the Outline Ecological Management Plan (EMP) (APP-180).</p> <p>A final EMP must be submitted to and approved by the relevant</p>

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<p>badgers, bats, and wintering birds) and nature conservation for implemented prior to, during and post construction of the onshore elements of Hornsea Three, and the long-term management measures to be set in place for reinstated and enhanced habitats. It is requested that good communications are maintained with the Norfolk Coast Partnership and other relevant organisations to ensure that these measures remain appropriate and are effectively implemented.</p>	<p>planning authority in consultation with Natural England as the statutory nature conservation body, secure by means of Schedule 1, Part 3, Requirement 10 of the draft DCO [APP-027]. The final EMP will include an implementation table and must be carried out as approved.</p> <p>It is considered this provides Norfolk Coast Partnership with sufficient comfort that the measures within the EMP will be appropriate and effectively implemented. Notwithstanding this, the principal contractor will implement a proactive approach in communication with local stakeholders, including Norfolk Coast Partnership, which will be documented in a communication plan to be developed post-consent.</p>
<p>Access</p> <p>The Norfolk Coast Path National Trail and other circular routes, public rights of way and permissive paths in the area are well used by visitors and locals and any disruption and closure of paths should be minimised.</p> <p>There will be particular disruption to users of the Norfolk Coast Path National Trail at Weybourne. Orsted recognise the sensitive nature and high usage of the beach and the coastal footpath and propose measures for allowing continued access. It is requested that good communications are maintained with the Norfolk Coast Partnership and other relevant organisations to ensure that these measures remain appropriate and are effectively implemented.</p>	<p>Impacts on coastal public rights of way have been assessed in Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078]. A number of mitigation measures have been identified within this document and in the Outline Code of Construction Practice [see APP-179] to reduce the potential for impacts to bridleways and other local routes during construction. Further details on how public rights of way, including the Norfolk Coast Path, will be managed, will be provided prior to commencement of construction under Requirement 17 of the DCO [see APP-027] which requires the preparation of a Code of Construction Practice for approval by the relevant planning authority which will include a Public Right of Way Management Plan. This will be developed in consultation with NNDC, NCC and the Norfolk Coast Partnership.</p>
<p>Relay stations</p> <p>We thank Orsted for planning to site any relay stations to the southern end of the potential area for their location, i.e. outside of the AONB, and confirm that we would object if this changed to within the AONB as we consider that it would have a significant impact on the designated landscape.</p>	<p>Noted.</p>
<p>Construction</p> <p>We suggest that construction traffic should use carefully selected routes within the AONB, to minimise disruption, damage and pollution.</p> <p>This area is important for tourism, with visitors valuing its natural wilderness and tranquillity, and all efforts should be made to minimise the visual impact and disruption of construction and operation.</p>	<p>Under Requirement 18 of the DCO [as submitted, APP-027], a Construction Traffic Management Plan will be required to be implemented prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase; an outline of this document [APP-176] has been produced and accompanied the DCO application. In paragraph 2.1.4.4, the Outline CTMP notes that "<i>Depending on the season of construction of individual onshore cable corridor sections or components, during peak holiday seasons the approved routing of HGVs documented in final CTMPs, if practical, may need to avoid routes marked on the Norfolk County Council Route Hierarchy Map</i>". The final Construction Traffic Management Plan will include details of approved routing and traffic management measures to be implemented along key tourist routes (if required).</p> <p>Impacts on tourism and recreational activity, and its associated economic value, are assessed in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement [APP-082]. The assessment of effects related to tourism and recreation draws on the assessments provided in related chapters including Volume 3,</p>

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	<p>Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076], Chapter 6: Land Use and Recreation (APP-78), Chapter 7: Traffic and Transport (APP-079) and Chapter 8: Noise and Vibration (APP-080). As reported in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement, no significant effects relating to tourism are anticipated during construction or operation.</p>
<p>Historic environment</p> <p>The area is well known for its historic environment, including human remains, burial mounds/tumuli (on Kelling Heath and Fox Hill), listed buildings and scheduled monuments and it is important to deal with these sites sensitively, to minimise any impacts.</p> <p>It is suggested that construction activity should be preceded by agreement of an appropriate archaeological written scheme of investigation, submitted to and approved by Norfolk County Council.</p>	<p>Impacts on the historic environment are assessed in Volume 3, Chapter 5: Historic Environment of the Environmental Statement [APP-077], informed by a detailed baseline description is provided in Volume 6, Annex 5.1: Desk Based Assessment [APP-149]. This concludes that there would be no significant effects on buried archaeological remains as a result of Hornsea Three (see Table 5.17 of Volume 3, Chapter 5: Historic Environment [APP-077]).</p> <p>Notwithstanding this, the Applicant has inserted a requirement in the draft DCO [APP-027] that a Written Scheme of Archaeological Investigation must be submitted and approved by the relevant authorities prior to commencement of the consented works (Requirement 16 of the draft DCO [APP-027]).</p>
<p>Offshore infrastructure</p> <p>If the AC transmission option is adopted, we recognise the potential effect on visual amenity of any offshore booster/compensator platform which would be visible near to the coast from important areas within the AONB. We propose that this impact should be properly assessed, including the cumulative effects of this and other existing infrastructure.</p>	<p>Effects of the offshore HVAC booster station on land based receptors on the Norfolk Coast (including the AONB) are presented in Volume 6, Annex 4.7: Effects of the Offshore HVAC Booster Station [APP-148]. As illustrated on the visualisations for viewpoints OSBSA and OSBSB in Appendix 1 of APP-148, the offshore HVAC booster station would be seen as a very small feature on the horizon in conjunction with other, existing offshore wind farm infrastructure, and shipping and other vessels. These views would only be possible on very clear days with the offshore HVAC booster station not visible at other times due to atmospheric conditions reducing visibility. Given ideal viewing conditions the scale of visual effect resulting from the offshore HVAC booster station would be no greater than negligible which is not significant in EIA terms. As stated in paragraph 2.4.1.2, the effects on the AONB would also be negligible. In line with the methodology set out in Volume 1, Chapter 5: Environmental Impact Assessment Methodology [APP-060], impacts of negligible significance have not been screened into a cumulative effect assessment.</p>
<p>We suggest that the cable should be brought ashore in a way which does not alter/impede the coastal processes, e.g. of shingle/sand movement.</p>	<p>The potential effects of cable installation on the nearshore environment, including: sediment disturbance during trenching; excavation and deposition of sediment during horizontal directional drilling operations; and the presence of coffer dams during horizontal directional drilling operations, are presented in Paragraph 1.11.5.19 et seq. of Volume 2, Chapter 1: Marine Processes of the Environmental Statement [APP-061]. These impacts are not predicted to result in a significant effect on marine processes in the nearshore environment, including intertidal areas.</p> <p>Potential effects of operational cables on nearshore marine processes (including beach morphology, hydrodynamics and sediment transport, or littoral drift) were considered in Paragraph 1.11.8.80 et seq. of Volume 2, Chapter 1: Marine Processes of the</p>

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	Environmental Statement [APP-061]. The impact assessment concluded that no significant effects on nearshore marine processes would result from the operational Hornsea Three export cables.
<p>We are pleased that the offshore cable route has been selected to avoid impacts on the Cromer Shoal Chalk Beds MCZ and its chalk reef habitat and suggest that any impacts on the marine EMS, MCZ and SAC should be minimised.</p>	<p>The Applicant acknowledges the comment and is continuing to work with stakeholders (including the MMO and Natural England) to ensure impacts on the Wash and North Norfolk Coast SAC and Cromer Shoal Chalk Beds MCZ due to cable installation, operation and maintenance, and decommissioning are minimised.</p>
<p>Light pollution</p> <p>We are particularly concerned about light pollution, both of the temporary works and of the permanent infrastructure (including any offshore relay station). We have recently had two Dark Sky Discovery Sites designated very close to this area, one at Kelling Heath Holiday Park and one at Wiveton Downs. These sites are designated because they meet specified low light levels and visibility of stars, with little light pollution. Accordingly, we request details of light levels for the temporary works and for the permanent infrastructure. We request that careful consideration is given to the design and use of lighting through-out the project to minimise any light pollution, e.g. through careful use of appropriate lighting technology, levels used and shielding.</p>	<p>Lighting during the onshore construction phase will be short term and temporary, used only when required (and generally limited to certain working hours) and designed to avoid unnecessary illumination. Light spill during out of hours working will be minimised through the use of task-orientated lighting, as set out in the outline Code of Construction Practice which accompanies the DCO application [APP-179]. In terms of permanent onshore infrastructure, the cables will be buried and there will be no operational lighting. Impacts from permanent lighting at the onshore HVAC booster station and onshore HVDC converter/HVAC substation (such as security lighting during operation to ensure a safe working environment), would be minimised through design, in particular the use of directional lighting. Based on the mitigation and management measures proposed to be put in place, no significant light spill is anticipated during construction or operation.</p> <p>The detailed lighting strategy for during construction (i.e. temporary) will be submitted as part of the Code of Construction Practice (Code of Construction Practice) for the approval of the relevant planning authority under Requirement 17 of the dDCO [APP-027]. The detailed lighting strategy for the operation and maintenance phase (i.e. permanent) will be submitted for the approval of the relevant local planning authorities under Requirement 7: Detailed design approval onshore of the dDCO [APP-027]. Both of these documents must be approved before works can commence.</p>
<p>Community</p> <p>The longshore economy is important to the Norfolk Coast Partnership and we suggest that any impacts on the local fishing industry, either those who are based at Weybourne itself or those who fish in the area affected by construction, is minimised.</p> <p>We recommend use of local products, suppliers and contractors and hope that this is maintained through-out the project life.</p> <p>We suggest that the wider community and landscape should benefit from the project and we note that Orsted has implemented community funding schemes in other areas, including an area at the western end of the Norfolk Coast AONB.</p> <p>We recognise a very important gap relating to local children and young people, who do not receive information about the environmental importance of their local area or the opportunities available to them for a career in the environment</p>	<p>The Applicant acknowledges the comment and would highlight that it is working with the National Federation of Fishermen's Organisations and other local fishing stakeholders to ensure significant impacts to commercial fisheries are avoided within the zone of influence of Hornsea Three array area and cable corridors, including those operating off the North Norfolk coast. In addition, the Applicant intends to secure via the dMLs [APP-027] a fisheries coexistence and liaison plan, which will describe the approach to liaison and consultation with the fishing industry throughout the lifetime of Hornsea Three. This will have to be approved by the MMO prior to commencement of works (condition 11(3) of Schedule 11, Generation Assets dML, condition 12(3), Transmission Assets dML). An outline of this plan, which the final plans must accord with, was submitted as part of the application [APP-183].</p> <p>Please see the Applicant's response to Relevant Representation RR-031 regarding community benefits. Furthermore, the Applicant has committed to the preparation of a Skills and Employment Plan which will be submitted to the relevant planning authority, as set out in</p>

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<p>sector. Some initial ideas for filling that gap include:</p> <ul style="list-style-type: none"> - An education programme for local schools, teaching children about their local environment and also about the value of Norfolk's protected landscapes. This could be combined with other topics, such as renewable energy. - An apprenticeship scheme, allowing local young people to gain experience in the environment sector. This could be combined with other topics, such as renewable energy. - An undergraduate/graduate scheme helping students to learn about the Norfolk environment and go on to gain. <p>We request that the Norfolk Coast Partnership is involved in exploring possibilities for community benefit.</p>	<p>Requirement 22 of the draft DCO [APP-027]. The skills and employment plan shall identify opportunities for individuals and businesses based in the regions of East Anglia and the Humber to access employment opportunities associated with the construction, operation and maintenance of Hornsea Three.</p>

Annex 9 – Full response to Royal Society for Protection of Birds [RR-113]

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<p>Our involvement with Hornsea Project Three</p> <p>The Royal Society for the Protection of Birds (the RSPB) has been involved with the Hornsea Three project as a member of the Onshore Ecology and Offshore Ornithology Expert Working Groups (EWG). This involvement follows the RSPB's engagement and attendance at the Examinations of Hornsea Project One and Two.</p> <p>Through this process we have endeavoured to inform the design of the scheme to minimise the risk of harm to the natural environment and in particular its ornithological interests. Despite welcome constructive pre-application consultation and discussions, serious concerns with the offshore aspects of the Application remain.</p>	<p>This is acknowledged by the Applicant and the concerns are addressed individually as follows.</p>
<p>Onshore Ornithology - The RSPB considers that further, inexpensive measures, can (and should) be undertaken by Ørsted to ensure that the construction of the export cable route avoids possible adverse effects on the pink-footed goose population of the North Norfolk Coast SPA and Ramsar site. We will continue to discuss this with Ørsted in the hope that it will be possible to secure these measures.</p>	<p>A Pink-footed Goose Management Plan will be prepared and submitted to Natural England for approval in the 12 months preceding commencement (as stated in paragraph 6.5.1.40 of the updated Outline CoCP (APP-179)). This is likely to include a decision tree process in line with adaptive management principles, which will determine triggers for appropriate levels of mitigation (i.e. ECoW watching brief, toolbox talks for construction teams, restricting more intrusive construction works in certain locations). It is not appropriate to deliver further detail pre-consent as factors such as crop regime, construction timelines and construction processes, all of which determine the mitigation proposed, will be confirmed post-consent.</p> <p>The following text has been added to paragraph 6.5.1.40 of the Outline CoCP: "The final version of this document will have, as an appendix, the approved Pink-footed Goose mitigation plan."</p>
<p>Offshore Ornithology - The Project site lies within the foraging range of seabirds from the Flamborough Head and Bempton Cliffs Special Protection Area (SPA), designated for kittiwake and England's only gannet breeding colony. The proposed revision of this SPA (the Flamborough and Filey Coast pSPA) is likely to result in a boundary extension and adding gannet, guillemot, puffin and razorbill to the qualifying features. In relation to the Hornsea Three project we are concerned about the potential impacts on gannet, guillemot, kittiwake and razorbill (all SPA or pSPA species). Offshore the issues are more fundamental and far more significant in terms of the project, concerning the methodologies used to assess the risk of harm to seabirds and the use of those outputs to evaluate the likely impacts of the scheme.</p>	<p>The Applicant has considered both the Flamborough Head and Bempton Cliffs SPA and the Flamborough and Filey Coast pSPA throughout the Hornsea Three HRA. The Applicant has welcomed the constructive input of the RSPB throughout the Evidence Plan process and will continue to work with the RSPB to try and resolve the remaining areas of disagreement.</p>
<p>Methodology, in particular:</p>	<p>The baseline characterisation for those months for which two</p>

