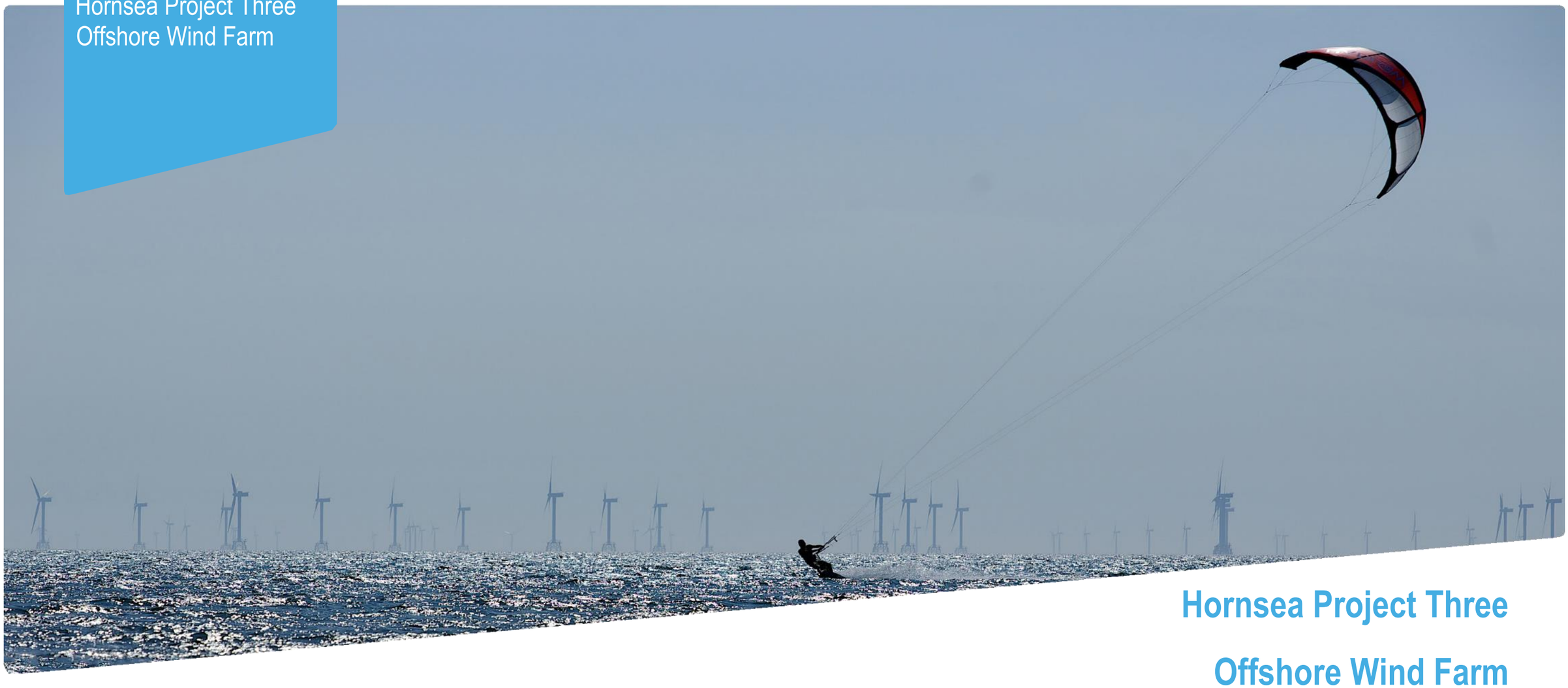
Hornsea Project Three
Offshore Wind Farm



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Offshore Wind Farm

Applicant's Statement of Case Submitted at Deadline 10

Date: 1st April 2019

Hornsea 3
Offshore Wind Farm

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Front cover picture: Kite surfer near a UK offshore wind farms © Ørsted Hornsea Project Three (UK) Ltd., 2019.

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Acronyms

Acronyms	Description
AONB	Area of Outstanding Natural Beauty
BEIS	Department for Business, Energy and Industrial Strategy
CoCP	Code of Construction Practice
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DPD	Development Plan Document
EIA	Environmental Impact Assessment
EMF	Electro-Magnetic Fields
EMP	Ecological Management Plan
EWG	Expert Working Group
ES	Environmental Statement
FID	Final Investment Decision
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
HRA	Habitats Regulations Assessment
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
LP	Landscape Plan
MMO	Marine Management Organisation
NATS	National Air Traffic Services
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
REWS	Radar Early Warning System
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SSSI	Site of Special Scientific Interest

Units

Unit	Description
GW	Gigawatt (power)
kV	Kilovolt (electrical potential)
kW	Kilowatt (power)
MW	Megawatt (power)

1. Introduction

1.1 Introduction

1.1.1.1 This Statement of Case (SoC) has been prepared by the Applicant, Hornsea Project Three Limited in order to assist the Examining Authority make its recommendation to the Secretary of State in determining the application. This submission cross references material submitted with the Application in response to matters raised during the examination. This SoC does not bring in any new evidence into the examination, but draws on material submitted as part of the application or subsequent examination. In this regard, this SoC makes use of the Examination library published by the ExA on 28 March 2019.

1.1.1.2 This SoC is structured as follows:

- Section 2 documents any elements of the project description which have been modified or clarified through the examination process over and above that presented in volume 1, chapter 3: Project Description, of the Environmental Statement APP-058;
- Section 3 lists the Interested Parties (IPs) with which the Applicant has secured Statements of Common Ground, Position Statements and Letters of Comfort on matters relating to the examination of the Project;
- Section 4 sets out the Applicant's summary of case of each of the material points of disagreement between the Applicant and the relevant IP; and
- Section 5 sets out the Applicant's overall summary of case to assist the ExA in making its recommendation and the Secretary of State in reaching its decision.

2. The Proposed Development

2.1.1.1 A full project description is documented at Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058], hereafter referred to as the Project Description.

2.1.1.2 This section documents any elements of the project description which have been modified or clarified through the examination process over and above that presented in the Project Description. Matters which extend to localized mitigation – for example commitments within the array (such as commitments made within Markham's Triangle, setback from oil and gas infrastructure) are not documented here.

2.1.2 Wind Turbine and Surface Infrastructure Layouts ([Array Layout] Development Principles)

2.1.2.1 Paragraph 3.6.4 of the Project Description and volume 4, annex 3.7: Layout Development Principles [APP-091] states that the Hornsea Three layouts will be designed such that they comply with a series of principles. Through the examination the Applicant has continued to engage with key stakeholders including the Maritime Coastguard Agency (MCA). Appendix 8 to this Deadline 10 submission presents the updated principles – all of which have been agreed with the MCA. An updated Statement of Common Ground (SoCG) between the applicant and MCA, along with a summary statement with MCA is also provided at Appendix 1 to this Deadline 10 submission. The scope of these submissions is not duplicated here.

2.1.3 Cable Protection in Designated Sites

2.1.3.1 The applicant has presented material on the scope of cable protection in designated sites. The Applicant's clear preference and objective will be to bury all cables, as that affords the best asset protection as well as being a better environmental outcome. However, the need to allow for some rock protection (both for protecting crossed assets and for remedial measures) is prudent should an unforeseen eventuality arise where cable burial is not possible or fails. However, the Applicant has reduced the maximum design scenario assumptions for cable protection from the Preliminary Environmental Information Report from an assumption that all cable protection could be placed within NNSSR SAC to a commitment to limit the level of rock protection within designated sites to no more than 10% of the cable length within that site and to remove all cable crossings from nearshore designated sites (i.e. WNNC SAC and Cromer Shoal Chalk Beds MCZ), thereby considerably reducing rock protection impacts in these sites (see Table 2.1 of REP1-138). This is in the Applicant's draft DCO.

2.1.4 Transmission System

2.1.4.1 Hornsea Three may use High Voltage Alternating Current (HVAC) or High Voltage Direct Current (HVDC) transmission, or could use a combination of both technologies in separate electrical systems. Hornsea Three is applying for both HVAC and HVDC transmission. This is to allow for suitable flexibility to ensure a low cost of energy to the UK consumer and to facilitate successful completion of Hornsea Three in a competitive market. If a combination of the two technologies is used, the total infrastructure installed will not exceed the maximum values assessed within this application.