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<p>We remain concerned that the survey effort across the Hornsea Three area has been inadequate with only 20 months being undertaken (an improvement from the 12 originally suggested). We welcome the work undertaken at the recommendation of the RSPB and Natural England (NE) reviewing historical boat-based survey work for Hornsea One and Two but this, while welcome, does not provide sufficient evidence that a minimum of two complete years of survey data, as recommended by NE and the Joint Nature Conservation Committee, was not necessary.</p>	<p>surveys have been conducted (April to November) was agreed in the Evidence Plan. This is detailed in paragraph 4.3.2.3 and Section 4 of the Ornithology EWG meeting minutes 27.02.2018 presented in Appendix D of Consultation Report Annex 1 - Evidence Plan (APP-035).</p> <p>The months for which two surveys have not been conducted fall outside of the breeding season for all but one of the key species in the assessment. Outside of the breeding season, seabird populations are more mixed and impacts on local breeding colonies are therefore diluted. This is illustrated by the apportioning values used for relevant species, with these not above 10% meaning that considerably higher densities of birds (i.e. higher than those in the breeding season) would need to be present at the Project site in order for a significant impact to occur. In addition, and evidenced through contextual data, variability in non-breeding periods is lower than during the breeding season. Although the Applicant accepts that having only one month of data for December to March will increase the uncertainty associated with assessments incorporating these months however, this does not prevent predicted impacts from being assessed. It should be noted that assessments including December to March incorporate available aerial survey data for these months in addition to contextual data collected as part of an extensive boat-based survey programme covering the former Hornsea Zone (an area includes Hornsea Three).</p> <p>A process was initiated through consultation with Natural England and the RSPB in order to reduce uncertainty by incorporating an extensive contextual dataset (both in terms of temporal and spatial scale) covering Hornsea Three (see Consultation Report Annex 1 - Evidence Plan (APP-035)). It is considered that the approach presented adequately captures the variability in seabird populations that is likely to occur in those months for which only one year of data was collected.</p> <p>Discussions in relation to the baseline characterisation of Hornsea Three have been ongoing throughout the Evidence Plan process. Appendix 8: Baseline Sensitivity Characterisation Sensitivity Clarification Note to be submitted at Deadline 1 explores the likely variability to be expected in seabird populations at Hornsea Three and seeks to address some of the issues raised by RSPB both as part of their relevant representation and during EWG meetings. This analysis looks at, the likely densities/populations of key species at Hornsea Three that would be required for a significant impact to occur and the application of an alternative hierarchical approach (used to calculate densities and population estimates). The note concludes that the use of either the original or alternative hierarchical approaches makes no material difference to the conclusions of the assessments presented for Hornsea Three both as part of Volume 2, Chapter 5 Offshore Ornithology of the Environmental Statement (APP-065) and the RIAA (APP-051)</p>
<p>We do not agree with breeding guillemot and razorbill being screened out from the assessment. While we agree that it is</p>	<p>Guillemot and razorbill are screened into the EIA and RIAA (See Volume 2, Chapter 5, Offshore Ornithology Environmental</p>

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<p>unlikely that birds recorded at the proposed development site are breeding birds from the pSPA, it remains likely that a large proportion of these birds are associated with the pSPA colony, such as juveniles and non-breeders that will subsequently breed at the colony. The pSPA is the closest breeding colony to the site therefore birds present in the breeding season are most likely an important constituent of that colony and must be considered in the assessment.</p>	<p>Statement (APP-065) and Report to Inform Appropriate Assessment (APP052)). Hornsea Three is beyond the foraging range of breeding adult birds of both species from FFC pSPA in the breeding season (see Figures 5.12 and 5.13 in RIAA: HRA Screening Report (Document 5.2.1) (APP-052)) and as such there are no impacts on these birds in the breeding season. Breeding adult birds of both species are considered in relevant non-breeding seasons.</p> <p>As guillemot and razorbill occur at Hornsea Three in the breeding season defined for each species (with these birds considered to be immature and non-breeding birds) consideration has been given in the assessments presented to the potential impacts on these birds and the effect this may have on breeding populations (see for example paragraphs 5.13.3.59 to 5.13.3.62 in Volume 2, Chapter 5 Offshore Ornithology of the Environmental Statement (APP-065) and paragraphs 7.7.2.49 to 7.7.2.53 in the RIAA (APP-051)).</p> <p>This issue was discussed at a meeting with the RSPB on the 8th August 2018. It was agreed that the Applicant would extract the relevant text associated with this issue and has provided this to the RSPB.</p>
<p>We also do not agree that herring gull should be screened out of the Environmental Impact Assessment. While Hornsea Three lies outwith the mean maximum foraging range presented in Thaxter et al., (2012), the species is currently red listed in Birds of Conservation Concern and considered to be at a high risk of collision. Numbers in the Hornsea Three survey area can be relatively high in the breeding season (221 in June 2017), therefore further consideration should be made in the assessment.</p>	<p>The population of herring gull quoted by the RSPB includes birds on the water and therefore does not reflect the peak number of birds at risk of collision (herring gull would be considered for collision risk as part of the EIA which only affects birds in flight). The equivalent value for birds in flight is 12 birds, although note that this is for Hornsea Three plus a 4 km buffer and collision risk modelling is conducted incorporating densities from Hornsea Three only.</p> <p>This issue was discussed at a meeting on the 8th August 2018. It was agreed that the Applicant would conduct collision risk modelling for herring gull. This note is presented at Appendix 12 of the Applicants response to Deadline I and validates the assumptions made in the Environmental Statement (APP-065) regarding herring gull.</p>
<p>We have concerns about the manner in which biological seasons have been defined by Ørsted's consultants. These should follow the definition of 'Breeding Season' as presented in Furness (2015), not 'migration free breeding season' except where colony specific evidence suggests otherwise.</p>	<p>The main colony of interest in respect of the assessments conducted for Hornsea Three is FFC SPA. This colony is located 150 km from Hornsea Three with this beyond the foraging range of many of the species for which the SPA is designated. The phenology of birds at Hornsea Three is therefore likely to be very different to the phenology of birds at FFC SPA with different populations likely to interact with Hornsea Three (e.g. migratory birds/immature birds).</p> <p>The Applicant has based the seasonal definitions for key species at FFC pSPA on survey data (collected to support planning applications for offshore wind farms throughout the English North Sea) and contextual information on the movements of birds. This is presented in RIAA Annex 3: Phenology, connectivity and apportioning for features of FFC pSPA (APP-054) and is considered to better reflect the phenology of birds at Hornsea Three (i.e. where impacts will occur).</p>

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<p>We do not agree with the way Ørsted's consultants have used the Band Extended Model and Avoidance Rates to calculate the likely collision risk impacts for gannet and kittiwake. The 2014 BTO Avoidance Rate Review Report, commissioned by Marine Scotland, and the subsequent peer reviewed paper (Cook et al,2018) demonstrated that insufficient information exists for a robust Avoidance Rate to be set for gannet and kittiwake for use with the Band Extended Model. Consequently, and as recommended by the Statutory Nature Conservation Bodies (SNCBs) Option 3 of the Band Extended Model cannot be used to calculate the collision risk for these species. Despite this, the approach is used by the Applicant in their Habitats Regulations Assessment document. Furthermore, the assessment fails to use the Avoidance Rate for kittiwake with the Basic Band Model as recommended by the SNCBs.</p>	<p>The Applicant considers that the use of a 98% avoidance rate is appropriate and is in line with the use of the Extended model at other offshore wind farm projects (e.g. Hornsea Project Two). There is now empirical evidence, collected as part of the Offshore Renewables Joint Industry Programme (ORJIP) (Skov et al. 2018), that suggests the use of a 98% avoidance rate is precautionary.</p> <p>Although collision risk estimates calculated using Option 3 have been presented, these are presented alongside collision risk estimates calculated using Options 1 and 2 in all project alone assessments (for example see Table 5.26 in Volume 2, Chapter 5 Offshore ornithology of the Environmental Statement (APP-065)). The assessments presented for the Project alone consider the collision risk estimates from all of these Options and do not rely solely on the results from Option 3 (for example see paragraph 5.11.2.106 in Volume 2, Chapter 5 Offshore Ornithology of the Environmental Statement (APP-065)) and Appendix 10 to the Applicant's response to Deadline 1.</p>
<p>We do not agree with the changes in Nocturnal Activity Factor, a parameter used in collision risk modelling, for kittiwake and gannet. The supporting analysis does not include all available data and, does not account for the distinction between the definition of daylight as used in the Band Model and with the official concept of 'twilight' and 'night', including civil, astronomical and nautical twilight. Nor does it account for the potential interaction between survey timing and diurnal behavioural patterns. Seabird foraging activity often peaks at first and last light. There is a danger that these peaks are not accounted for in the assessment either because they have been removed from the analysis by an overly simplified definition of day and night or because the survey was carried out at a time of much lower activity.</p>	<p>The change in nocturnal activity for kittiwake (i.e. from 3 to 2) is consistent with that advised by the RSPB for offshore wind farm projects in Scotland (see for example the Scoping Opinions submitted for the Forth and Tay offshore wind farm projects). The Applicant would welcome clarity on the RSPB's recommended rate.</p> <p>The nocturnal activity factors used for some species are based on empirical evidence as detailed in Appendix D of Volume 5, Annex 5.3: Collision Risk Modelling (APP-109). It is widely accepted, including by SNCBs in Scotland, that the percentage rates assigned to the nocturnal activity rates presented in Garthe and Hüppop (2004) by Band (2012) lead to over-estimates of collision risk with the rates proposed by Band (2012) not based on any scientific evidence. The use of percentage rates was also not the intention of Garthe and Hüppop (2004) with these scores not intended to represent quantifiable rates of nocturnal activity rather they were intended to indicate that those bird species that scored higher were more likely to show more nocturnal flight activity than those that scored lower (Furness et al. 2018).</p> <p>A recently published paper (Furness et al., 2018) presents nocturnal activity rates for gannet based on empirical evidence. A similar exercise is also being conducted for kittiwake, with preliminary results presented in the planning application for the Norfolk Vanguard offshore wind farm. The rates presented support the use of lower nocturnal activity rates as applied in the collision risk modelling for Hornsea Three.</p> <p>Peaks in abundance that may occur at first light should not be accounted for as part of the nocturnal activity factor which is used in the collision risk model to calculate the collision risk at night. The nocturnal activity rate used represents the activity expected as a proportion of daylight activity. As such, the application of a nocturnal activity factor does not require consideration of peaks in activity that may occur at first light as the amount of nocturnal activity is the same regardless of the activity that occurs in daylight</p>

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	<p>hours. Therefore, if an increased amount of daylight activity is expected (e.g. at sunrise), the nocturnal activity factor used in the model would be scaled to ensure the same amount of nocturnal activity was assumed in the model. Uncertainty in relation to the abundance of birds at a project should not be captured by arbitrarily increasing defined parameters, instead this form of uncertainty should form part of the avoidance rate (which represents bird avoidance behaviour and corrections for various assumptions made in the collision risk model). Appendix 10 to the Applicant's response to Deadline 1 has been provided to give further detail on this.</p>
<p>We have concerns with the correction factors applied to in-combination assessment estimates of mortality. These are to 'correct' for the differences in the consented and as-built scenarios for other offshore wind farms and for perceived inaccuracy in the Nocturnal Activity Factors applied to gannet and kittiwake collision risk estimates. These corrections represent an oversimplification, failing to distinguish between projects that still have permission to theoretically build out to consented capacity or where a new consent would be needed for further development. In addition, the changes in Nocturnal Activity Factor are not justified as discussed above and it is likely that this has led to the in-combination impacts of the scheme being downplayed.</p>	<p>The correction factors for nocturnal activity and as-built turbine scenarios have been applied in order to highlight the uncertainty present in cumulative and in-combination assessments. These corrections have been used to qualitatively support the conclusions for relevant species, with numbers resulting from such corrections not compared to relevant populations or baseline mortality. In addition, in the RIAA, the corrected numbers have not been compared against PVA outputs which are used to support conclusions in relation to effects on site integrity (see paragraphs 7.7.2.9 to 7.7.2.16 and 7.7.2.30 to 7.7.2.38 in the RIAA (APP-051)).</p>
<p>We continue to disagree (as we did with Hornsea One and Two) about the Apportioning Rates used to evaluate the proportion of the guillemot, kittiwake and razorbill populations in the Hornsea Three area that will have come from the Flamborough and Filey SPA/ pSPA. The analysis is not suitably precautionary and does not fully take account of all available tracking data.</p>	<p>The Applicant has outlined their approach to apportioning in RIAA Annex 3: Phenology, connectivity and apportioning for features of FFC pSPA (APP-054). The apportioning approach applied is supported by site-specific and published scientific evidence.</p> <p>The Applicant would welcome further discussion with the RSPB in relation to their proposed approach to apportioning.</p>
<p>The Population Viability Analysis model used to evaluate the impacts of Hornsea Three on the gannet and kittiwake populations of the pSPA (and SPA in the case of kittiwake) have been run over only 25 years, whereas Ørsted are seeking approval for the scheme to run for 35 years. If the model is updated accordingly the impacts on gannet and kittiwake will be higher.</p>	<p>The outputs derived from PVA modelling for 25 years for the density independent model have been extrapolated to 35 years. As the outputs from the density independent model have a linear trend this approach is appropriate. This is fully explained where relevant (see for example paragraphs 7.7.2.30 to 7.7.2.38 in the Report to Inform Appropriate Assessment (APP-051)). This issue was discussed at a meeting on the 8th August. It was agreed that the Applicant would extract the relevant text associated with this issue and provide this to the RSPB.</p> <p>Please see Appendix 9 to the Applicant's response to Deadline 1 for a clarification note detailing PVA modelling incorporating a matched runs approach (Hornsea Three Population Viability Analysis clarification note) with the respective outputs examined to identify any material differences between outputs from matched and non-matched approaches.</p>
<p>These and other areas of disagreement between the RSPB</p>	<p>The Applicant acknowledges this and is working with RSPB to</p>

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<p>and Ørsted have been aired extensively at the Hornsea Project One and Two Examinations and, despite these extensive discussions there remains significant differences of opinion between the parties as to how the impacts should be assessed. As mentioned above the RSPB is grateful for the helpful pre-application discussions and we are continuing to discuss and explore options with Ørsted to ensure that the Examining Authority has all the information it needs to consider the issues without unnecessarily consuming Examination time.</p>	<p>address the remaining concerns.</p>
<p>Offshore ornithology impacts: As a result of the methodology concerns set out above, the RSPB considers that the impacts have not been adequately assessed and, as such do not consider that the risk of an adverse effect on the integrity of the SPA/pSPA and its species can be ruled out, alone or in-combination:</p> <p>The impact upon the kittiwake population of the SPA/ pSPA alone and in-combination with other plans and projects.</p> <p>The impact upon the gannet population of the pSPA in-combination with other plans and projects.</p> <p>The screening out of the breeding guillemot and razorbill population of the pSPA means that the Habitats Regulations Assessment has not considered the impacts of Hornsea Three upon these species.</p> <p>In addition, we do not think that herring gull should not have been screened out from the Environmental Impact Assessment.</p>	<p>The Applicant acknowledges this and has addressed these concerns in the individual sections above.</p>
<p>Conclusions: For the reasons outlined above, we consider that it is not possible to ascertain no adverse effects on the integrity of the SPA/pSPA and its species, alone or in-combination.</p>	<p>The Applicant acknowledges this and has been working with the RSPB to try and address these concerns and develop a SOCG following submission of their Relevant Representation.</p>

Annex 10 – Full response to North Norfolk District Council [RR-133]

Annex 10 – Full response to North Norfolk District Council (RR-133)

Relevant Representation Comment	Applicant's Response
<p>North Norfolk District Council (NNDC) has been notified by Ørsted Hornsea Project Three (UK) Limited that, as of 08 June 2018, their application for Development Consent Order (DCO) in respect of Hornsea Project Three (HPT) has been accepted for examination by the Planning Inspectorate under the Planning Act 2008.</p> <p>This letter forms the Relevant Representation of NNDC and sets out a summary of the issues that are considered to be relevant to the nationally significant infrastructure project as it passes through the North Norfolk district.</p>	<p>The Applicant notes NNDC's support in principle and has responded to each of the detailed points raised below.</p>
<p>Principle of Development</p> <p>North Norfolk District Council is fully supportive of the principle of renewable energy development in helping to tackle the challenges faced by climate change. NNDC recognises the national importance of having a balanced supply of electrical generation including increasing renewable energy supplies from offshore turbines in helping decarbonise the UK's energy sector. At a local level NNDC has made a significant contribution of its own through, amongst other things, the grant of planning permission for in excess of 150MW capacity of solar farms, with electrical output capable of powering over 40,000 homes, in North Norfolk.</p> <p>Whilst recognising the national importance of Hornsea Project Three, North Norfolk District Council believes it is essential to ensure that key design and construction decisions do not result in unacceptable or adverse impacts on residents or businesses within North Norfolk, acknowledging the important contribution that agriculture and tourism plays in the economic prosperity of the District underpinned by the nationally and internationally recognised coast, landscape and biodiversity interests.</p>	<p>The Applicant notes NNDC's support for renewable energy.</p> <p>As part of the design development process described in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059], the Applicant has sought to minimise direct impacts on sensitive receptors, for example through the avoidance of designated sites and use of trenchless technologies (i.e. horizontal directional drilling) along the onshore cable corridor (see section 4.8-4.13 of the same chapter). Where impacts could not be avoided, these are assessed in the relevant onshore topic specific chapter of the Environmental Statement (Volume 3) – with impacts on agriculture and tourism specifically assessed in Volume 3, Chapter 5: Land Use and Recreation [APP-078], and Chapter 10: Socio-Economics [APP-082] respectively. Mitigation measures to minimise potential impacts are identified in the same chapters.</p>
<p>Keys Aspects of the Project Affecting North Norfolk</p> <p>North Norfolk District Council's jurisdiction extends inland from the Mean Low-Water mark along the coastline. The proposal would affect land within NNDC stretching from the intertidal area at Weybourne and inland along the proposed cable route and 80m wide working corridor until it passes out of the district into Broadland District Council near to Corpusty and Saxthorpe. The key design/construction decisions affecting North Norfolk include:</p> <ul style="list-style-type: none"> - Choice of transmission system; 	<p>The Applicant notes these points, which it has responded to below.</p>

Relevant Representation Comment	Applicant's Response
<ul style="list-style-type: none"> - Phasing of the Project and Associated Construction Timetable(s); - Method of bringing offshore cables onshore at Weybourne; - Working Corridor of onshore cable route; - Use of Horizontal Directional Drilling onshore; - Onshore HVAC Booster Station; - Impact of construction traffic; - Landscape & Biodiversity Mitigation; - Community Benefits 	
<p>Choice of Transmission System - High Voltage Alternating Current (HVAC) vs High Voltage Direct Current (HVDC) The final chosen method of transmission of electricity to the onshore grid connection location will have a fundamental bearing on the overall impact of the project. Whilst it is recognised that Ørsted Hornsea Project Three (UK) Limited wish to keep their options open to using either HVAC or HVDC, this does currently present a wide project envelope and increases the level of uncertainty for affected parties until such time as the final transmission method is chosen.</p> <p>Table 3.37 in Chapter 3 of the Environmental Statement seeks to compare the components involved in the different HVAC / HVDC transmission systems. It has been the understanding of NNDC since the pre-application stage that a HVAC system will require an onshore booster station, with a site identified onshore near to the village of Edgefield; together with an offshore booster station, at a yet unidentified location, within a search zone approximately 19-22 nautical miles offshore from Cromer.</p> <p>However, table 3.37 creates uncertainty as to whether these booster stations are required with the reference that these components 'May be required'. However, the accompanying comments within that table suggest 'HVAC: onshore and/or offshore booster station required'. As part of the examination process, North Norfolk District Council believes it will be important for there to be absolute clarity about the components required for each transmission type so that the worst-case scenario in relation to the HVAC option can be fully assessed. This is critical to ensure the impact of the development is properly understood and so that weight can be afforded by the decision maker as to whether one type of electrical transmission should be preferred over the other with the potential for the Development Consent Order to specify the transmission system to be used where there is</p>	<p>Generally, on this point please see Appendix 22 to the Applicant's response to Deadline 1 relating to the use of HVAC and HVDC transmission systems. Specifically regarding the booster station, the Applicant advises that long distance, large capacity HVAC transmission systems require reactive compensation equipment (i.e. HVAC booster station) to absorb the reactive power generated by the capacitance of the export cable in order to allow HVAC power transmission over such distances, and to comply with the conditions of the regulatory codes for connection to the GB transmission system. Therefore, should the HVAC transmission system be taken forward for Hornsea Three, HVAC booster station(s) will be required and, as stated in paragraph 3.6.9.20 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], 'can be located onshore, on an offshore platform, or within a subsea structure. Alternatively, a combination of these options could be used.'</p> <p>Should an HVAC booster station be located onshore, it would be near to Little Barningham, as shown in Figure 3.33 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]. However, an onshore HVAC booster station would not be required in two scenarios:</p> <ul style="list-style-type: none"> - If HVDC technology is taken forward; or - If HVAC technology is taken forward and there is only a need for offshore or subsea HVAC booster station(s). <p>A decision on which transmission type to use will be made during the detailed design phase (post consent). Should the HVAC transmission option be taken forward, the location of the HVAC booster station(s) – onshore, offshore or subsea - will also be determined during detailed design phase (post consent) based on the optimum technical location informed by cost benefit analysis of the options provided for in the</p>

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<p>compelling evidence to do so.</p> <p>In the opinion of North Norfolk District Council, HVDC would result in the need for fewer buried cables and would have the least damaging impact on the district of North Norfolk when considering the project as a whole, particularly as this would negate the need for the booster station near Edgefield.</p>	<p>application.</p>
<p>Phasing of the Project and Associated Construction Timetable(s)</p> <p>Section 3.8 of Chapter 3 – Project Description sets out the Construction Phasing if the Development Consent Order is granted. This is also set out at para 2.15 of the Development Consent Under Explanatory Memorandum in terms of maximum durations. It indicates that construction could commence 2020/21 and could take up to seven years if built out in a single phase or up to 10 years if built out in two phases, with a maximum period of six years between the end of the first phase and commencement of the second phase.</p> <p>NNDC understands that the onshore elements of the proposed project would take three years to construct in a single phase but this could span a six-year period in a two phase scheme (assuming a three-year gap between phases). If reference is made to the DCO Explanatory Memorandum (together with the example two phase programme at Figure 3.39 (Chapter 3: Project Description)) then the duration of the project could well exceed 15 years if a gap of six years between the end of the first phase and commencement of the second phase is allowed by the DCO.</p> <p>Clarity over Construction timetabling is a matter that NNDC would seek to be considered further, as part of the examination process, in order that any adverse impacts of construction in a single or two phase programme can be properly understood and appropriately managed for the benefit of residents and businesses within the District. The possibility of any extended construction window (certainly if it was to extend over 15 years) would be considered totally unacceptable to NNDC and local communities most of which are dependent on the tourism economy and the Council believes that the examination should explore how the project, and any grant of DCO, could reduce the maximum construction envelope down to an acceptable level. This may include specifying a maximum gap between the end of the first phase and commencement of the second phase.</p>	<p>These points are responded to in turn below.</p>
<p>In respect of a two-phase scheme it will be important during the examination to understand which components will be installed in the first phase which may help to reduce any future adverse consequences during the second phase. For example, in a two-phase construction the Environmental Statement does not appear to give consideration as to</p>	<p>As set out in Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], Hornsea Three may be constructed in one or two phases with a maximum construction period of 8 years, not 15 years. This is primarily to provide sufficient flexibility through the Contracts for Difference (CfD) process which is a financial instrument</p>

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<p>whether cable ducting could be laid for all of the development in phase one which would help reduce the adverse impacts of having to re-open or dig new trenches to lay cables for phase two. By laying ducting, a simpler cable pull through process would be possible in phase two which would help reduce disturbance impacts and speed up project completion. It would also help reduce the impacts from construction traffic in phase two by reducing the need for vehicles bringing imported stabilised backfill material over a wide time period (see section Impact of Construction Traffic). Completing the majority of trench works in phase one would also allow time for soils to recover and reduce the length of time taken out of agricultural production.</p>	<p>which forms the principle mechanism for subsidising renewable generation through providing a fixed level of pricing for power output.</p> <p>Regarding ducting, please see the Applicant's response to Relevant Representation RR-031 in respect of construction phasing.</p> <p>Regardless of whether the project is delivered in a single phase or two phases, the Applicant has sought to minimise disruption on the local community through design (such as the use of trenchless technologies i.e. HDD to cross public roads to minimise road closures, and other sensitive locations such as watercourses) and management measures (to be developed in line with the principles set out in the Outline Code of Construction Practice [APP-179]), with a final code of construction practice, being in line with the outline, secured through Requirement 17 of the draft DCO [APP-027]).</p> <p>Impacts on the local road network are assessed in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079]. It is noted that under Requirement 18 of the DCO (as submitted, APP-027), a Construction Traffic Management Plan will be required to be implemented prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase; an outline of this document has been produced and accompanied the DCO application [APP-176]. As reported in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079], no significant effects relating to traffic are anticipated during construction or operation.</p>
<p>The Council believes the examination panel will also need to satisfy itself that the benefits of any landscape mitigation works planned in phase one are not damaged or undermined by a protracted phase two timetable which may include re-opening trenches. It is important that all mitigation works are delivered at an early stage so as to make the impact of the works acceptable in planning terms. Any phase one mitigation landscaping damaged or requiring removal during phase two would take time to recover and so may not deliver the level of mitigation expected over the planned lifetime of the project.</p>	<p>Measures designed in to Hornsea Three relating to landscape and visual resources are set out in section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076].</p> <p>This includes a replanting programme to provide screening at the proposed HVAC booster station and onshore HVDC converter/HVAC substation sites in conjunction with mitigation measures considered as part of the landscape and visual impact assessment (Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]. Indicative landscaping proposals are presented in the Outline Landscape Management Plan [APP-181] and will be developed in a final Landscape Management Plan, in accordance with the outline, secured by Schedule 1, Part 3, Requirement 8 of the draft DCO [APP-027].</p> <p>Since the point of Application, the Applicant has committed to planting sections of the planting at the commencement of works on the HVAC booster station and HVDC converter/HVAC substation site, which could be up to two, or three years respectively ahead of the planned completion</p>

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	<p>of construction, in order to maximise the screening provided in the shortest period of time. Areas which will not be pre-planted comprise the connecting points to the onshore cable corridor, and between the permanent footprint and temporary construction site. This is to facilitate the construction works at the site and avoid any damage to the planting.</p> <p>In a two-phase construction programme the remainder of the proposed mitigation planting (i.e. that is not implemented at the commencement of construction works of the first phase), would be implemented during the first available planting season following completion of the first construction phase, unless otherwise agreed with the local planning authority. Some of these areas may subsequently need to be removed to allow construction of the second phase although they would be reinstated again following completion of the second phase. The need for such works will be determined as part of the final LMP, when clarity on construction phasing is available and detailed design of the onshore HVDC converter/HVAC substation is completed. These commitments are captured in the newly updated paragraphs 3.1.2.3-3.1.2.4 and 3.1.3.4-3.1.3.5 in the Outline LMP [APP-181].</p> <p>Along the onshore cable corridor, Hornsea Three will seek to implement landscape mitigation at the soonest practicable time after each phase of cable installation (as stated in paragraph 4.1.1.3 of the Outline LMP [APP-181]. At locations where there is high bat activity, the Applicant has committed (set out in paragraph 6.3.3.5 of the Outline EMP [APP-180]) to provide temporary artificial hedges. These artificial hedges will be retained in situ until replacement planting matured to provide effective habitat links between the severed sections of the hedgerows, which will also provide temporary landscape mitigation until replacement planting has matured.</p>
<p>Method of bringing offshore cables onshore at Weybourne</p> <p>At the Preliminary Environmental Information Report (PEIR) stage, NNDC advised that:</p> <p>'Whilst the method of construction in the nearshore/landfall location needs to be considered further and in more detail, initial consideration is that a Horizontal Direct Drilling (HDD) approach would prove to be the least likely to have impacts on nearshore processes during construction and would be preferred. This should (in consideration with other marine environmental factors) be at an extent where HDD exit points have minimal impact on nearshore coastal processes. Likewise buried cabling as identified in the reports would be preferred to minimise impacts to coastal processes with low profile protection being the secondary position.</p> <p>Impact of the proposed cables on tides and, in particular,</p>	<p>The Applicant has included both HDD and open cut for cable installation at the Hornsea Three landfall, as described in Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058).</p> <p>The effects of open cut trenching and HDD on the nearshore marine processes (including beach morphology, sediment transport and hydrodynamics) has been robustly assessed in Paragraphs 1.11.5.19 to 1.11.5.26 and Paragraphs 1.11.6 – 1.11.7.11 respectively, of Volume 2, Chapter 1: Marine Processes of the Environmental Statement (APP-061). The impact assessments concluded that there will be no significant impacts on the marine processes in the nearshore environment, with effects from both methods predicted to be short term, localised and reversible.</p> <p>The impact of both Hornsea Three landfall cable installation scenarios (i.e. open cut and HDD operations) on The Wash</p>