2.1.4.2 **REP1-164** documents the (Onshore) likely environmental effects arising from the use of HVAC and/or HVDC. For the purpose of environmental impact assessment the primary differences between the two transmission technologies are:

- Onshore Export Cable Corridor: As the HVDC option would require fewer cable trenches (four as opposed to six required for HVAC), the temporary and permanent onshore cable corridor would be narrower compared to the HVAC option as assessed in the Environmental Statement (HVDC has a 60m wide minimum land take required to deliver the maximum HVDC design scenario / 68m typical corridor width [REP3-011] as opposed to HVAC transmission system which requires 80m) and therefore, the overall area of land along the onshore cable corridor would be less. The type of construction activities required for the HVDC option would be the same as for the HVAC option, however there would be fewer transition joint bays, junction boxes, link boxes and drainage trenches along the cable trenches. In EIA terms the conclusions of the assessment would remain unchanged irrespective of which transmission technology is selected.
- Onshore HVAC booster station: The HVDC transmission option would not require the construction of the onshore HVAC booster station and therefore, the potential impacts associated with the construction and operation and maintenance of this infrastructure would not have to be considered within the assessments of the onshore topics.
- Onshore HVDC converter/HVAC substation: The HVAC transmission option would require a main building at the onshore HVDC converter/HVAC substation of 25m, as opposed to (as assessed in the Environmental Statement) 15 m for the HVDC transmission option. The shorter height of the HVAC substation would result in a slightly lower scale and extent of effects on landscape receptors beyond the site due to some lower visibility and there would greater potential for localised screening. There would also be a lower potential for some views from settlements, key routes and designated heritage assets, however this would not be sufficient to change the conclusions of the assessment for Landscape and Visual Impacts (APP-076) and Historic Environment (APP-077).

2.1.4.3 **REP1-164** sets out the Applicants justification for the inclusion of both transmission technologies. It notes:-

- At present, all UK offshore wind farms operating or in construction utilise an HVAC transmission technology.
- The UK government's stated policy objective is to support the development of a domestic offshore wind industry which delivers renewable energy at a reducing cost to the UK consumer through competitive market mechanisms. The Applicant strongly supports this policy and recognises the

value that vigorous competition between offshore developers and within the offshore supply chain brings to the wider industry and to the UK consumer.

- Within the former Hornsea offshore wind zone alone, continual development of the supply and offshore construction industry, incentivised by the competitive allocation of price support contracts, has delivered reductions in the cost of energy from £140/MWh for Hornsea Project 1 to £57.50/MWh for Hornsea Project 2 between 2015 and 2017 respectively. These reductions have been facilitated in part by continued optimisation of offshore transmission technologies generally, and HVAC transmission technology specifically.
- Notwithstanding the above, the Applicant does not maintain a technology bias to either HVAC or HVDC transmission systems. In order to continue to deliver reductions in the price of offshore wind energy the Application requires flexibility in the choice of transmission technology. This flexibility encourages competition within the supply chain across a greater number of potential suppliers, and ensures that an economic and efficient transmission system can be delivered within project timescales that reduces the cost to the UK consumer. This in turn can be reflected in any CFD auction bid strategy that the applicant may take forward and volume and pricing levels that are proposed/delivered.
- The Applicant is of the view that committing to solely HVDC now in the consented envelope of Hornsea Three could restrict or even prevent the development of Hornsea Three in the future. Thus, in the Applicant's opinion a decision on which transmission system to adopt for Hornsea Three (HVDC or HVAC) should not be made until after extensive engagement with potential systems suppliers has taken place, which is likely to be further informed by future CfD auction allocation announcements (i.e. post consent).

2.1.4.4 It is noted that the preference of the Local Planning Authorities for transmission technology to be deployed by the project varies. North Norfolk District (REP7-014) and Broadland (REP4-016) advocate the use of HVDC transmission technology, whereas South Norfolk (REP7-013) advocate the deployment of HVAC transmission technology.

2.1.5 Onshore Infrastructure

Onshore site preparation activities

2.1.5.1 No changes to the scope of the onshore site preparation activities have been made during the Examination, with the exception of the removal of demolition from the proposed envelope for this. However, amendments have been made to the wording of Requirements 8, 10, 17 and 18 of the draft DCO (see REP9-003) to ensure that the provisions set out within the Outline LP, Outline EMP, Outline CoCP and Outline CTMP apply to the site preparation activities. Requirement 16 has also been updated to ensure that a written scheme of investigation is prepared and approved prior to commencement of the site preparation works.

Onshore export cables

2.1.5.2 The Applicant has provided through the Examination, clarification on the potential onshore cable corridor widths under a HVAC and HVDC scenario, as well as at the crossing with Norfolk Vanguard (REP3-011 and REP6-013). The detailed justification for inclusion of both transmission technologies within the envelope is provided in section 2.1.3 above.

2.1.5.3 Clarification has also been provided on the commitments relating to hedgerow and tree removal, and replacement within the onshore cable corridor. The Applicant's final position is reflected within the Outline LP submitted at Deadline 9 (REP9-060).

Joint Bays and Link Boxes

2.1.5.4 No changes to the number or description of joint bays or link boxes have been made during the Examination. However, the applicant has provided clarification on the definition of joint bays and link boxes through the Examination, primarily in Annex 12 of the Applicant's Comments on Relevant Representations submitted at Deadline 1 (REP1-131), the written summary of the oral case put at Issue Specific Hearing 1 (REP3-003) and the Applicant's response to the ExA's second written questions submitted at Deadline 4 (Q2.9.1). This has also been reflected in the updated draft DCO (see REP9-003).

HVAC Booster Station

2.1.5.5 The Applicant has made a number of additional commitments relating to the onshore HVAC booster station during the Examination in response to engagement with stakeholders, in particular North Norfolk District Council.

2.1.5.6 In terms of the design of the infrastructure itself, the Applicant has provided a set of design objectives and principles (REP4-026), which will underpin the visual appearance of the onshore HVAC booster station buildings. These principles have been secured through amendments to Requirement 7 'Detailed Design approval onshore' of the draft DCO which requires that work must not commence until details of the layout, scale and external appearance of the work, which must be substantially in accordance with the Design Objectives and Principles, have been submitted to and approved by the relevant local authority. The Applicant has also had extensive engagement with Norfolk County Council (NCC) in respect to the temporary and permanent access into the onshore HVAC booster station. This engagement led to an identified need for additional land at the booster station in order to facilitate widening of the road access point at the proposed onshore HVAC Booster Station (at intersection with B1149) and an additional minor widening of land on the internal (private) access road to provide sufficient visibility and abnormal load transport swept path to accommodate the transportation of the transformers to site. Consent in respect to this additional land application has been received from all landowners and occupiers. The proposed access for the onshore HVAC booster station, which has been agreed with NCC, is provided within the Outline CTMP (REP9-048).

2.1.5.7 The Applicant has also amended Requirement 21 of the draft DCO, which requires the preparation of a noise management plan for the operation period, to apply to the onshore HVAC booster station and clarify the contents of the plan (to include details of the noise monitoring measures).

2.1.5.8 In response to concerns raised by North Norfolk District Council ("NNDC") as to the effectiveness of proposed soft landscaping mitigation at the onshore HVAC booster station site, the Applicant 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 during construction and the early years of operation.

2.1.5.9 Further information relating to the drainage strategy and potential infiltration rates on site (REP1-168) has also been provided, although the detailed surface water drainage scheme would be developed post-consent as secured by Requirement 15.

2.1.6 HVDC Converter/HVAC substation

2.1.6.1 The Applicant has made a number of additional commitments relating to the onshore HVDC converter/HVAC substation during the Examination in response to engagement with stakeholders, in particular South Norfolk District Council (SNC).