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<p>waves and the influences this may have on coastal sediment transport are important factors that the Environmental Statement will need to include and PEIR seems to be making progress in covering these important issues'.</p>	<p>and North Norfolk Coast SAC have been assessed as minor as they are expected to be localised and there is no overlap between the SAC and the landfall site.</p> <p>The implications of Hornsea Three on the features of the Cromer Shoal Chalk Beds MCZ (horizontal directional drilling exit pits are likely to be within the boundary of this MCZ) and conservation objectives for the wider supporting environment has been fully considered in paragraphs 5.1.2.3 to 2.1.2.17, Volume 5, Annex 2.3, Marine Conservation Zone Assessment of the Environmental Statement [APP-104]. This considers effects of cable installation during the construction phase, including both scenarios for cable installation at the landfall (i.e. open cut and horizontal directional drilling operations). The MCZ assessment concluded that there was no risk to the conservation objectives or features of the MCZ, including supporting processes on which the designated features are reliant upon (e.g. wave energy and sediment transport).</p> <p>The impact of Hornsea Three on nationally and regionally important geological sites was fully considered in paragraph 1.7.1.1 of Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement [APP-073]. The Weybourne Cliffs SSSI fell within the geology and ground conditions study; however, at 396 m from the onshore cable corridor it would not be affected and has been scoped out of the assessment.</p>
<p>Some nine months after the PEIR response from NNDC it is disappointing that Ørsted are still discussing the possibility of open cut trenching techniques to bring the offshore cable onshore to the Transition Joint Bays (TJBs). Para 3.6.12.23 of the Environmental Statement Project Description refers to Open cut installation requiring beach closures of up to one month per cable. It is understood there would be 6 offshore cables using HVAC transmission or there would be 4 offshore cables (plus one HVAC cable) with HVDC transmission. This would suggest potential beach closure of up to six months in the worst case HVAC scenario.</p> <p>The District Council therefore believes it will be very important for the examination to establish and understand the impact of nearshore works, the timing of works and how impacts on public footpaths and rights of way, including public access to the beach, for recreation can be managed without significant detriment to amenity. The associated economic impact of beach closures therefore needs to be properly assessed and mitigation considered as part of the examination process.</p>	<p>The Applicant notes NNDC's position, however, as set out in paragraph 3.6.12.5 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], the construction methodology taken forward at landfall will be informed by detailed site investigation work undertaken post consent. The assessments presented within the Environmental Statement and the Habitat Regulation Assessment (HRA) have considered the worst-case scenario (between open cut and horizontal directional drilling, noting that horizontal directional drilling represents the worst-case in a number assessments) for each relevant receptor. Whilst it is recognised that open cut trench forms the worst-case scenario for a number of receptors, it is important to note that neither option would result in significant adverse effects in EIA or HRA terms. Specific benefits of maintaining open cut trenching within the envelope are described in the following paragraphs.</p> <ul style="list-style-type: none"> - Open cut installation is a less technically complex approach, utilising simpler construction methods as well as decoupling time critical construction activities thus providing greater certainty in construction and installation programmes at reduced costs. - Open cut works reduce the marine interface, with no need for offshore horizontal directional drilling

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	<p>exit pits and associated dredge and backfill operations. Onshore, open cut activities typically entail less onshore traffic (with no horizontal directional drilling drill rigs required for example, or bentonite deliveries to site) and typically entail a smaller associated construction compound than those required to support HDD operations.</p> <ul style="list-style-type: none"> - Open cut works can also be undertaken over a shorter time period when compared with HDD, with typical works per cable taking 1 month (Paragraph 3.6.12.23 of the Project Description Environmental Statement) over 4 months for each horizontal directional drilling operation (Table 3.51 Maximum design parameters for TJBs and landfall work) Project Description chapter. <p>Notwithstanding the above, impacts of the maximum design scenario on recreation and public rights of way, including public access to the beach are assessed in Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078]. The economics of the beach in terms of the tourism sector, is considered in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement [APP-082]. This concludes that there are no significant effects during construction or operation on either receptor.</p>
<p>The examination stage will also need to consider the impact of open cut trenching on the Weybourne intertidal area (including effects on the Marine Conservation Zone, adjacent Site of Special Scientific Interest and nearby Special Area of Conservation) so that, where the evidence can justify it, the scope of the project is narrowed down to exclude inappropriate trenching techniques in any subsequent grant of DCO.</p> <p>Based on the evidence seen to date, NNDC remains firmly of the view that HDD techniques (long HDD drill) should be used to bring the offshore cables onshore as this will have the least damaging impact on the nearshore (especially with a two-phase project), will result in fewer adverse impacts on coastal processes and will reduce the potential to destabilise the cliffs at Weybourne compared to open trenching techniques.</p>	<p>The Applicant has responded to this comment in the two sections above.</p>
<p>Working Corridor of onshore cable route</p> <p>Ørsted have for some time made clear that the working corridor of the onshore cable route would typically be 80m wide - consisting of a 60m central section comprising three no. 5m wide and up to 2m deep trenches (tapering to 1.5m at base) either side of a 6m wide haul road. Each side of the cable corridor would include additional 10m wide strips of land on which topsoil and subsoil would be stored. Figure 3.32 within the Environmental Statement Project Description</p>	<p>Please refer to Appendix 22 of the Applicant's response to Deadline 1 which addresses matters relating to the transmission technology.</p> <p>Hornsea Three is a nationally significant infrastructure project in a constantly evolving industry with a continuous focus on cost reduction and improvements in technology and construction methodologies. As such, it is not possible to provide precise final design details a number of years ahead of the time it will be constructed. As a result of this, the Applicant has employed a maximum design scenario</p>

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<p>shows an indicative layout (albeit it appears to only show 12 cables rather than the 18 cables required for the 6 circuit HVAC worst case scenario).</p> <p>The District Council believes it would be very helpful at examination stage to understand the likely layout for the HVDC solution which it is understood would consist of 8 HVDC cables and 3 HVAC cables. This may result in a reduction in the number of trenches needing to be dug and would mean less soil disturbance, which would be welcomed, particularly when passing across currently active agricultural land. The Council believes there is currently a lack of clarity generally about the 'best-case scenario' with this project which it is hoped will be made clearer through examination.</p>	<p>approach, which reflects the Rochdale envelope approach. The Applicant has shared details of this maximum design scenario with stakeholders through the process described in the Consultation Report [APP-034]. As a result of this, the assessments presented within the Environmental Statement are based on a realistic maximum design scenario, which is either HVDC or HVDC technology depending on the receptor. Where appropriate, mitigation is considered for the maximum design scenario throughout the Environmental Statement.</p>
<p>Use of Horizontal Directional Drilling (HDD) onshore - NNDC welcomes the use of Horizontal Directional Drilling (HDD) techniques so as to avoid sensitive or designated sites so as to minimise any potential impacts upon them.</p> <p>Figure 3.2 within Environmental Statement Volume 3, Chapter 3 – Ecology and Nature Conservation sets out in some detail the intended locations for Hydraulic Directional Drilling including locations: A - HDD only, B – HDD with haul road over, C – HDD with haul road over or Open Cut, and D – HDD and ducting laydown.</p> <p>The Council believes it will be important at examination stage to ensure the correct HDD method has been chosen along the onshore cable route. For example, Figure 3.2 - Sheet 1 suggests the use of type B – HDD with Haul Road over within an area marked as woodland. The loss of woodland should be avoided. Sheet 5 also refers to HDD (type B) passing through a hedgerow marked as having high and very high bat activity. Again such options should be avoided or, where there are justifiable reasons as to why species harm cannot be avoided, appropriate mitigation should be put in place.</p>	<p>The Applicant notes NNDC's endorsement of HDD use. As set out in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059], the routing of the onshore cable corridor has sought to minimise impacts on sensitive receptors including woodlands and important hedgerows. The Applicant has avoided all significant areas of woodland through routing or the use of trenchless technology (i.e. HDD). In some locations, it has been necessary to have HDDs with a haul road to facilitate access along the onshore cable corridor to enable construction.</p> <p>An assessment of the potential impacts on the remaining areas of small, scattered woodland, or woodland edge, which would be removed during the construction phase, is assessed in paragraphs 3.11.1.19 – 3.11.1.22 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement [APP-075]. This assessment concludes that there would be no significant effect on woodland habitat.</p> <p>Where removal of hedgerows supporting high or very high levels of bat activity within the onshore cable corridor is required, artificial hedgerows will be provided to maintain connectivity. As bats use trees intermittently, the need for artificial hedgerows will be informed by pre-construction surveys prior to the commencement of works. The details of this process are described in Section 4.3.6 of the Outline Ecological Management Plan [EMP, APP-180]. With this mitigation in place, the assessment concludes that no significant effects on bats will occur during construction.</p> <p>In summary, Volume 4, Annex 3.5: Onshore Crossing Schedule [APP-089] provides a summary of the indicative locations of obstacles along the onshore cable corridor and notes how they are proposed to be crossed. The assessments presented within the Environmental Statement (Volume 3), and resulting mitigation measures, are based on the maximum design scenario in line with the Rochdale Envelope approach.</p>

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<p>Onshore HVAC Booster Station</p> <p>Whilst NNDC has a preference for HVDC transmission because of the overall reduction in likely adverse impacts, if HVAC transmission is utilised then an Onshore Booster Station is understood to be needed in the area east of Edgefield and north of Corpusty and Saxthorpe (as indicated on sheets 9 and 10 of 2.4.2 - Works Plan - Onshore - Plans and Drawings) and as set out in Section 3.7.5 of Chapter 3 of the Environmental Statement – Project Description.</p> <p>Whilst there remains some confusion as a result of Table 3.37 in Chapter 3 of the Environmental Statement about which components would be required for a HVAC system, Ørsted has previously stated their intention early at the pre-application stage to construct a booster station in North Norfolk as part of a HVAC system. NNDC have therefore worked with Ørsted to find the least harmful location having regard to the technical constraints of site selection and having regard to, amongst other things, landscape character and visual impact.</p>	<p>The Applicant notes NNDC's comments.</p>
<p>Paragraph 3.7.5.4 of the Project Description states '...The equipment will either be housed within a single or multiple buildings, in an open yard or a combination of the above.' The District Council believes it is disappointing that, at this stage of the project, the design of the HVAC booster stations has not been refined further so that there is greater clarity about what is proposed. An indicative onshore booster station layout has been provided but this is shown in limited detail so as to gauge overall impact or assess how and whether proposed landscaping mitigation will be effective.</p> <p>Volume 6, Annex 4.5 sets out Photograph Panels, Wirelines and Photomontages and includes a series of five viewpoints which include wireline models and Year 1 and Year 15 photomontages. Paragraph 2.1.1.3 of that document suggests:</p> <p>'Where wirelines indicate that views of the onshore HVAC booster station would be very limited photomontages have not been produced. This approach was consulted on and agreed with South Norfolk District Council (SNDC) and Norfolk County Council (NCC) as noted in Table 4.4 of volume 3, chapter 4: Landscape and Visual Resources. North Norfolk District Council (NNDC) and Broadland District Council (BDC) were also consulted but at the time of finalisation of this report had not responded'.</p> <p>It should be made clear that whilst NNDC was invited to comment on the photomontage methodology, this consultation took place on 21 Dec 2017 with responses requested by 12 Jan 2018 (or approval would be assumed). The District Council does not believe this represents</p>	<p>The Applicant acknowledges the contribution provided by NNDC during site selection and design refinement of the onshore HVAC booster station and, as noted in Paragraph 2.1.1.3 of Volume 6, Annex 4.5 Photograph Panels, Wirelines and Photomontages of the Environmental Statement [APP-146], contacted NNDC for comment on the proposed viewpoint methodology relative to the onshore HVAC booster station. The NNDC's position on the appropriateness of the viewpoints is being explored as part of the ongoing preparation of a Statement of Common Ground.</p> <p>The landscape planting proposed at the onshore HVAC booster station as described in the Outline LMP [APP-181] is indicative and will be used to form the basis of the final LMP which will be submitted and agreed with the relevant planning authority (under Schedule 17 of the draft DCO, [APP-027]). The Applicant will consult with NNDC on the preparation of this final LMP as it relates to the onshore HVAC booster station.</p>