2.1.6.2 In terms of the design of the infrastructure itself, the Applicant has provided a set of design objectives and principles (REP4-026), which will underpin the visual appearance of the onshore HVDC converter/HVAC substation. These principles are secured through amendments to Requirement 7 'Detailed Design approval onshore' of the draft DCO which requires that work must not commence until details of the layout, scale and external appearance of the work, which must be substantially in accordance with the Design Objectives and Principles, have been submitted to and approved by the relevant local authority. The Applicant has also had extensive engagement with NCC in respect to the temporary and permanent access into the onshore HVDC converter/HVAC substation. The proposed access for the onshore HVDC converter/HVAC substation, which has been agreed with NCC, is provided within the Outline CTMP (REP9-048).

2.1.6.3 In response to concerns raised by SNC as to the effectiveness of proposed soft landscaping mitigation at the onshore HVDC converter/HVAC substation site, the Applicant 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 two years ahead of the planned completion of construction works, in order to maximise the screening provided during construction and the early years of operation.

2.1.6.4 Further information relating to the drainage strategy and potential infiltration rates on site (REP1-172) has also been provided, although the detailed surface water drainage scheme would be developed post-consent as secured by Requirement 15.

2.1.7 Grid Connection

2.1.7.1 No changes to the proposed grid connection location have been made during the Examination. The process by which a grid connection location was identified is set out in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives of the Environmental Statement [APP-059], and is in accordance with the framework set out by Government. Although both National Grid and Ørsted input into the appraisal process (in respect to economic and strategic factors) the eventual grid connection offer, at Norwich Main National Grid Substation, was determined by National Grid. The process for identification of a grid connection point for the project has also been responded to by National Grid Electricity Transmission Plc (NGET) in their response to the Examining Authority's Written Questions (REP1-070).

2.2 Phasing

2.2.1.1 No changes to the proposed approach to phasing for Hornsea Three has been proposed during the Examination. Hornsea Three may be constructed in a single phase or two phases and although the total durations for each phase would not exceed those stated in the ES, there may be periods where work stops as one phase is completed and is initiated again for the following phase after a gap. Figures 3.38 and 3.39 of the Project Description Chapter of the ES [APP058] illustrate indicative construction programme if Hornsea Three were built out in a single or in two phases.

2.2.1.2 Should the onshore installation be divided into two discrete phases, the construction corridor would be broadly (where it traverses open fields) split in two and all works associated with the first phase would be confined to the allocated construction corridor. Similarly, all HDD works, trench excavation works, cable installation, cable jointing and testing works would be carried out for the first phase only. It is noted that the ES "worst case" provides for the whole width of onshore corridor to be cleared for each phase as the scale of each phase being taken forward is not known, the exact land take required at certain locations may draw on the full corridor width – for example to make use of site access points or in the setting out of HDD works, or through utilising soil storage or secondary construction compounds.

2.2.1.3 This approach has been adopted by the Applicant in line with similar to other recent Round 3 offshore wind farms (Dogger Bank Creyke Beck, Dogger Bank Teesside A and B, interlinks between Norfolk Vanguard and Norfolk Boreas), where projects are seeking to identify the optimum approach to the consenting of the largest, and furthest offshore Round 3 offshore windfarms.

2.2.1.4 The application of phasing is interlinked with the UK Government's approach to supporting projects through the CFD auction process (or alternative funding mechanism) and both the Government's and the Applicants' shared objective of maximising the ability to bring forward strong, viable projects. Since the DCO application was submitted, the CfD delivery mechanism has received further clarity in July 2018 from the Energy minister Claire Perry, who advised that:

- the next CfD allocation round will be held in May 2019 (with successful auction round announcements anticipated to be made in summer 2019):
- a subsequent allocation round in 2021; and

- further auctions "around every two years".

2.2.1.5 Nonetheless, there remains key elements of the CfD tender framework yet to be announced, including the total budget for each tender, with Government noting that "depending on the price achieved, these auctions will deliver between 1GW and 2GW of offshore wind each year in the 2020s". A single project build-out scenario could still be the preferred option. However announcements from UK government (Claire Perry, July 2018) have suggested a cap on the total auction award per delivery year of 1-2 GW with up to 4 GW supported in a single auction. Therefore, it may be the case that a two phased project is required to successfully respond to the available CfD budget, depending on how many competing bids/projects participate in the auction round, e.g. many competitive bids may warrant a smaller project, i.e. two phases.

2.2.1.6 The ability to secure key infrastructure for such a large project, including wind turbine generators, offshore installation vessels, lead in times for high voltage transmission cables (in particular HVDC cables), offshore substations installation vessels in a timely manner, will also add challenges to the whole offshore wind industry to deliver the largest, and furthest offshore Round 3 offshore windfarms, meaning that a project needs to be phased in response to the availability and capacity of the supply chain.

2.2.1.7 The Applicant recognises the potential for minimising impacts and disruption to the local community through implementing in a single phase or pre-ducting for the second phase. Therefore, the Applicant has made two commitments – documented further in response to the ExA's First Written Questions (Q1.9.7, REP1-122). Firstly, the Applicant has committed to installing all onshore export cables circuits within ducts, as opposed to direct burial. Furthermore, 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 CFD in the same auction round (or alternative funding mechanism) or the second project still secures Final Investment Decision.

2.2.1.8 Requirement 6 of the draft DCO provides for a phasing scheme to be submitted to and approved by the relevant planning authority prior to commencement of development. This will detail of phasing and under the requirement this scheme must be abided by when the project is constructed. Subparagraph 9(2) was added during examination to clarify the maximum number of phases will be two.

2.3 Ports

2.3.1.1 No changes to the position in respect to port selection have been made during the Examination. It is likely that the Hornsea Three components will be fabricated at a number of manufacturing sites across Europe or elsewhere, to be determined as part of a competitive tendering process upon award of consent and the completion by Ørsted of a Final Investment Decision (FID). A construction base (port facility) may be used to stockpile some components, such as foundations and turbines, before delivery to the Hornsea Three array area for installation. Other components, such as pre-fabricated offshore substation units, may be delivered directly to the Hornsea Three array area when required. An onshore operations and maintenance base may be provided to support the operating wind farm after construction. This onshore operations and maintenance base is not included in this application and any consent will be secured at a later date when the location and requirements for this are known.

3. Balance of Considerations

3.1.1.1 This section lists the Interested Parties (IPs) with which the Applicant has secured Statements of Common Ground, Position Statements and Letters of Comfort on matters relating to the examination of the Project. These have been informed by written and oral submissions made by IPs over the course of the examination.

3.1.1.2 A number of IPs made representations throughout the examination process but with whom a SoCG has not been developed. These IPs are listed in section 4.3

3.2 Statements of Common Ground

3.2.1 Introduction

3.2.1.1 Over the course of the examination process the Application has developed the following SoCGs with IPs. Where appropriate, these have been informed by representations made by associated parties; for example, the Norfolk County Council SoCG has taken into consideration matters raised by individual councilors. Where the document secured is a Position Statement or Letter of Comfort this is clearly indicated:

- Norfolk County Council (REP1-232, REP4-019, REP9-027);
- North Norfolk District Council (REP2-011, REP5-005, REP7-007);
- South Norfolk Council (REP1-223, REP4-020, REP7-031);
- Broadland District Council (REP1-099, REP4-016, REP7-017, Deadline 10);
- Norwich City Council (REP1-225);
- Great Yarmouth Borough Council (REP1-202);
- Natural England All other Matters (REP1-218, REP9-022);
- Position Statement: Natural England Benthic Ecology & Marine Processes (REP9-016);
- Natural England Ornithology (REP8-005);
- Marine Management Organisation (REP1-224, REP4-018, REP9-023);
- The Wildlife Trust and Norfolk Wildlife Trust (REP1-227, REP9-024);
- Whale and Dolphin Conservation (REP1-219);
- Environment Agency (REP1-203);
- Historic England (REP9-026);
- National Federation of Fishermen's Organisation and VisNed (REP1-220, REP6-007, Deadline 10);
- Eastern Inshore Fisheries and Conservation Association (EIFCA) (REP1-201, REP7-016);
- Maritime and Coastguard Agency (REP1-221, REP5-004, Deadline 10);
- Trinity House (TH) (REP9-025);
- Royal Society for the Protection of Birds (REP2-012, REP3-007, REP9-029);
- Highways England (REP1-226, REP4-017, REP7-015);
- ConcoPhillips (included in Statement of Commonality REP7-012);
- Neptune E&P UK Limited (Letter of Comfort REP1-101);
- Spirit Energy Netherlands B.V., Spirit Energy North Sea Limited and Spirit Energy Resources Limited (REP1-007; Areas of agreement on J6A data analysis (REP9-053));
- Position Statement: Shell UK Limited (REP5-006); and
- Norfolk Vanguard Limited and Norfolk Boreas Limited (REP1-222, REP4-021, REP9-028).

3.2.1.2 For the following bodies the latest position is set out within the Statement of Reasons (REP9-0111):

- National Grid Electricity Transmission PLC
- National Grid Gas PLC
- Cadent Gas Limited
- Network Rail Infrastructure Limited
- Anglian Water Services Limited
- UK Power Networks
- Land Interest Group/National Farmers Union
- Environment Agency (Asset Owner)

3.3 Discussions with other IPs

3.3.1 Introduction

3.3.1.1 A number of IPs have made representations during the examination process but with whom a SoCG has not been developed.

3.3.1.2 The following have made a single submission into the Examination process to which the Applicant responded at the subsequent deadline:

- Public Health England (RR-011 and REP8-021);
- East Anglia Two Limited and East Anglia One Limited (REP1-040);
- Greater Norwich Development Partnership (REP1-230);
- Wood Dalling Parish Council (REP1-012);
- Weybourne Parish Council (REP6-066); and
- Ministry of Defence (REP1-123).

3.3.1.3 Meanwhile, the following have made several representations, throughout the examination process:

- Campaign to Protect Rural England (REP3-088, REP7-081);
- No to Relay Stations (N2RS) (REP1-075, REP6-060, REP6-061, REP6-062);
- The National Trust (REP1-074, REP1-079);
- Oulton Parish Council (REP1-046, REP2-027, REP3-082, REP3-083, REP4-123, REP5-023, REP6-071, REP7-080, REP8-017, REP9-085);
- Cawston Parish Council (REP1-004, REP3-087, REP7-086- REP7-092);
- Mulbarton Parish Council (REP3-086, REP5-025, REP6-067, REP7-079, REP8-015, REP8-016);
- Swardeston Parish Council (REP1-184, REP1-190, REP1-199, REP3-085);
- Edgefield Parish Council (REP1-097, REP3-110);
- Corpusty and Saxthorpe Parish Council (REP1-097, REP3-111);
- Members of the Public (various); and
- Affected persons (i.e. landowners) (various).

3.3.1.4 Matters raised by affected persons align with those identified by the National Farmers Union/Land Interest Group. The Applicant's response in respect to these matters is set out within the Statement of Reasons (REP9-011).

4. Applicant's Summary of Case

4.1 Introduction

4.1.1.1 This section presents a summary of residual matters of disagreement between the IPs identified from Section 4 and the Applicant.

4.1.1.2 For each IP, the Applicant has set out the nature and context of these disagreements and provides the Applicant's closing remarks with regard to these matters. Where appropriate, the Applicant has signposted to relevant documents submitted either as part of the Application or during the course of Examination.

4.2 Norfolk County Council

4.2.1 Introduction

4.2.1.1 All matters under the remit of NCC, with the exception of those elaborated on below, have been agreed as demonstrated in the SoCG between the Applicant and NCC [REP9-027].

4.2.1.2 NCC state a preference for HVDC transmission, as detailed in section 2.1.3.1 of this document.

4.2.2 Mitigation proposed along B1145 through Cawston

4.2.2.1 The principle of utilising the B1145 through Cawston as a route for construction vehicles (HGVs and construction workforce) has been agreed between the Applicant, Broadland District Council and NCC, with the latter also indicating that it believes that a suitable access strategy can be produced. However, the development of the outline and detailed design of the mitigation scheme is ongoing. In particular, NCC has indicated that the Applicant's proposal needs to address matters raised by the Road Safety Audit undertaken in March 2019. NCC has also indicated that further discussion on the potential to route a proportion of the vehicles along Heydon Road should be progressed as part of the detailed CTMP development. The Applicant's comments on these points are set out below.

Summary of Applicant's Case

4.2.2.2 The Applicant has undertaken extensive consultation with NCC in respect to the routing of traffic along the B1145 through Cawston, particularly focusing on the road link suitability, and necessary mitigation measures. The Applicant has in the first instance minimised the number of traffic movements required along this link and with wider road network, achieving this through a rationalization of the depth of the haul road with the result of reducing the number of HGVs by a substantial proportion.

4.2.2.3 As up to 127 HGVs and 243 light vehicle movements are still proposed along the B1145 though Cawston, a scheme of highway works has been developed as mitigation, in consultation with NCC and Cawston Parish Council. The current proposals are captured in the Outline CTMP submitted at Deadline 9 (REP9-048). Although the Applicant has agreed the principle of traffic utilising this route with NCC, it acknowledges that the proposed scheme requires further development, not only to respond to findings of a Road Safety Audit (undertaken in March 2019), but also to seek to further address concerns raised by residents of Cawston.

4.2.2.4 In order to address these concerns, a specific commitment is included within the Outline CTMP to continue to engage with NCC Highways, Broadland District Council and Cawston Parish Council to inform the development of the access strategy for cable sections 8, 9 and 10, particularly where it relates to the use of the B1145 through Cawston (link 88 and 89) and Heydon Road (link 75). This will commit the applicant to ongoing dialogue between parties and the development of the detailed CTMP, prior to its approval by the relevant planning authority pursuant to requirement 18 of the draft DCO. Given this commitment, the detailed CTMP will not be capable of approval until agreement is reached with the listed parties.

4.2.2.5 Furthermore, in response to feedback from stakeholders, in particular Cawston Parish Council and Cawston residents, the Applicant has explored other alternatives to HGV routing through Cawston, including the potential for traffic movements to utilise Heydon Road. Although the Applicant maintains that the B1145 is the most suitable route for accessing the southern sections of cable section 9 and cable section 10, as the NCC designated route for HGVs, the Applicant will seek to further minimise traffic movements through Cawston through the prioritisation of construction traffic movements along the Heydon Road up to the maximum level defined as acceptable in the Outline CTMP, where practicable. To inform this prioritisation, the Applicant has committed to provide within the detailed CTMP the following:

- A construction programme specific to cable sections 8, 9 and 10 (which will be accessed via the B1145 (link 88 and 89) and Heydon Road (link 75)), including details of how this programme has been optimised to enable the prioritisation of traffic movements along Heydon Road where practicable; and
- Details of the estimated construction traffic flow variations during the construction programme for cable sections 8, 9 and 10 (i.e. identifying the level and duration of any peak traffic movements).

4.2.2.6 On the basis of the above, the Applicant is confident agreement can be reached between parties on the detailed design of the highway works and routing of HGVs through the development of the detailed CTMP, secured by means of Requirement 18 of the draft DCO. With the principle of the use of this route for construction traffic is agreed, the Applicant considers the outstanding matters to constitute detailed design. It is standard for such detailed design and specification of highway improvement works associated with onshore construction projects to be developed post-consent and as such the Applicant considers it has made significant progress on this matter, beyond that which would usually be required at this stage.

4.2.2.7 In summary, the Applicant considers that the ExA and ultimately the Secretary of State can have confidence that significant effects (in EIA terms) will not occur on the B1145 through Cawston, or the wider road network, with sufficient provisions for mitigation included within the Outline CTMP or to be developed within the detailed CTMP(s).