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<p>meaningful consultation as the Council offices were only open for business for 11 days during this period, which is insufficient given the scale of this project and its potential impact on the District. NNDC had previously made a significant contribution in providing advice to Ørsted to assist them in refining a list of potential sites and continued to offer to support regarding the design of the HVAC booster station and to agree the specification of landscape mitigation planting. To date this opportunity has not been taken up by Ørsted or its appointed consultants. The District Council therefore believes that Para 2.1.1.3 is disingenuous as the specific question about wireframes and photomontages was never properly discussed with NNDC.</p>	
<p>Irrespective of whether specific or genuine consultation has taken place, the key issues which need to be determined regarding any cable booster station during examination is whether the visual impacts of the proposed facility are acceptable in whatever form it may take within the wide envelope presented. The following issues should therefore be established:</p> <ul style="list-style-type: none"> - What is the best-case booster station scenario for a HVAC solution; - What is the worst-case booster station scenario for a HVAC solution; - Agreeing the likely external form of any buildings to be sited; - Agreeing the external colours for any building(s) to be erected including walls, roofs, windows and doors with the purpose of reducing the visual impacts; - Establishing what any solution without buildings would look like (including colour); - Establishing the specification and maintenance/management of mitigation planting necessary to achieve the minimum screening of the buildings set out in the photomontages for Years 1 and 15; - Understanding expected growth rates for mitigation planting; - Understanding the impact of a two-phase project on the HVAC booster station site and associated landscape mitigation; - Understanding the likely visual impact of any 	<p>Further detail on the delivery of the onshore HVAC booster station is set out in an earlier response. This clarifies in what scenarios the onshore HVAC booster station would be required. The parameters for the onshore HVAC booster station are set out in Table 3.62 of Volume 1, Chapter 3: Project Description [APP-058].</p> <p>It is noted that, under Requirement 7 of the draft DCO [APP-027], details including the layout, scale, finished ground levels, external appearance, materials, access and circulation areas, and timetables for the landscaping works at the HVDC converter/HVAC substation will be submitted to and approved by the relevant planning authority prior to commencement of construction.</p> <p>Details of the mitigation planting at the onshore HVAC booster station, to supplement natural screening, is provided in the Outline Landscape Management Plan [APP-181]. The principles of maintenance and management of proposed mitigation planting at the onshore HVAC booster station is set out in Section 5 of this document and would be developed in detail within the final LMP to be submitted and agreed with the relevant local planning authority under Requirement 8 of the draft DCO [APP-027] prior to commencement of works under the DCO.</p> <p>Details regarding the Applicant's commitment to implement a section of the landscape mitigation at the onshore HVAC booster station at the commencement of construction works for the first phase is detailed in an earlier response. The commitment relevant to the onshore HVAC booster station is captured in paragraphs 3.1.2.3-3.1.2.4 in the updated Outline LMP [APP-181].</p> <p>Based on the mitigation proposed, outside of the site boundaries, landscape and visual effects were not identified to be significant once planting has matured (see section 4.11.2 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement [APP-076]).</p> <p>Details regarding the Applicant's commitment to replanting hedgerows which are removed during construction is</p>

Relevant Representation Comment	Applicant's Response
<p>external lighting needed on site.</p> <p>Whilst many of the above issues may form part of a suite of subsequent planning conditions, it will nonetheless be important for the District Council and communities most closely affected by this development to understand the likely best and worst case impacts of the development and to understand whether mitigation is achievable. This may also give weight to determining whether one transmission system should be favoured over another.</p>	<p>detailed in an earlier response.</p> <p>Lighting during the onshore construction phase will be short term and temporary, used only when required (and generally limited to certain working hours) and designed to avoid unnecessary illumination. Light spill during out of hours working will be minimised through the use of task-orientated lighting, as set out in the outline CoCP which accompanies the DCO application (APP-179). In terms of permanent onshore infrastructure, the cables will be buried and there will be no operational lighting. Impacts from permanent lighting at the onshore HVAC booster station and onshore HVDC converter/HVAC substation (such as security lighting during operation to ensure a safe working environment), would be minimised through design, in particular the use of directional lighting. Based on the mitigation and management measures proposed to be put in place, no significant light spill is anticipated during construction or operation.</p> <p>The detailed lighting strategy for during construction (i.e. temporary) will be submitted as part of the Code of Construction Practice (CoCP) for the approval of the local planning authority under DCO Schedule 1, Part 3, Requirement 17 Code of Construction Practice. The detailed lighting strategy for the operation and maintenance phase (i.e. permanent) will be submitted for the approval of the relevant local planning authorities under DCO Schedule 1, Part 3, Requirement 7 Detailed design approval onshore [APP-027].</p>
<p>Impact of construction traffic</p> <p>Within North Norfolk it is assumed that the main traffic generators connected with Hornsea Project Three will come from construction traffic associated with:</p> <ul style="list-style-type: none"> - Bringing the offshore cables onshore at Weybourne - Construction of the cable corridor; and - Construction of the HVAC Booster Station (assuming HVAC transmission is used) <p>North Norfolk has many small and narrow country roads with restricted widths and limited opportunities for larger vehicles to pass each other. Traffic levels vary but tourism during March to October (heighted during the summer months especially near coastal locations) means that the timing of any construction works will be critical to minimising adverse highway impacts.</p>	<p>Impacts on the local road network are assessed in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079]. It is noted that under Requirement 18 of the DCO (as submitted, APP-027), a Construction Traffic Management Plan will be required to be implemented prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase; an outline of this document has been produced and accompanied the DCO application [APP-176].</p> <p>Alongside the above, it is noted that the greatest volume of construction traffic will be present on the local roads around Weybourne during the landfall construction work which will have a duration of up to 32 months (potentially across two phases), and cable corridor works close to landfall, which will have a duration of up to 30 months (although this duration is across the whole corridor, potentially across two phases). However, on the basis of the onshore mitigation measures identified within the documents referenced above, Volume 3, Chapter 7: Traffic and Transport of the Environmental Assessment [APP-079] did not assess effects on traffic and transport across Hornsea Three as a whole to be significant.</p>

Relevant Representation Comment	Applicant's Response
<p>Volume 3, Chapter 7 of the Environmental Statement considers Traffic and Transport and Table 7.9 sets out the 'maximum design scenario considered for the assessment of potential impacts on traffic and transport' and Table 7.12 sets out the daily construction vehicle movements split out into construction staff and HGVs and Table 7.18 indicates the Impact of Hornsea Project Three Construction Traffic Flows including percentage change due to construction traffic (Maximum daily change) for HGVs and total vehicles. An Outline Traffic Construction Management Plan has been provided which seeks to 'establish the principles that will be implemented by the principal contractors to minimise the adverse impacts associated with the transport of materials, plant and staff required for construction of the onshore elements of Hornsea Project Three offshore wind farm'</p> <p>At the examination it will be important to understand the highway implications for the best-case scenario (assumed HVDC) and the worst case scenario (assumed HVAC) so that residents and businesses can properly understand the impact of construction traffic, where it is planned to go, in what volumes and for what duration. At present it is difficult to cut through the information presented in order to gauge an understanding of the different scenarios. There is particular concern in respect of access north of the A148 from the point at which cables come onshore, with evidence submitted suggesting a significant increase in HGV traffic. Construction of the HVAC booster station near Edgefield (Link ID 59) will also see a significant increase in HGV movements and one of the largest percentage increases in total vehicles within North Norfolk.</p>	<p>Impacts on the local road network are assessed in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement [APP-079]. This assessment has been undertaken based on the maximum design scenario, which is set out in Table 7.9 of the same chapter and comprises the HVAC transmission scenario built in a single phase, which increases the intensity of vehicle movements across a shorter duration. This approach is consistent with the Rochdale Envelope approach as set out in PINS Advice Note 9: Rochdale Envelope.</p> <p>Based on this assessment, Volume 3, Chapter 7: Traffic and Transport of Environmental Statement [APP-079] concludes that no significant effects will occur during construction or operation and maintenance of Hornsea Three.</p> <p>Notwithstanding this, the Applicant continues to develop CTMP measures which may be necessary to limit HGV activity on critical links during the commuter peak periods. The large % effects observed within the assessment are a result of the limited number of HGV currently on the specific links in question, it does directly correlate and mean the links are not able to accommodate the HGV flows predicted. The Applicant also continues to develop HGV fluctuation levels to define the peak and average flows over the construction period. This information will be presented at Deadline 2.</p>
<p>It is likely that focus in the examination will be on the accuracy of the figures presented including baseline data and expected traffic movements. In particular, within Table 7.12, Link IDs 1, 50, and 55 within NNDC area show no daily</p>	<p>Mitigation will largely come via the construction traffic management plan or plans. An Outline CTMP has been produced and accompanied the DCO application [APP-176]. Under Requirement 18 of the DCO (as submitted, APP-</p>

Relevant Representation Comment	Applicant's Response
<p>construction movements and no percentage changes. It will be important to understand how such commitments and mitigation strategies can be secured in any subsequent consent to minimise adverse effects on sensitive receptors, as well as consideration of whether delivery of equipment and cables should be outside of daytime hours when traffic volumes on these routes are highest.</p> <p>Consideration will also need to be given to construction phasing and what will happen in the event of significant delay between first and second phases including construction compounds, temporary access routes and mobilisation works within North Norfolk.</p>	<p>027), a detailed CTMP will be required to be submitted and approved by the relevant planning authority in consultation with the relevant highway authority. This will be developed based on the principles set out in the Outline LMP and will be implemented prior to the commencement of works for an individual phase to manage access and associated impacts during the construction phase. Principles of the timing for HGV movements is set out in section 2.1.4 of the Outline CTMP [APP-176], establishing core working hours and an associated mobilisation period. Where working outside of these periods is required, this will be agreed with the relevant planning authority.</p> <p>As noted in paragraph 3.7.3.33 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], each secondary construction compound will be in place for periods of up to three months per construction phase. The secondary construction compound will be removed and the sites restored to their original condition when the work front in that locality, for a given phase, has passed.</p> <p>Similarly, once a construction site access is no longer required for the construction of a particular phase of Hornsea Three, the access will be removed and the highway returned to its original condition, unless otherwise agreed with the HAs. The details of and timescales for the reinstatement will also be agreed with the HAs. This commitment is captured in updated paragraphs 3.2.1.4 and 4.2.1.5 of the Outline CTMP [APP-176].</p>
<p>Landscape & Biodiversity Mitigation</p> <p>NNDC recognise that Ørsted have undertaken desktop studies and Phase 1 Habitat Surveys together with site specific surveys in accordance with best practice recommendations in order to inform the baseline data which underpins Environmental Statement Volume 3, Chapter 3 – Ecology and Nature Conservation. Figure 3.2 (Sheets 1 to 5) set out the range of ecological constraints including, amongst other things, the location of Sites of Special Scientific Interest (SSSIs), County Wildlife Sites as well as data for Great Crested Newts, reptiles and bat activity. Figure 3.2 also sets out in some detail the intended locations for Hydraulic Directional Drilling including locations: A - HDD only, B – HDD with haul road over, C – HDD with haul road over or Open Cut, and D – HDD and ducting laydown. The Use of HDD section above identifies some issues to consider at examination stage regarding HDD types to be employed along the cable corridor route.</p> <p>Section 3.10 of the Environmental Statement Volume 3, Chapter 3 – Ecology and Nature Conservation sets out Measures to be adopted as part of Hornsea Three and these are welcomed by NNDC and should be secured with any</p>	<p>As set out in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059], the routing of the onshore cable corridor has sought to minimise impacts on sensitive receptors through routing or the use of trenchless technology (i.e. HDD). In some locations, it has been necessary to have HDDs with a haul road over to facilitate access along the onshore cable corridor to enable construction. Volume 4, Annex 3.5: Onshore Crossing Schedule [APP-089] provides a summary of the indicative locations of obstacles along the onshore cable corridor and notes how they are proposed to be crossed.</p> <p>The assessments presented within the Environmental Statement (Volume 3), and resulting mitigation measures, are based on the maximum design scenario in line with the Rochdale Envelope approach.</p> <p>The Applicant notes NNDC's comment on the measures set out in Volume 3, Chapter 3: Ecology and Nature Conservation [APP-075]. These measures are secured under Schedule 1, Part 3, Requirement 10 of the DCO [APP-027] which states that <i>"No phase of the connection works may commence until for that phase a written ecological management plan (which accords with the outline ecological management plan) reflecting the survey results</i></p>

Relevant Representation Comment	Applicant's Response
<p>consent. It will also be important for Ørsted to set out and quantify landscape mitigation to offset the loss of hedgerows and trees which will provide the opportunity for both landscape and ecological enhancements sufficient to at least outweigh any adverse impacts.</p> <p>Consideration will also need to be given to the timing of enhancement/mitigation works, particularly in view of the potential for the project to be split into two phases.</p>	<p><i>and ecological mitigation and enhancement measures included in the environmental statement has been submitted to and approved by the relevant planning authority in consultation with Natural England”.</i></p> <p>Details regarding the Applicant's commitment to implement a section of the landscape mitigation at the onshore HVAC booster station at the commencement of construction works for the first phase is detailed in an earlier response. The commitment relevant to the onshore HVAC booster station is captured in newly added paragraphs 3.1.2.3-3.2.1.4 in the Outline LMP [APP-181].</p>
<p>Community Benefits</p> <p>In respect of potential community benefits, NNDC recognises that the DCO process has to work within the sphere of planning law and under the notion that planning obligations should only be sought where they are necessary to make the development acceptable in planning terms; directly related to the development; and fairly and reasonable related in scale and kind to the development.</p> <p>NNDC recognises that, once built, the scheme is likely to be relatively benign. However, the authority believes that it is important that the proposals sufficiently address any harmful impacts associated with construction including potential damage to coastal areas, loss of trees and hedgerows along and associated with the cable corridor, damage to roads and verges from traffic together with consideration of harm to the economic prosperity of businesses affected by any extended or multi-phased construction activities. The Council believes it will therefore be important for the examination panel to carefully consider and understand the package of CIL compliant benefits being put forward by Ørsted as part of the consent process and how those benefits would be secured.</p> <p>Outside of the DCO process, North Norfolk District Council will seek to negotiate with Ørsted to secure a range of benefits for the wider community of North Norfolk.</p>	<p>Please see the Applicant's response to Relevant Representation RR-031 regarding community benefits. The Applicant has, as part of the DCO application, committed to the preparation of a Skills and Employment Plan which will be submitted to the relevant planning authority, as set out in Schedule 1, Part 3, Requirement 22 of the draft DCO [APP-027]. The skills and employment plan shall identify opportunities for individuals and businesses based in the regions of East Anglia and the Humber to access employment opportunities associated with the construction, operation and maintenance of the authorised development</p>
<p>Summary</p> <p>Whilst NNDC is supportive of the principle of the Hornsea Project Three offshore wind development being proposed by Ørsted, the Council believes it will be important to ensure the project is managed and delivered in a way that does not result in significant adverse impacts on local communities and businesses close to the landfall and along the onshore cable route. Given the current size of the project envelope, NNDC has genuine concerns about certain aspects of the proposal and it is requested that these matters, as set out above, are taken forward as part of the examination stage so that there can be greater clarity about the proposals and confidence that an acceptable DCO outcome can be</p>	<p>The Applicant notes NNDC's summary and has addressed the specific points raised above.</p>

Relevant Representation Comment	Applicant's Response
achieved for the residents, businesses and communities of North Norfolk.	