4.2.3 Cumulative traffic and transport impacts

4.2.3.1 The Applicant has extensively consulted with NCC in respect to the potential for cumulative impacts to arise on the local road network, in particular as a result of the interaction between Hornsea Three and Norfolk Vanguard. Although NCC have indicated that it does not foresee any matters of disagreement relating to the cumulative impacts, the continuation of the Norfolk Vanguard examination beyond the 2nd April (the close of the Hornsea Three examination) necessitates continued discussion to ensure the need for any additional traffic management measures (our specific routing requirements) are shared and captured in the relevant management plans.

Summary of Applicant's Case

4.2.3.2 The Applicant has engaged with Norfolk Vanguard on a regular basis throughout the pre-application and examination phases, at all levels within the organisations.

4.2.3.3 The Applicant has committed, within the outline CTMP for Hornsea Three to set out measures within the detailed CTMP(s) to ensure that the traffic and transport cumulative environmental impacts with Norfolk Vanguard) are managed to levels such that they are acceptable by NCC as the local highway authority. At this point in time, it has been agreed between the Applicant, NCC and Norfolk Vanguard that specific links will require maximum cumulative traffic flow thresholds to be applied in order to ensure no significant cumulative effects. Three such links have been identified and thresholds identified within the Applicant's Outline CTMP (REP9-048). These comprise, link 89 (the B1145 through Cawston); link 59 (the B1149 Edgefield to Heydon) and Link 208 (The Street, Oulton). The detailed CTMP(s) will also set out the details of how any interactions in the implementation, maintenance and removal of intervention measures at The Street in Oulton, and the B1145 through Cawston would be managed between the projects (if appropriate).

4.2.3.4 The detailed CTMP(s) will also provide specific HGV routing, to be agreed with NCC. The Applicant notes that NCC have recently indicated a preference for the use of Shorthorn Road as an alternative to the B1149 north of Horsford. Although in principle, the Applicant has no objection to the use of this alternative, an assessment of the acceptability of potential impacts would be undertaken as part of the routing work for the detailed CTMP in consultation with the relevant stakeholders.

4.2.3.5 The Applicant has also committed within the outline CTMP to the provision of a Communications Plan which will, amongst other matters, set out the process of continued engagement between the Applicant, NCC and Norfolk Vanguard. This will ensure that as construction programmes are refined post-consent, this information will be regularly shared between parties, particularly traffic demand on shared road links. This will ensure that commitments to manage cumulative construction traffic demand are fully delivered; for example, on a given road the two projects may have committed to programme works that ensure each scheme's peak traffic does not overlap. Regularly programmed sharing of information will ensure that the final approved CTMPs accurately reflect the expected construction traffic demand of both projects, and provide certainty to NCC, as the Local Highway Authority, that commitments remain feasible and deliverable.

4.2.3.6 On the basis of the above, the Applicant considers that the ExA and ultimately the Secretary of State can have confidence that significant effects (in EIA terms) will not occur as a result of cumulative traffic flows from Hornsea Three and other major projects. Specific measures will be developed as more information becomes available, and agreed with NCC through the development of the detailed CTMP(s), secured by means of Requirement 18 of the draft DCO.

4.2.4 Community Benefits

4.2.4.1 Whilst NCC welcome measures made by the Applicant to mitigation the potential impact on local businesses and communities, they would welcome continued engagement with the Applicant in respect to a Community Benefit Fund.

Summary of Applicant's Case

4.2.4.2 The Applicant has identified a number of designed-in measures proposed to increase the potential for beneficial impacts on socio-economics and reduce the potential for adverse impacts on tourism. Community benefits and business compensation fund matters are outside of the Planning Act 2008 regime because they are not related to mitigation, and therefore the ExA and SoS will not place weight on those. Notwithstanding this, 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 [REP9-011]. 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). However, the Applicant will continue to engage with NCC on this matter post-consent.

4.3 North Norfolk District Council

4.3.1 Introduction

4.3.1.1 All matters under the remit of NNDC, with the exception of those elaborated on below, have been agreed as demonstrated in the SoCG between the Applicant and NNDC [REP9-021].

4.3.1.2 NNDC state a preference for HVDC transmission, as detailed in section 2.1.3.1 of this document. They have also indicated a preference for a single phase of works along the onshore cable corridor; the Applicant's position on phasing is detailed in section 2.2 of this document.

4.3.2 Landfall construction methodology

4.3.2.1 NNDC do not agree that bringing the cables using open cut techniques is appropriate, and would strongly prefer that this method was removed from the Project envelope with the primary concerns being the potential for coastal erosion. The Applicant considers it necessary for the overall feasibility of the project to retain both construction methodologies at the landfall, with assessments concluding that neither would result in significant effects on coastal erosion.

Summary of Applicant's Case

4.3.2.2 The effects of open cut trenching 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 of Volume 2, Chapter 1: Marine Processes of the Environmental Statement (APP-061). The impact assessment concluded that there will be no significant impacts on the marine processes in the nearshore environment, with effects predicted to be short term, localised and reversible.

4.3.2.3 The Applicant considers it necessary for the overall feasibility of the Project to retain both construction methodologies, the technological feasibility of which will require confirmation via an intrusive geotechnical survey campaign. It may be the case that HDD is not possible or preferred due to ground conditions, cable design or other factors, in which case open cut techniques would be required to install the cable from offshore to the Transition Joint Bays (offshore to onshore cable connection). Should open cut technology be used, the Applicant has presented proposals for PRoW diversions to the Norfolk National Trails Partnership, NCC and NNDC and feedback has indicated that the outline proposals are appropriate, and that further details can be developed during the detailed design stage.

4.3.2.4 The Applicant would note that, in accordance with Requirement 17, a detailed CoCP will be submitted to the relevant planning authority and must be approved by them in consultation with the Environment Agency prior to the commencement of construction. This will detail the appropriate reinstatement measures to be implemented once cables are installed, taking into account the potential for coastal erosion and foreshore lowering over the lifetime of the infrastructure. It will also set out the details of the public right of way management.

4.3.2.5 Therefore, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence the inclusion of both technologies is appropriate and that significant effects (in EIA terms) will not occur on marine processes, or the public right of way, as a result of either methodology.

4.3.3 Timing and duration of maintenance of landscape planting

4.3.3.1 NNDC consider that the particular climate and growing conditions within their district necessitate a 10 year management period for any new planting, to ensure it fulfils its landscape mitigation purpose. The Applicant considers five years to be appropriate and sufficient to achieve full landscape mitigation.

4.3.3.2 Further to this, NNDC propose a start time for the management period of all new and replacement planting set at first generation of power. The Applicant considers it appropriate to start the management period following the completion of planting within each LPA district, and has included a measure in the Outline LP to link the notification that planting is complete with the commencement of the management period. The Applicant considers that it is essential for the management period to begin as soon as possible after planting (proposed to be once all planting within a given local planning authority is complete) to secure the establishment management measures.

Summary of Applicant's Case

4.3.3.3 The Applicant considers that the proposed provisions as set out in the Outline LP is are sufficient and appropriate for the temporary and reversible impact which would result from Hornsea Three. The Applicant has presented evidence from a EIA Quality Mark Article produced by the Institute of Environmental Management and Assessment (REP5-060) which demonstrates that should 40-60cm whips be planted and maintained for five years, an overall average height of 1.9m would be achieved, which constitutes full landscape mitigation. After five years, for all locations where hedges may be removed as part of Hornsea Three construction works, failure is very unlikely and the hedges will be restored back to an improved baseline status (species rich and gap filled). Any ongoing maintenance would be the responsibility of the landowner in a situation comparable to that existing prior to construction.

4.3.3.4 Several nationally significant infrastructure developments in Norfolk have a five year landscaping maintenance period:

- The Norfolk County Council (Norwich Northern Distributor Road) (A1067 to A47(T))) Order 2015;
- The National Grid (King's Lynn B Power Station Connection) Order 2013 (Requirement 5(3)); and
- Dudgeon offshore wind farm onshore substation and cable TCPA (Condition 6(iv) of appeal decision).

4.3.3.5 The Applicant is not aware of any feedback from these projects which suggests this was not appropriate or that mitigation was not achieved as expected within this five year period.

4.3.3.6 Furthermore, the Applicant would note that the five year management period proposed is only applicable to areas where the Applicant has temporary rights to the land (i.e. along the onshore cable corridor), following which the Applicant would hand the land back to the landowner. Where the Applicant has permanent rights to the land (i.e. at the onshore HVAC Booster Station and the onshore HVDC Converter/HVAC Substation), the soft landscaping proposed would be managed for the full lifetime of the project, to ensure it is maintained to degree which achieves full landscape mitigation. This long term management is secure within the Outline LP.

4.3.3.7 The Applicant disagrees with NNDC and does not consider first generation of power an appropriate milestone for the purpose of commencing management of soft landscaping, as this could be years ahead of the completion of construction at the onshore cable corridor, as demonstrated in the indicative construction program shown in Figures 3.38 and 3.39 of the Project Description (APP-058). This would lead to a period of time elapsing between replacement or planting of the soft landscaping and the implementation of management measures (including those designed to encourage establishment). Thus, to ensure the provisions to manage soft landscaping are secure for the period between completion of new or replacement planting and first generation of power, the Applicant considers it in the interest of both parties to agree for the management period to commence upon completion of the new or replacement planting. To avoid complexity, the Applicant has proposed that each relevant planning authority would be notified once all replacement or new planting is complete within their local authority boundary, and the management period would commence immediately following this notification. A commitment to provide this notification is captured within paragraph 7.1.1.2 of the Outline LP.

4.3.3.8 Therefore, the Applicant considers a five year management period, commencing following notification of all planting being complete within a given district to be appropriate, and that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur.

4.3.4 Impacts of the tourist economy

4.3.4.1 NNDC has concerns that during the onshore cable corridor construction phase there will be significant impacts on local tourism businesses in a very attractive and popular area of the North Norfolk Coast such that the construction works will have a significant impact on the income of tourism businesses in the Weybourne and Kelling area. The Applicant has given due consideration to the potential for impacts during the construction phase to result in potential effects on the tourism sector within Norfolk and concluded that no significant effects would occur.

Summary of Applicant's Case

4.3.4.2 The Applicant has assessed the potential for impacts during the construction phase to result in potential effects on the tourism sector within Norfolk, including the potential for impacts on visual resources, recreational resources, the local road network, and noise and vibration sensitive receptors, within Volume 3, Chapter 10: Socio-Economics of the Environmental Statement (APP-082). The concentration of visitor activity in particular locations (limited to a relatively small part of NNDC as a whole), its seasonal character, the temporary nature of the construction activity and the measures identified by the Applicant to minimise disruption at key locations avoids the potential for significant effects. Such measures include management of traffic movements along key tourist routes, as set out in the Outline CTMP) and provision of a temporary diversion to the Peddars Way/Norfolk Coast Path should open cut techniques be used at landfall to avoid closures (to be managed through a Public Right of Way Management Plan).

4.3.4.3 The Applicant would further note that beneficial impacts may also be realized as a result of additional demand for accommodation by the construction workforce and additional spend in local businesses associated with this demand. Therefore the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur in respect to tourism during the construction phase.

4.4 South Norfolk Council

4.4.1 Introduction

4.4.1.1 All matters under the remit of SNC, with the exception of those elaborated on below, have been agreed as demonstrated in the SoCG between the Applicant and SNC [REP7-013].

4.4.1.2 SDC state a preference for HVAC transmission, as detailed in section 2.1.3.1 of this document.

4.4.2 Impacts on landscape and visual receptors

Assessment of Hedgerows and Trees

4.4.2.1 SNC consider that there may not be sufficient information before the ExA relating to important hedgerows and veteran trees within their district boundary to enable them to make an informed decision. The Applicant disagrees and considers that it has fully assessed the impact on hedgerow and trees, with no significant effects anticipated.

Summary of Applicant's Case

4.4.2.2 The Applicant considers that it has fully assessed the impact on hedgerows and trees. The Applicant submitted information in response to Examining Authority questions which clarified the location of important hedgerows [REP1-155] and veteran trees [REP2-016]. The Applicant's assessment and associated mitigation presented within Volume 3, Chapter 3: Ecology and Nature Conservation (APP-075), Volume 3, Chapter 4: Landscape and Visual Resources (APP-076) and the first draft of the Landscape Plan (APP-181) submitted with the Application (commitments to: utilise HDD technology at many crossings which would retain hedgerows and trees; replace all removed hedgerows with a species rich native hedgerow mix; and provide additional enhancement planting within a 100 m enhancement corridor (subject to landowner approval)) resulted in a minor adverse to negligible effect, which is not significant in EIA terms. This conclusion was based on a scenario in which no trees which were removed would be replaced.

4.4.2.3 Although the Applicant maintains that a full assessment has been undertaken, it has evolved its position during the course of Examination following extensive engagement with the LPAs, including SNC. The following additional commitments have been made within the Outline Landscape Plan committing to:

- carrying out pre-commencement surveys of all hedgerows and trees which are currently identified to be removed (i.e. those not located within an existing HDD area or otherwise currently identified for retention, as some trees within the AONB have been); and

- replacing trees (trees within hedgerows and individual trees) which are removed in the area temporarily impacted by the onshore cable corridor (in the case of individual trees, this would be subject to landowner permission).

4.4.2.4 Where the above surveys identify veteran trees to be removed within the onshore cable corridor, the Applicant will aim to preferentially protect these features either through micro-siting of the cable trenches or using alternative construction methodology (such as HDD) to cross the feature. Where retention is not possible for these features, removal will be justified as part of the detailed LP(s). The same approach would be applied to important hedgerows which are classified as such due to the presence of standard trees. The outcome of the surveys would also inform the detailed site-specific protective measures to be developed within the detailed Ecological Management Plan (EMP), which will be agreed with the relevant planning authorities in accordance with Requirement 10.

4.4.2.5 The Applicant considers that the additional commitments address the concerns raised by SNC, providing sufficient comfort that appropriate site-specific mitigation will be developed as part of the detailed EMP, and that the soft landscaping proposals committed to by the Applicant will lead to a biodiversity and landscape enhancement once planting has established. Therefore the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur in respect to hedgerows and trees.

Duration of maintenance for landscape planting

4.4.2.6 SNC normally recommend a management period of 5 years for landscape planting in their district, but consider that the management period should be consistent along the cable corridor and therefore that the maximum recommended period (10 years as suggested by NNDC) should apply. The Applicant considers that 5 years is sufficient for full ecological, heritage and landscape mitigation in all LPA districts.

Summary of Applicant's Case

4.4.2.7 The Applicant considers that a 5 year management period is appropriate for full ecological, heritage and landscape mitigation across the onshore cable corridor, in all local planning authority districts. A summary of the evidence for this is presented in section 4.3.3 of this document.

4.4.2.8 Without prejudice to this, the Applicant does not consider that it would be complex to have a management period of 5 years in South Norfolk and Broadland, and a 10 year period in North Norfolk, should the ExA and SoS agree with NNDC's evidence.

4.4.3 Impacts on Keswick Hall (Historic Environment)

4.4.3.1 There is disagreement between the parties as to the magnitude of impacts on the setting of Keswick Hall, with SNC considering the impacts comprise a moderate magnitude, whilst the Applicant considers the impacts to be of minor magnitude.

4.4.3.2 It has been agreed between both parties that the mis-alignment in these positions is a result of a difference in professional opinion. Notwithstanding this difference in professional opinion, both parties agree that the harm caused to Keswick Hall and its setting would be less than substantial based on the NPPF test (as there would be no physical harm to the designated asset) and that this harm should be weighed against the public benefits of the proposal.

4.4.3.3 SNC have indicated that the mitigation for the onshore HVDC converter/HVAC substation will be more effective under the HVAC scenario (where there is a maximum building height of 15 m), and less effective, and not sufficient, under the HVDC scenario (where there is a maximum building height of 25 m). Therefore, in respect to the impacts on the historic environment, SNC have expressed a preference for HVAC transmission. Section 2.1.3.1 of this document details the Applicant's case for retaining both HVAC and HVDC transmission systems as options.