**Annex 11 – Full response to Sarah Butikofer on behalf of Holt County
Division [RR-142]**

Annex 11 – Full response to Sarah Butikofer on behalf of Holt County Division (RR-142)

Relevant Representation Comment	Applicant's Response
<p>I am writing as the County Councillor for Holt Division in North Norfolk, as such my area covers Weybourne, Kelling, High Kelling and Holt. I have been notified by Ørsted Hornsea Project Three (UK) Limited that, as of 08 June 2018, their application for Development Consent Order (DCO) in respect of Hornsea Project Three (HPT) has been accepted for examination by the Planning Inspectorate under the Planning Act 2008.</p> <p>This letter forms my Relevant Representation and sets out a summary of the issues that in my role as a representative of the area I am most concerned about. It explains what I am most concerned about and consider especially relevant to my division in North Norfolk.</p>	<p>The Applicant has responded to each point in turn below.</p>

Relevant Representation Comment	Applicant's Response
<p>Principle of Development</p> <p>Although not fundamentally opposed to the principle of renewable energy development in helping to tackle the challenges faced by climate change, I believe this area is taking too much of the pressure of national infrastructure development; particularly when previous projects in this area, and across the wider area of North Norfolk are considered. Onshore solar farms nearby at East Beckham and previous wind farm projects such as Dudgeon to name just two through this same area, should I believe be taken into consideration.</p> <p>It is therefore essential to ensure that key design and construction decisions do not result in unacceptable or adverse impacts on residents or businesses within North Norfolk, ours is a unique and fragile economy and we simply cannot afford for it to be undermined. It is crucial that the important contribution that agriculture and tourism plays in the economic prosperity of the whole District and most importantly in these small villages is underpinned by the nationally and internationally recognised coast, landscape and biodiversity interests.</p>	<p>Volume 3, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059] sets out the process of identifying the site of specific elements and reasonable consideration of alternatives as Hornsea Three has developed. As described in Section 4.4 of Chapter 4, it is important to note that in the context of site selection for offshore wind farms, developers are limited by the process of bidding for sites and, in the context of Round 3, within zones which were identified by The Crown Estate.</p> <p>Once an Agreement for Lease and the potential generating capacity was identified for Hornsea Three (see Section 4.6 of Chapter 4), a grid connection option appraisal was undertaken. The aim of the appraisal was to identify the most economic and efficient design option for the connection of a project. Although both National Grid and Ørsted input into the appraisal process (in respect to economic and strategic factors), the eventual grid connection offer was determined by National Grid.</p> <p>One early route considered for the Hornsea Three cable corridor would be to have used the existing cable route corridor that was used for Hornsea One and Hornsea Two, providing a landfall in the vicinity of Grimsby with a grid connection at Killingholme. However, at that initial stage NGET indicated that the 400kV substation at Killingholme and indeed locations north of Boston had no capacity within the timeframes required. Based on this, as well as a range of other factors, in May 2016, Hornsea Three was formally offered a grid connection at Norwich Main Substation as a result of the appraisal process.</p> <p>This grid connection at Norwich Main Substation was a key determining factor in the routing of the onshore cable corridor. Alongside this, the route has sought to minimise direct impacts on sensitive receptors, for example, through the avoidance of designated sites and use of trenchless technologies (i.e. horizontal directional drilling) (see section 4.8-4.13 of Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [APP-059]). Where impacts could not be avoided, these are assessed in the relevant onshore topic specific chapter of the Environmental Statement (Volume 3) – with impacts on agriculture and tourism specifically assessed in Volume 3, Chapter 5: Land Use and Recreation [APP-078], and Chapter 10: Socio-Economics [APP-083] respectively.</p>

Annex 11 – Full response to Sarah Butikofer on behalf of Holt County Division (RR-142)

Relevant Representation Comment	Applicant's Response
<p>Keys Aspects of the Project Affecting Holt County Division The proposed landfall site is once again at Weybourne Beach, with the inward cable route then passing inland through the villages of Kelling and High Kelling creating an 80m wide working corridor. The key design/construction decisions affecting Holt Division include:</p> <ul style="list-style-type: none"> - Choice of transmission system; - Phasing of the Project and Associated Construction Timetable(s); - Method and timing of bringing offshore cables onshore at Weybourne; - Working Corridor of onshore cable route; - Impact of construction traffic. 	<p>The Applicant has responded to each point in turn below.</p>

Relevant Representation Comment	Applicant's Response
<p>Choice of Transmission System - High Voltage Alternating Current (HVAC) vs High Voltage Direct Current (HVDC)</p> <p>The final chosen method of transmission of electricity to the onshore gird connection location will have a fundamental bearing on the overall impact of the project. Whilst I recognise that Ørsted Hornsea Project Three (UK) Limited wish to keep their options open to using either HVAC or HVDC, this does currently present a very wide project envelope and increases the level of uncertainty for affected parties until such time as the final transmission method is chosen.</p> <p>As the NNDC report states 'Table 3.37 in Chapter 3 of the Environmental Statement seeks to compare the components involved in the different HVAC / HVDC transmission systems. It has been the understanding of the local Council NNDC since the pre-application stage that a HVAC system will require an onshore booster station, with a site identified onshore near to the village of Edgefield; together with an offshore booster station, at a yet unidentified location, within a search zone approximately 19-22 nautical miles offshore from Cromer.</p> <p>However, table 3.37 creates uncertainty as to whether these booster stations are required with the reference that these components 'May be required'. However, the accompanying comments within that table suggest 'HVAC: onshore and/or offshore booster station required'</p> <p>I completely support the view taken by North Norfolk District Council which says 'it is important for there to be absolute clarity about the components required for each transmission type so that the worst-case scenario in relation to the HVAC option can be fully assessed. This is critical to ensure the impact of the development is properly understood and so that weight can be afforded by the decision maker as to whether one type of electrical transmission should be preferred over the other with the potential for the Development Consent Order to specify the transmission system to be used where there is compelling evidence to do so.</p> <p>In the opinion of North Norfolk District Council, HVDC would result in the need for fewer buried cables and would have the least damaging impact on the district of North Norfolk when considering the project as a whole, particularly as this would negate the need for the booster station near Edgefield.'</p>	<p>Please see Appendix 22 to the Applicant's response to Deadline 1: Transmission System (HVAC/HVDC) Briefing Note.</p>

Relevant Representation Comment	Applicant's Response
<p>Phasing of the Project and Associated Construction Timetable(s)</p> <p>NNDC's response is clear on this issue which is far from what we have seen from Ørsted, timing of this project has changed at every meeting I have attended. The notes below from NNDC's report show clearly a potential 15 year window of construction, yet last week at a public meeting we were categorically told it was 8 maximum.</p> <p>'Section 3.8 of Chapter 3 – Project Description sets out the Construction Phasing if the Development Consent Order is granted. This is also set out at para 2.15 of the Development Consent Under Explanatory Memorandum in terms of maximum durations. It indicates that construction could commence 2020/21 and could take up to seven years if built out in a single phase or up to 10 years if built out in two phases, with a maximum period of six years between the end of the first phase and commencement of the second phase.</p> <p>NNDC understands that the onshore elements of the proposed project would take three years to construct in a single phase but this could span a six-year period in a two phase scheme (assuming a three-year gap between phases). If reference is made to the DCO Explanatory Memorandum (together with the example two phase programme at Figure 3.39 (Chapter 3: Project Description) then the duration of the project could well exceed 15 years if a gap of six years between the end of the first phase and commencement of the second phase is allowed by the DCO.</p> <p>Clarity over Construction timetabling is a matter that NNDC would seek to be considered further, as part of the examination process, in order that any adverse impacts of construction in a single or two phase programme can be properly understood and appropriately managed for the benefit of residents and businesses within the District. The possibility of any extended construction window (certainly if it was to extend over 15 years) would be considered totally unacceptable to NNDC and local communities most of which are dependent on the tourism economy and the Council believes that the examination should explore how the project, and any grant of DCO, could reduce the maximum construction envelope down to an acceptable level. This may include specifying a maximum gap between the end of the first phase and commencement of the second phase.</p>	<p>Please see the Applicant's response to Relevant Representation RR-133: North Norfolk District Council, which covers the issues raised in this representation.</p>

Annex 11 – Full response to Sarah Butikofer on behalf of Holt County Division (RR-142)

Relevant Representation Comment	Applicant's Response
<p>In respect of a two-phase scheme it will be important during the examination to understand which components will be installed in the first phase which may help to reduce any future adverse consequences during the second phase. For example, in a two-phase construction the Environmental Statement does not appear to give consideration as to whether cable ducting could be laid for all of the development in phase one which would help reduce the adverse impacts of having to re-open or dig new trenches to lay cables for phase two. By laying ducting, a simpler cable pull through process would be possible in phase two which would help reduce disturbance impacts and speed up project completion. It would also help reduce the impacts from construction traffic in phase two by reducing the need for vehicles bringing imported stabilised backfill material over a wide time period (see section Impact of Construction Traffic). Completing the majority of trench works in phase one would also allow time for soils to recover and reduce the length of time taken out of agricultural production.</p>	<p>Please see the Applicant's response to Relevant Representation RR-031: Plumstead Parish Council in respect of construction phasing.</p>
<p>The Council believes the examination panel will also need to satisfy itself that the benefits of any landscape mitigation works planned in phase one are not damaged or undermined by a protracted phase two timetable which may include re-opening trenches. It is important that all mitigation works are delivered at an early stage so as to make the impact of the works acceptable in planning terms. Any phase one mitigation landscaping damaged or requiring removal during phase two would take time to recover and so may not deliver the level of mitigation expected over the planned lifetime of the project.'</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>

Annex 11 – Full response to Sarah Butikofer on behalf of Holt County Division (RR-142)

Relevant Representation Comment	Applicant's Response
<p>Method of bringing offshore cables onshore at Weybourne It is essential that construction works on the beach are done 'out of season' as far as possible to mitigate the impacts on local businesses totally dependent on the tourist trade in the area for survival. This area forms part of a larger project by NNDC 'The Deep History Coast Project', to bring tourists into the area out of season to help sustain these communities. Any works done in this area must be fully mitigated to minimise beach disruption for users, in terms of noise, access and visibility. It is completely unacceptable that Ørsted have so far failed to respond to concerns already raised by NNDC as reported below.</p> <p>'At the Preliminary Environmental Information Report (PEIR) stage, NNDC advised that:</p> <p>'Whilst the method of construction in the nearshore/landfall location needs to be considered further and in more detail, initial consideration is that a Horizontal Direct Drilling (HDD) approach would prove to be the least likely to have impacts on nearshore processes during construction and would be preferred. This should (in consideration with other marine environmental factors) be at an extent where HDD exit points have minimal impact on nearshore coastal processes. Likewise buried cabling as identified in the reports would be preferred to minimise impacts to coastal processes with low profile protection being the secondary position.</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>
<p>Impact of the proposed cables on tides and, in particular, waves and the influences this may have on coastal sediment transport are important factors that the Environmental Statement will need to include and PEIR seems to be making progress in covering these important issues'.</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>

Relevant Representation Comment	Applicant's Response
<p>Some nine months after the PEIR response from NNDC it is disappointing that Ørsted are still discussing the possibility of open cut trenching techniques to bring the offshore cable onshore to the Transition Joint Bays (TJBs). Para 3.6.12.23 of the Environmental Statement Project Description refers to Open cut installation requiring beach closures of up to one month per cable. It is understood there would be 6 offshore cables using HVAC transmission or there would be 4 offshore cables (plus one HVAC cable) with HVDC transmission. This would suggest potential beach closure of up to six months in the worst case HVAC scenario.</p> <p>The District Council therefore believes it will be very important for the examination to establish and understand the impact of nearshore works, the timing of works and how impacts on public footpaths and rights of way, including public access to the beach, for recreation can be managed without significant detriment to amenity. The associated economic impact of beach closures therefore needs to be properly assessed and mitigation considered as part of the examination process.</p> <p>The examination stage will also need to consider the impact of open cut trenching on the Weybourne intertidal area (including effects on the Marine Conservation Zone, adjacent Site of Special Scientific Interest and nearby Special Area of Conservation) so that, where the evidence can justify it, the scope of the project is narrowed down to exclude inappropriate trenching techniques in any subsequent grant of DCO.</p> <p>Based on the evidence seen to date, NNDC remains firmly of the view that HDD techniques (long HDD drill) should be used to bring the offshore cables onshore as this will have the least damaging impact on the nearshore (especially with a two-phase project), will result in fewer adverse impacts on coastal processes and will reduce the potential to destabilise the cliffs at Weybourne compared to open trenching techniques. ‘</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>

Relevant Representation Comment	Applicant's Response
<p>Working Corridor of onshore cable route</p> <p>Ørsted have for some time made clear that the working corridor of the onshore cable route would typically be 80m wide - consisting of a 60m central section comprising three no. 5m wide and up to 2m deep trenches (tapering to 1.5m at base) either side of a 6m wide haul road. Each side of the cable corridor would include additional 10m wide strips of land on which topsoil and subsoil would be stored. Figure 3.32 within the Environmental Statement Project Description shows an indicative layout (albeit it appears to only show 12 cables rather than the 18 cables required for the 6 circuit HVAC worst case scenario).</p> <p>It would be very helpful at examination stage to understand the likely layout for the HVDC solution which it is understood would consist of 8 HVDC cables and 3 HVAC cables. This may result in a reduction in the number of trenches needing to be dug and would mean less soil disturbance, which would be welcomed, particularly when passing across currently active agricultural land. I like the Council believe there is currently a lack of clarity generally about the 'best-case scenario' with this project which it is hoped will be made clearer through examination.</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>
<p>Impact of construction traffic</p> <p>Again the report by NNDC sets out a comprehensive view, however I should like to reiterate that as the County Councillor responsible for this area I am particularly concerned about the impact on our fragile infrastructure, and homes built on the very edge of roads with large vehicles and their associated vibrations passing.</p> <p>'Within North Norfolk it is assumed that the main traffic generators connected with Hornsea Project Three will come from construction traffic associated with:</p> <ul style="list-style-type: none"> - Bringing the offshore cables onshore at Weybourne - Construction of the cable corridor; and - Construction of the HVAC Booster Station (assuming HVAC transmission is used) <p>North Norfolk has many small and narrow country roads with restricted widths and limited opportunities for larger vehicles to pass each other. Traffic levels vary but tourism during March to October (heighted during the summer months especially near coastal locations) means that the timing of any construction works will be critical to minimising adverse highway impacts.</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>