Summary of Applicant's Case

4.4.3.4 The Applicant has undertaken a full assessment of the impacts on the setting of Keswick Hall (within Volume 3, Chapter 5: Historic Environment of the Environmental Statement APP-077) and concluded that effects would be minor adverse, which is not significant. Key considerations in this assessment was the existing condition of the setting which has already been altered and degraded through the addition of modern development. As noted above, there is agreement between SNC and the Applicant that there would be harm to the asset (as a result of the impact to its setting), however the harm is less than substantial (as there would be no physical harm to the designated asset) and that this harm should be weighed against the public benefits of the proposal. As set out in the Statement of Reasons, the Applicant considers that the public benefits of the proposal do outweigh the potential harm caused to Kewsick Hall.

4.4.3.5 The Applicant has proposed mitigation as set out in Table 5.13 of Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077) and committed, in accordance with Requirement 7 of the DCO, 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. This is in additional to a substantial soft landscaping proposal at the onshore HVDC converter/HVAC substation which minimises the impact of the proposed infrastructure on the surrounding landscape.

4.4.1 Core Working Hours

4.4.1.1 SNC considers that the core working hours start time of 07:00hrs Monday to Saturday in the Outline Code of Construction Practice should be 08:00am having regard to the proximity of the works to residential properties at some locations, the proposed use of a mobilization period, the maintenance period on Saturdays, the existing provision within the Outline CoCP for longer working hours where agreed with the LPA. The Applicant considers its proposed core working hours are appropriate, when considering the designed-in and committed mitigation as set out in the Outline CoCP.

Summary of Applicant's Case

4.4.1.2 The Applicant would note that numerous nationally significant infrastructure projects have accepted core working hours commencing from 07:00am. The majority of which identified below have similar circumstances to that of Hornsea Project Three. Within the eastern region, approved projects with a 07:00 commencement time include:

- The Galloper Wind Farm Order;
- Palm Paper 3 CCGT Power station Kings Lynn;
- East Anglia THREE Offshore Wind Farm;
- The Progress Power (Gas Fired Power Station); and
- Rookery South (Resource Recovery Facility).

4.4.1.3 A construction start time of 07:00am (rather than 08:00am) provides a mechanism for some of the construction workforce and vehicle movements to travel outside the standard peak AM traffic movements, helping to minimise impacts on the wider road network. The provision of such a mechanism has been discussed with and welcomed by both Highways England and NCC, as the local highway authority. Specific to construction working hours at onshore HVDC converter/HVAC substation, located within South Norfolk, the Applicant does not consider that the locality warrants reduced core working hours. Although there are residential properties nearby to the site, the locality is already subject to background ambient noise generated by the A47. Furthermore, whilst the period of construction works for the HVDC converter/HVAC substation extends over a longer period than for the onshore cable corridor, it is not anticipated that noise generating activities will occur from 07:00 am every day for the full duration.

4.4.1.4 An assessment of the potential impacts on residential amenity of residents at the onshore HVDC converter/HVAC substation, particularly in respect to noise and vibration has been undertaken by the Applicant and reported in Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement (APP-080). This concluded that due to the temporary nature of the impacts, as well as the distance between the site and the closest residential receptor, the effects would be negligible. The Applicant would note that various measures designed to minimise noise and vibration during construction, so far as is reasonably practicable, have been identified within section 6.2 of the Outline CoCP in order to minimise disturbance to sensitive receptors. Therefore the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur as a result of the proposed core working hours during the construction phase.

4.5 Broadland District Council

4.5.1 Summary

4.5.1.1 All matters under the remit of Broadland District Council (BDC), with the exception of the choice of transmission system, have been agreed as demonstrated in the SoCG between the Applicant and BDC [submitted at Deadline 10]. Matters agreed include noise, vibration, air quality and traffic assessments and mitigation at all receptors within BDC's remit including Cawston and Oulton.

4.5.1.2 BDC state a preference for HVDC transmission, as detailed in section 2.1.3.1 of this document.

4.6 Norwich City Council

4.6.1 Summary

4.6.1.1 Agreement has been reached on all matters between the Applicant and Norwich City Council, as detailed in the SoCG [REP1-225].

4.7 Great Yarmouth Borough Council

4.7.1 Summary

4.7.1.1 Agreement has been reached on all matters between the Applicant and Great Yarmouth Borough Council, as detailed in the SoCG [REP1-202].

4.8 Natural England

4.8.1 Introduction

4.8.1.1 The following section provides a summary of case for those matters that have been under discussion with Natural England throughout the examination of Hornsea Three.

4.8.2 Marine Mammals

4.8.2.1 As evidenced within the final "All other Matters" SoCG (REP9-022) as submitted at Deadline 9, there are no matters of residual disagreement relating the assessment of potential effects on marine mammals both within the EIA and the RIAA on the basis that the Applicant has committed to a southern North Sea Site of Community Importance Site Integrity Plan (SNS SCI SIP).

4.8.2.2 Given the agreement on the control measure (the SNS SCI SIP) the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence that significant effects (in EIA terms) on marine mammal receptors will not occur either alone or cumulatively, and similarly that (in HRA terms) there is no potential for an adverse effect on integrity to the SNS SCI either alone or in-combination.

4.8.2.3 The Applicant and Natural England are in agreement on the nature of monitoring proposals for marine mammals, and how this is secured within the DCO with the exception of the request from Natural England for the Applicant to be the party responsible for enforcing piling cessation if effects (as a result of the analysis of underwater noise modelling) are shown to be significantly different than predicted. The Applicant's position has remained throughout that the MMO has specific powers under (Section 72 and 102) of the Marine and Coastal Access Act (2009) to impose a stop notice on piling, if it (as the regulator) deems it necessary.

4.8.3 Marine Processes & Benthic Ecology

Introduction / Summary of Disagreement

4.8.3.1 The Applicant has engaged with Natural England throughout the pre-application phase and during examination on matters relating to marine processes and benthic ecology. During examination, the Applicant has listened to the concerns raised by Natural England and has sought to address these either by providing clarificatory information or empirical evidence to address perceived uncertainties highlighted by Natural England and support the Applicant's position. This has included clarifications on the baseline presented, including the benthic ecology baseline (e.g. REP1-210 and REP4-097) and presentation of evidence on ground conditions (REP6-026) to demonstrate the project envelope is appropriate for the ground conditions present. Further detail of the clarifications and further evidence presented during examination in order to address concerns raised by Natural England (and other stakeholders) are discussed below.

4.8.3.2 The consultation with Natural England during examination has led to the resolution of some of the concerns raised in the Natural England Relevant Representation (RR-097) and Written Representation (REP1-213). The Position Statements for Natural England and the Applicant on matters relating to Benthic Ecology and Marine Processes as presented at Deadline 9 (REP9-016) outlines the areas of agreement between the parties. However, the Applicant can confirm that there are a number of residual matters of disagreement with Natural England with regard to Special Areas of Conservation (SACs) and Marine Conservation Zones (MCZs). These relate to the following specific sites:

- The Wash and North Norfolk Coast (WNNC) SAC
- The North Norfolk Sandbanks and Saturn Reef (NNSSR) SAC
- The Cromer Shoal Chalk Beds MCZ; and
- Markham's Triangle pMCZ.

Natura 2000 sites

4.8.3.3 The extant disagreements relate to concerns raised by Natural England with regard to its levels of confidence surrounding the following matters:

- Benthic ecology baseline characterisation, primarily in the nearshore area, where the offshore cable corridor was re-routed;
- Ability to bury cables;
- Maximum rock protection assumptions;
- Ability to decommission rock protection;
- Ability to avoid Annex I reef features;
- Recovery of sandwaves following pre-lay clearance work; and
- Recoverability of Annex I sandbanks sub-features, particularly Subtidal Mixed Sediments and Subtidal Coarse Sediments.