Relevant Representation Comment	Applicant's Response
<p>Volume 3, Chapter 7 of the Environmental Statement considers Traffic and Transport and Table 7.9 sets out the 'maximum design scenario considered for the assessment of potential impacts on traffic and transport' and Table 7.12 sets out the daily construction vehicle movements split out into construction staff and HGVs and Table 7.18 indicates the Impact of Hornsea Project Three Construction Traffic Flows including percentage change due to construction traffic (Maximum daily change) for HGVs and total vehicles. An Outline Traffic Construction Management Plan has been provided which seeks to 'establish the principles that will be implemented by the principal contractors to minimise the adverse impacts associated with the transport of materials, plant and staff required for construction of the onshore elements of Hornsea Project Three offshore wind farm'</p> <p>At the examination it will be important to understand the highway implications for the best-case scenario (assumed HVDC) and the worst case scenario (assumed HVAC) so that residents and businesses can properly understand the impact of construction traffic, where it is planned to go, in what volumes and for what duration. At present it is difficult to cut through the information presented in order to gauge an understanding of the different scenarios.</p> <p>It is likely that focus in the examination will be on the accuracy of the figures presented including baseline data and expected traffic movements. In particular, within Table 7.12, Link IDs 1, 50, and 55 within NNDC area show no daily construction movements and no percentage changes. It will be important to understand how such commitments and mitigation strategies can be secured in any subsequent consent to minimise adverse effects on sensitive receptors, as well as consideration of whether delivery of equipment and cables should be outside of daytime hours when traffic volumes on these routes are highest.</p> <p>Consideration will also need to be given to construction phasing and what will happen in the event of significant delay between first and second phases including construction compounds, temporary access routes and mobilisation works within North Norfolk.'</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>

Relevant Representation Comment	Applicant's Response
<p>Landscape & Biodiversity Mitigation</p> <p>NNDC recognise that Ørsted have undertaken desktop studies and Phase 1 Habitat Surveys together with site specific surveys in accordance with best practice recommendations in order to inform the baseline data which underpins Environmental Statement Volume 3, Chapter 3 – Ecology and Nature Conservation. Figure 3.2 (Sheets 1 to 5) set out the range of ecological constraints including, amongst other things, the location of Sites of Special Scientific Interest (SSSIs), County Wildlife Sites as well as data for Great Crested Newts, reptiles and bat activity. Figure 3.2 also sets out in some detail the intended locations for Hydraulic Directional Drilling including locations: A - HDD only, B – HDD with haul road over, C – HDD with haul road over or Open Cut, and D – HDD and ducting laydown. The Use of HDD section above identifies some issues to consider at examination stage regarding HDD types to be employed along the cable corridor route.</p> <p>Section 3.10 of the Environmental Statement Volume 3, Chapter 3 – Ecology and Nature Conservation sets out Measures to be adopted as part of Hornsea Three and these are welcomed by NNDC and should be secured with any consent. It will also be important for Ørsted to set out and quantify landscape mitigation to offset the loss of hedgerows and trees which will provide the opportunity for both landscape and ecological enhancements sufficient to at least outweigh any adverse impacts.</p> <p>Consideration will also need to be given to the timing of enhancement/mitigation works, particularly in view of the potential for the project to be split into two phases.</p>	<p>Please see the Applicant's response to Relevant Representation RR-133.</p>
<p>Summary</p> <p>As I said at the beginning whilst I am not against the principle of offshore wind development it is critical to me and more importantly the people I represent, that if we are to take more of this national burden locally the project must be managed and delivered in a way that does not result in significant adverse impacts on local communities and businesses close to the landfall and along the onshore cable route.</p> <p>Given the current size of the project envelope, NNDC has genuine concerns about certain aspects of the proposal and it is requested that these matters, as set out above, are taken forward as part of the examination stage so that there can be greater clarity about the proposals and confidence that an acceptable DCO outcome can be achieved for the residents, businesses and communities of North Norfolk.</p>	<p>The Applicant notes the summary provided and has addressed the specific points raised above and in the Applicant's responses to Relevant Representation RR-133 and RR-031.</p>

Annex 12 – Full response to National Farmers Union [RR-146]

Annex 12 – Full response to National Farmers Union (RR-146)

Relevant Representation Comment	Applicant's Response
<p>OUTLINE REPRESENTATIONS</p> <p>1 Introduction</p> <p>1.1 These are the Outline Representations of the National Farmers Union ("NFU") and the Hornsea Three Agents (agents acting for NFU members and their clients on this project) to the application for a Development Consent Order by the Secretary of State for Housing, Communities and Local Government identified as the Hornsea Project Three Offshore Wind Farm Project order. The agents representing the landowners/occupiers are Savills, Strutt & Parker, Bidwells, Irelands, Brown & Co and Cruso & Wilkin (henceforth known as the Land Interest Group (LIG)).</p> <p>1.2 The objectives of the NFU are to champion farming in England and Wales and to provide professional representation and service to its members.</p> <p>1.3 The matters raised in these Outline Representations are matters not only of concern to the farming owners of agricultural land affected by this DCO, but also of concern to, and raise points of principle that will affect, members of the NFU having farm holdings that may be affected by similar Offshore Wind Farm schemes.</p>	<p>The Applicant notes the role of the NFU and the Land Interest Group.</p>
<p>2. Consultation and Engagement</p> <p>2.1 There has been a lack of constructive and proactive face to face meetings with Orsted and their agents. Some meetings have been held but the detail required by landowners has not been available. For example details on timings of construction to be able to understand the impact on the cropping rotation of the farm or the commercial shoot over the winter months. Therefore it has not been possible to discuss all aspects of the scheme.</p> <p>2.2 Orsted and their agents have been meeting LIG but due to the lack of specific information there has been no progression in negotiations in the last two months over June and July 2018.</p> <p>2.3 Heads of terms were sent out on the 20th April 2018 which do not at the present time contain the specific detail for the scheme. Further specific detail has been requested from Orsted at the last meeting held on 9th July 2018.</p> <p>2.4 Orsted have still not sent out a draft option and lease to</p>	<p>The Consultation Report [APP-034] sets out in detail the consultation process that has been undertaken for Hornsea Three. The relevant planning authorities have confirmed that they consider that appropriate and adequate consultation had been undertaken prior to the Application being accepted by the Planning Inspectorate.</p> <p>Appendices A and B of the Statement of Reasons [APP-032] set out the communication that took place with affected landowners prior to submission of the Application.</p> <p>Each landowner has been contacted with a view to entering into negotiations to acquire land or rights over the Order Land as necessary. The Applicant's preference has been, and will continue to be, to acquire the land or rights over the Order Land voluntarily.</p> <p>An updated version of Appendices A and B of the Statement of Reasons (APP-032) has been submitted for Deadline 1 and sets out the current status of negotiations with landowners. The Applicant does not accept the NFU's comment that there has been a lack of engagement with affected landowners.</p>

Relevant Representation Comment	Applicant's Response
<p>the agents or landowners after many requests to see these documents. It is imperative that the NFU and agents acting (LIG) see these documents to make sure that the terms are reasonable. The time period where incentive payments are offered must be long enough for LIG to look at the terms offered in detail and negotiate. Orsted must not force the hand of landowners.</p>	<p>2.1, 2.2 and 2.3 It is not possible to provide precise final design details of Hornsea Three, or the way or when it will be built, a number of years ahead of the time it will be constructed. Offshore wind is a constantly evolving industry with a constant focus on cost reduction, therefore improvements in technology and construction methodologies occur frequently and an unnecessarily prescriptive approach could preclude the adoption of new, more cost-effective technology and methods, potentially affecting the viability of a project. Volume 1, Chapter 3: Project Description [APP-058] describes the Hornsea Three design and identifies the range of potential parameters for all relevant components upon which Option or Lease Agreements are being negotiated.</p> <p>2.4 The Applicant confirms that draft option agreements and leases have not been sent to all agents of landowners as negotiations to date have been focussed on the Heads of Terms which will inform the basis of the draft option agreements and leases. Notwithstanding this, the Applicant has provided draft option agreements and leases to a local law firm for review with feedback to be provided to the agents and landowners in question. It is anticipated that this law firm will represent a number of the landowners.</p> <p>The Applicant will continue negotiations with all relevant landowners, lessees, tenants and occupiers.</p>
<p>3.0 Compulsory Acquisition and Compelling Case Requirement</p> <p>3.1 The DCO will contain powers to acquire compulsorily so much of the Order land as is required for the authorised development, or to facilitate, or is incidental to it.</p> <p>3.2 Further, the guidance as to negotiations either before or parallel with formal processes may well give rise to a "legitimate expectation" that such will occur, and a failure to conduct such negotiations deprives landowners of the benefit that negotiations may have brought, especially in relation to where different locations and lesser rights might have been achieved.</p> <p>3.3 The NFU and the land agents LIG believe that no meaningful negotiations have taken place alongside the formal procedures for compulsory purchase. Therefore a compelling case cannot be made.</p>	<p>The Applicant refers to Section 7 of the Statement of Reasons [APP-032] which describes how the tests set out in section 122 of the Planning Act 2008 have been satisfied, including the Applicant's position that there is a compelling case in the public interest for land and rights over land to be acquired compulsorily.</p> <p>Appendices A and B of the Statement of Reasons [APP-032] set out the communication which took place with affected landowners prior to submission of the application.</p> <p>Please refer to the updated Appendices A and B of the Statement of Reasons (as submitted for Deadline 1) for an indication of the current status of negotiations.</p> <p>The Applicant considers that it has made reasonable attempts to negotiate with landowners and will continue to do so.</p>
<p>4.0 HVAC v HVDC Cables</p> <p>4.1 It was made clear at the statutory consultation carried out at the end of November 2017 that Orsted would be applying for a DCO on both HVAC and HVDC cables. This will involve building a booster station or converter substation.</p> <p>4.2 It has been highlighted that the use of DC technology for</p>	<p>Please see Appendix 22 to the Applicant's response to Deadline 1 which relates to the transmission technology proposed as part of the authorised development.</p>

Relevant Representation Comment	Applicant's Response
<p>offshore windfarms is still maturing and that there are certain risks by only taking forward DC technology. If Orsted could confirm that they are taking forward DC technology this would greatly reduce the impact on land operations and farm businesses as the width of the lease area required will be less and it is likely that no link boxes will be required. Landowners and their agents have been asking for information from Orsted to confirm why they cannot use DC technology and the only reasons forthcoming have been cost, risk and the length of the scheme. There is confusion out there with landowners as another developer Vattenfall who are also proposing a NSIP project the Norfolk Vanguard and Boreas Cable Project have confirmed that they will be using DC technology.</p>	
<p>5. Booster Station</p> <p>5.1 LIG would like further clarification as to why the proposed Booster station is not being built on a brown field site? Whilst the cost of this may be greater for Orsted there would be significantly less impact on farmers and their agricultural businesses.</p>	<p>Information pertaining to the site selection for the onshore HVAC booster station is provided in Environmental Statement volume 1, chapter 4: Site Selection and Consideration of Alternatives [APP-059].</p> <p>The initial HVAC booster station search area was established using a set of guiding principles (see paragraph 4.10.7.5 of Chapter 4). This was then followed by more detailed constraints mapping in order to confirm exclusion areas and identify sites offering some potential. Volume 4, Annex 4.3: Refinement of the Onshore Cable Corridor and Associated Infrastructure (Stages 5-7 Scoping to PEIR), section 3.4.3, [APP-094] sets out the selection criteria listing a range of constraints that were excluded from consideration and/or indicate the least environmentally constrained locations within the search area. Potential site locations were then identified based on specific criteria including the potential for a footprint of approximately 2.5 ha, ideally with some existing screening and accessible. The final site selection process was informed by extensive environmental surveys, technical and feasibility studies and consultation.</p> <p>On the basis of the above, the site of the onshore HVAC booster station identified in Volume 1, Chapter 3: Project Description [APP-058], is considered the most appropriate.</p>
<p>6. Construction and Funding</p> <p>6.1 Orsted have stated that they will need at least 8 years to lay all the cables and that this would be carried out in two phases. Construction works of two phases of two and half years with a three year gap in between. If the project was constructed in one phase with high intensity it has been stated that it would be possible to do this with a minimum duration of three years. Two of the reasons given for a two phase programme are constraints in the supply chain and/or the timing of auctions for the Government's Contract for Difference process which offshore wind farms currently rely on to secure a price for the electricity produced by a project. Therefore Orsted are indicating that they do not have the</p>	<p>The Applicant refers to the Funding Statement (APP-029) which sets out how Hornsea Three will be funded and the Applicant's responses to the Examining Authority's First Written Questions 1.14.11 and 1.14.12 (submitted for Deadline 1).</p> <p>Please see the Applicant's response to Relevant Representation RR-006 relating to ducting, as well as RR-015 relating to construction phasing.</p>

Relevant Representation Comment	Applicant's Response
<p>necessary funding to build the project at the present time in one phase. We have grave concerns that Orsted do not have the funding to deliver the second proposed phase of the project and so should not be applying for this phase of the project within this current DCO application.</p> <p>6.2 The project involves laying 6 large cables over a width of 60 metres along some of the most productive Grade 1, 2 and 3a land classification farmland in Norfolk. The cables will be buried so most farming operations can take place on top of them and we believe that this will be a minimum depth of 1.2m.</p> <p>6.3 At the present time Orsted have not been able to confirm whether they will be ducting the cables and that their preference is to just lay the cables in open trenches. If the cables were in ducts this would enable Orsted to lay the ducts during the first phase for the whole project.</p>	
<p>7. Cumulative Impact</p> <p>7.1 Cumulative Affect Assessment has been addressed in the PEIR but the detail is exceedingly broad with no mention of the Vattenfall Boreas scheme only Norfolk Vanguard. These are two major schemes affecting landowners and occupiers in Norfolk which are programmed to be constructed at approximately the same time but one is running north to south (Hornsea 3) and the other east to west (Vattenfall) across the county, therefore greatly affecting the number of landowners affected and taking more land out of agricultural production than is necessary.</p>	<p>Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078] provides a description of the cumulative effects and includes an assessment of the potential for temporary cumulative construction effects on farm holdings and additional temporary impacts on best and most versatile land where Norfolk Vanguard cable route (which incorporates the laying of the ducts for Norfolk Vanguard and Norfolk Boreas) crosses the Hornsea Three onshore cable corridor. The assessment assumes that the restoration of the land for the identified cumulative projects would be carried out in accordance with recognised best practice adopted for Hornsea Three and therefore that there would be no cumulative permanent losses of agricultural land. As such, Hornsea Three do not consider that any additional measures are required.</p>
<p>8. Jointing bays and Link Boxes</p> <p>8.1 It is understood from other projects that 'Jointing Bays' should be all underground and will not interfere with agricultural operations.</p> <p>8.2 It is understood that link boxes will be needed if the cables are HVAC cables and they are normally placed at least every 600 to 800 metres on a cable run near to the jointing bays. No clarification has been received on how many link boxes will be needed at the end of every run. Link boxes do stand proud above ground level and so greatly interfere with agricultural operations and are a hazard to farm machinery. It is extremely important to have further design information on link boxes and the siting of them. This includes any link boxes to be located in a cluster and how will they be marked/identified/fenced. The preference is that all link boxes are located within fence boundaries.</p>	<p>Link boxes are required for each cable circuit and must be sited relatively close to the cable joint in question (within approximately 10m). The precise link box locations will be determined by the specifications of the cables used for Hornsea Three, when a cable contractor is appointed and the detailed design of the cable specifications, including length of cables per cable drum are known. Once detailed design for Hornsea Project Three has commenced it may be possible to site jointing bays in areas which reduce interference with farming operations, noting that the cable corridor has been defined to follow field boundaries etc. where possible in order to minimise any impacts to landowners' use of their land. However, given the number of technological and environmental constraints there is no way to confirm the joint bay (and thus link box) locations at this stage.</p> <p>As noted within the representation, and at paragraph 3.7.3.13 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], joint bays will likely be</p>

Relevant Representation Comment	Applicant's Response
	<p>completely buried, with the land above reinstated following the completion of construction works. Land above link boxes will also be reinstated following the completion of construction works, although they may require manhole covers (see paragraph 3.7.3.14 of the same chapter). Manhole covers are required to provide access at all link boxes for the purpose of cable integrity testing during the operations and maintenance phase Hornsea Three; except where it is only the fibreoptic cables which are jointed which do not require regular operations and maintenance access.</p> <p>As part of ongoing discussions with landowners, the Applicant has committed to placing marker posts on each corner of the surface feature, if requested by the landowner to do so as part of the voluntary Option and Lease agreement. This is captured in updated paragraph 6.8.1.3 in the Outline CoCP (APP-179) as follows (new text shown in underline):</p> <p>6.8.1.3 “Appropriate fencing of the construction corridor will be provided per the nature of the individual farm holding affected. <u>Where requested to do so by the landowner, markers posts will be placed on the corner of manhole covers associated with link boxes to clearly demarcate their location.</u>”</p>
<p>9. Field Drainage</p> <p>9.1 Land drainage is one of the main issues which landowners and occupiers are concerned about on this scheme and some detail has been agreed in the heads of terms but it is not satisfactory.</p> <p>9.2 To date insufficient detail has been received by LIG on behalf of their clients and members in regard to how reinstatement of field drainage will take place.</p> <p>9.3 No information has been provided on how field drainage will be reinstated in the documents as part of the DCO application. As no draft Option and Lease has been made available it has not been possible to see whether drainage reinstatement is covered satisfactorily in the proposed option and deed.</p>	<p>Details of drainage management, including impacts on existing field drainage, are set out in paragraphs 3.7.2.10 and 3.7.2.11 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]. Mitigation measures are included in paragraphs 6.4.1.9 and 6.4.1.14 of the Outline Code of Construction Practice [APP-179] and are secured in Requirement 17 of the draft DCO [APP-027]. However, the Applicant has amended paragraphs 6.4.1.9 and 6.4.1.14 of the Outline CoCP [APP-179] to address the concerns raised by the NFU and LIG (new text shown in underline):</p> <p><i>“6.4.1.9 Where the Hornsea Three onshore cable corridor crosses smaller watercourses and land drainage ditches measures would be discussed <u>and agreed</u> with the relevant stakeholders (e.g. for temporary culvert crossings, appropriately sized flume pipes, equal to or greater than the diameter of the flume upstream and to an agreed length, will be placed on or below the hard bed of the watercourse) <u>taking into consideration any agreements with, or representations made by, the relevant landowner</u>”</i></p> <p><i>“6.4.1.14 Any field drainage intercepted during the cable installation will either be reinstated following the installation of the cable or diverted to a secondary channel. Any works undertaken will be in agreement with the appropriate stakeholders <u>taking into consideration any agreements with, or representations made by, the relevant landowner.</u>”</i></p> <p>Following completion of the onshore cable installation, the working area will be reinstated to a state commensurate with</p>

Relevant Representation Comment	Applicant's Response
	<p>condition prior to the commencement of works. As stated in paragraph 4.1.6.3 of the Outline CoCP (APP-179), this includes the reinstatement of land drainage systems and/or installation of construction drains where necessary.</p> <p>As stated in paragraph 3.7.3.25 of Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058), it may also be necessary to install additional field drainage within the onshore cable corridor to ensure the existing drainage characteristics of the land are maintained during construction.</p> <p>The Applicant has included an obligation to agree any drainage design for during and post-construction with the relevant landowner prior to construction in the terms of the voluntary agreement it is discussing with landowners.</p>
<p>10. Soils</p> <p>10.1 As above the treatment and reinstatement of soil during and after construction is one of the main issues of concern. Limited detail has been provided to landowners and occupiers. Again LIG does not know how soil reinstatement and aftercare will be dealt with in the Option and Lease. Furthermore no measures have been set out after soil has been reinstated. What measures will be put in place to bring the soil back to its condition and quality before the works took place? An aftercare plan should be included in a code of construction.</p>	<p>Impacts on soil and agricultural land classification are assessed in Volume 3, Chapter 6: Land Use and Recreation (APP-078). In order to reduce effects as far as possible, Hornsea Three has committed to a number of mitigation measures detailed within Table 6.28 of Volume 3, Chapter 6: Land Use and Recreation of the Environmental Statement [APP-078]. These include the development of a soil management strategy with the principle objectives of conserving soil resources; avoiding damage to soil structures; maintaining soil drainage; and identifying principles for the reinstatement of the soil profile.</p> <p>This Soil Management Strategy will set out the principles of an aftercare programme, to be implemented following the reinstatement of the soil, which will be agreed with the individual landowners. The Soil Management Strategy will form part of the final CoCP to be submitted and agreed with the relevant planning authority under Requirement 17 of the draft DCO [APP-027] and is referred to in paragraph 6.8.1.1 of the Outline CoCP (APP-179).</p>
<p>11. Flood Issues</p> <p>11.1 No details have been provided to landowners and occupiers on how any increase in surface run off of water from the haul road or the construction compounds will be dealt with during construction. Therefore there is concern that retained land may flood during the construction works.</p>	<p>Flood control measures that would be implemented during the construction phase are outlined in Table 2.17 of the Volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement (APP-074) and included within section 6.4 of the Outline CoCP [APP-179]. With these measures in place, it was assessed that no significant effects in respect to surface water run-off and potential flood risk would occur.</p> <p>Additional detail in respect to field drainage is set out in response to point 9 above.</p>
<p>12. Dust/Irrigation</p> <p>12.1 Clarification is needed on how practical issues like dust will be controlled during construction and how can the effect on irrigation be minimised?</p>	<p>Measures adopted as part of Hornsea Three to control dust are set out in paragraph 6.3 of the Outline Code of Construction Practice (APP-179) and are in accordance with guidance from the Institute of Air Quality Management. These are considered sufficient to manage and minimise potential impacts from dust and as such the assessment</p>

Relevant Representation Comment	Applicant's Response
	<p>presented in Volume 3, Chapter 9: Air Quality (APP-081) concluded no significant effects.</p> <p>Paragraph 6.8.1.6 of the Outline Code of Construction Practice (APP-179) includes a commitment to maintain water supplies and irrigation systems as far as possible during the construction period. Paragraph 6.8.1.6 of the Outline CoCP (APP-179) has been updated to clarify this (new text shown in underline):</p> <p><i>6.8.1.6 “Existing water supplies and drainage systems will be maintained and reinstated wherever reasonably practicable during the construction process. <u>Details of the irrigation system on each land holding will be gathered during the detailed design stage and irrigation plans will be developed. The Agricultural Liaison Officer will consult with each individual landowner to obtain the relevant information and to be a point of contact to report concerns regarding irrigation systems during construction. The plans will include the following information:</u></i></p> <ul style="list-style-type: none"> - <i><u>Location of boreholes and water supplies used by each farmer;</u></i> - <i><u>Irrigation or impoundment licence granted by the EA; and</u></i> - <i><u>System of irrigation applied and the location of irrigation network for each field.”</u></i> <p>Irrigation requirements during the construction process will depend on the type of crops being grown at the time of construction and the timing of the construction activities in terms of soil moisture deficits. The Agricultural Liaison Officer will consult with each individual landowner to obtain the relevant information for the irrigation plans and to be a point of contact to report concerns regarding irrigation systems during construction.</p> <p>Irrigation systems will be restored at the end of the construction process.</p>
<p>13. Access routes to the Order Limits</p> <p>13.1 At the present time Orsted has provided no detail in regard to how it is proposing to gain access to the order limits. There is a question over whether access may be needed along private access roads and/or to create access.</p>	<p>The Applicant has identified where temporary vehicular access to serve Work No. 7, 8, 9, 10, 11, 12, 13 and 15 within the Order Limits (Work No. 14) would be required during construction in the Works Plan – Onshore (APP-013) as well as Access to Works Plan (APP-014). Permanent access associated with the onshore HVAC booster station and onshore HVDC converter/HVAC substation are incorporated within the relevant Work No. for that component i.e. Work No. 9 and 10 respectively. Under Requirement 11 of the draft DCO [APP-027], construction of any access shall not commence until for that access written details of the siting, design, layout and any access management measures for any new, permanent or temporary means of access to a highway to be used by vehicular traffic, or any alteration to an existing means of access to a highway used by vehicular traffic, has, after consultation with the highway</p>

Relevant Representation Comment	Applicant's Response
	<p>authority, been submitted to and approved by the relevant planning authority.</p> <p>In addition to this, all landowners have been provided with plans that identify those areas where additional specific access roads will be required for construction or maintenance.</p>
<p>14. Access to land and the Haul Road</p> <p>14.1 Insufficient detail has been provided as to how landowners and occupiers are to access land severed by the construction works and as to whether landowners will be able to access the haul road during construction. Furthermore no detail has been provided on how the haul road may be constructed and if it is possible to use tracking for the haul road which can be laid on the surface of the land and taken up. No specific detail has been given on the time the haul road will be down for severing land. If it is down for the full construction period of 8 years this is unacceptable interference.</p>	<p>Severed land will be made accessible to landowners, lessees, tenants and occupiers by the installation of access points by the Applicant at practical locations along the onshore cable corridor. If this is not feasible and land is severed and inaccessible, then compensation is payable for any losses or damage pursuant to Article 25(5) of the draft DCO [APP-027].</p> <p>Paragraph 3.7.2.26 of Volume 1, Chapter 3: Project Description [APP-058] sets out some details regarding the proposed haul road. This states that “<i>The haul road will be utilised during installation and be made up of either: an average of 0.3 m of permeable gravel aggregate with a geotextile or other type of protective matting; or plastic or metal plates or grating.</i>” Further details on the construction method for the haul road will be determined at the detailed design stage post consent.</p> <p>Paragraph 1.2.3.1 of the Outline CTMP [APP-176] quotes paragraph 3.7.2.25 of Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058] which states that “<i>The haul road will be used where needed throughout the installation of the cable and will be removed upon reinstatement.</i>” The Applicant would like to clarify that, following completion of the construction works in a given locality, defined as the section of the route between two HDD locations (with no haul road across), the haul road will be removed and the land reinstated, unless otherwise agreed with the relevant local planning authority. This is clarified in the updated paragraph 1.2.3.1 of the Outline CTMP as follows [Submitted as APP-176] (new text shown in underline):</p> <p>1.2.3.1 “<u>The haul road will be used where needed throughout the installation of the cable and will be removed upon reinstatement. Following completion of the works being served by that access point, the haul road will be removed and the land reinstated, unless otherwise agreed with the local planning authority.</u>”</p> <p>The Applicant is unable to be specific on the exact length of time that the haul road will be required, especially on an individual land-holding basis as the details of the construction phasing and construction programme are not known at this stage and will be developed during detailed design. This will subsequently inform the haul road strategy with regards to reinstatement or being left in situ between phases which will be agreed with the relevant local planning authority in consultation with the landowners.</p>

Relevant Representation Comment	Applicant's Response
	Notwithstanding this, the commitment at paragraph 1.2.3.1 (see above) requires the Applicant to remove the haul road between phases once the works being served by that access point is complete.
<p>15. Request to Attend Hearings and make Representations</p> <p>15.1 The NFU and the Hornsea Three Agents known as LIG intends to lodge full Written Representations in due course and request to make oral representations at the compulsory acquisition hearing or any other hearings which may be held.</p> <p>15.2 NFU and LIG represents approximately 50 members/clients who own or lease land affected by the DCO. A full list of names and addresses are available if requested. The members and clients have not been listed on this representation due to data protection. Each landowner or occupier has submitted an outline representation highlighting specific issues to the individual business, if appropriate, and has made reference to this outline representation which highlights the main issues of all landowners concerned.</p>	The Applicant notes the request to attend hearings and make further submissions.