4.8.3.4 Natural England has also identified that the listed features of the WNNC SAC (i.e. Annex I sandbanks and sub-features) and NNSSR SAC (i.e. Annex I reef and Annex I sandbanks), , are in unfavourable condition. For the NNSSR SAC, this is due to activities exerting pressures capable of affecting the qualifying features, including demersal fishing, oil and gas operations, cabling and aggregate extraction. For the WNNC, as outlined in REP6-019, this is primarily due to fishing, although offshore wind farm cabling was also identified as having the potential to affect some of the Annex I features.

4.8.3.5 Natural England's view that there is uncertainty within the assessments relating to the above points and their latest site condition assessment information, Natural England consider that they cannot rule out the potential for adverse effect on integrity (AEoI) either alone or in-combination for both of the SACs.

4.8.3.6 The Applicant strongly disagrees with NE. The Applicant has evidenced (through the original impact assessments as presented within the ES and RIAA and subsequent examination phase clarifications) why it considers that a conclusion of no AEoI either alone or in-combination for both the SACs can be reached.

Cromer Shoal Chalk Beds MCZ

4.8.3.7 The extant disagreements regarding the Cromer Shoal Chalk Beds MCZ relate to concerns raised by Natural England with regard to its levels of confidence surrounding the following matters:

- Ability to bury cables;
- Maximum rock protection assumptions;
- Ability to decommission rock protection;
- Recovery of sandwaves following pre-lay clearance work; and
- Construction impacts, particularly from trenching and horizontal directional drilling (HDD) exit pits during landfall installation.

4.8.3.8 Natural England has confirmed that the conservation objective for the feature of relevance to this application for the Cromer Shoal Chalk Beds MCZ (i.e. Subtidal Sand) is to 'maintain' this feature in favourable condition.

4.8.3.9 Natural England's has confirmed that the Applicant's survey work provides a good level of coverage and there is sufficient information in order to assess the worst case scenario (REP7-070). Despite that, Natural England continues to advise that they have limited confidence in the Stage 1 MCZ assessment conclusions (of the Applicant) that there will be no significant risk of Hornsea Three hindering the achievement of the conservation objectives for the Cromer Shoal Chalk Beds MCZ.

4.8.3.10 The Applicant has evidenced (through the original assessments as presented within the ES and MCZ Assessment and subsequent examination phase clarifications) why it considers that the Secretary of State can be satisfied that there is no significant risk of hindering the conservation objectives for the Cromer Shoal Chalk Beds MCZ.

Markham's Triangle pMCZ

4.8.3.11 The Applicant notes that this site is proposed for designation and that the decision on whether this will be designated or the timescale for designation has not yet been confirmed. The extant disagreements regarding Markham's Triangle pMCZ relate to concerns raised by Natural England with regard to its levels of confidence surrounding the following matters:

- Amount of operations and infrastructure expected to occur within each feature and effects on those features; and
- Ability to decommission rock protection.

Natural England has identified that, with respect to the features of relevance for the Markham's Triangle pMCZ (i.e. Subtidal Coarse Sediment, Subtidal Sand and Subtidal Mixed Sediment), two of the attributes for Subtidal Sand and Subtidal Mixed Sediments are in unfavourable condition due to bottom towed gear. Although the Conservation Objectives of the site are yet to be determined, the consultation document has indicated a General Management Approach of 'Restore' for all features.

4.8.3.12 Natural England advises that they are currently unable to provide definite advice on the significance of impacts on the features of the site.

4.8.3.13 The Applicant has evidenced (through the original impact assessments as presented within the ES and MCZ Assessment and subsequent examination phase clarifications) why, if Markham's Triangle is designated, the Secretary of State could be satisfied that there is no significant risk of the conservation objectives for Markham's Triangle pMCZ.

Summary of Applicant's Case

1. Benthic ecology baseline characterisation

Natura 2000 sites

4.8.3.14 The Applicant has produced a baseline characterisation for benthic ecology within the NNSSR SAC and The WNNC SAC, as discussed and agreed during pre-application consultation with the Marine Processes, Benthic Ecology and Fish Ecology Expert Working Group (EWG). The Applicant considers that this characterisation is robust for the purposes of undertaking the EIA and HRA. The Applicant has identified and classified benthic infaunal and epifaunal biotopes using appropriate guidelines for marine habitat classification in UK waters and following methodologies used on previous offshore wind farm projects.

4.8.3.15 Within the nearshore area, the approach to characterisation was discussed and agreed with the EWG, with site specific surveys scoped and agreed with the EWG based on the offshore cable corridor presented at PEIR. Based on a Section 42 consultation response from Natural England, a re-route of the offshore cable corridor in the nearshore area was taken forward to minimise impacts on designated features in the nearshore area. As such, the baseline characterisation used a combination of desktop information with site specific survey data from areas adjacent to the nearshore re-route. Validation of the baseline characterisation of the WNNC SAC was provided during the Examination phase via the WNNC SAC Clarification Note (REP1-140), which presented site specific survey data across the offshore cable corridor within the WNNC, to address Natural England's comments relating to data coverage within the WNNC SAC. Clarification regarding the baseline characterisation for the NNSSR SAC was also provided during the Examination phase (REP7-022) to address the JNCC's queries in relation to the data analysis and biotope classification within this site. The biotopes identified within the Hornsea Three benthic ecology study area, and specifically within these designated sites, are typical of those present within the southern North Sea as demonstrated through the desktop data.

4.8.3.16 While the Applicant is confident that its biotope classification is accurate, the Applicant has demonstrated that any perceived uncertainty on the part of NE / JNCC about the benthic ecology baseline characterisation in the NNSSR and WNNC SAC (i.e. with regards to the biotope codes assigned) does not affect the overall conclusions made within the RIAA of no AEoI for these sites. This is due to the evidence of recoverability of southern North Sea sediments and associated communities, which show that even if biotopes which are subtly different to those in the Hornsea Three baseline characterisation were present, the overall conclusions of the assessment would not be affected. Furthermore, control measures to avoid impacts on the most sensitive habitats/communities within these SACs will be delivered through post consent plans (e.g. micrositing around Annex I reefs via the Cable Specification and Installation Plan (CSIP); deposition of sediment to avoid areas of high epifaunal diversity via the Sandwave Clearance Plan).

Cromer Shoal Chalk Beds MCZ and Markham's Triangle pMCZ

4.8.3.17 The Applicant notes that Natural England are in agreement that the broadscale habitats within the Cromer Shoal Chalk Beds MCZ and Markham's Triangle pMCZ have been adequately characterised by the Applicant in order to facilitate the assessment of potential impacts on these sites (see Benthic Ecology Position Statement between the Applicant and Natural England (REP9-016)).

2. Ability to bury cables

Natura 2000 sites

4.8.3.18 The Applicant has developed a project envelope as presented in Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058) which includes a range of tools and installation methodologies which are appropriate to install cables within the Hornsea Three offshore cable corridor. Based on this project envelope, the Environmental Statement and RIAA have undertaken thorough assessments of the effects of cable installation, operation and maintenance and decommissioning (including Annex I features of SACs) considering maximum design scenarios for the activities proposed. This includes site preparation works (e.g. sandwave clearance and boulder clearance), cable installation and operation and maintenance activities (e.g. remedial burial and cable repair and replacement). The project envelope has taken into account lessons learned from the Applicant's numerous offshore wind farm projects in the UK and overseas to ensure the project envelope is in line with industry best practice.

4.8.3.19 The Applicant provided evidence (REP6-026) that shows with the right installation tools (i.e. utilising the tools referenced in the Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058)), cable burial will be possible within the Hornsea Three offshore cable corridor. As a precaution, and drawing on lessons learned from previous projects, remedial cable protection has been included within the project envelope to cover the eventuality of some unplanned event occurring. As stated by the Applicant throughout the Examination phase, there are many reasons why a cable may be insufficiently buried (e.g. adverse weather, mechanical breakdown) and these are not limited to ground conditions. As such, it would be necessary to include provision for remedial cable protection, irrespective of any further ground investigations that might be done now or in future.

4.8.3.20 Natural England has expressed concerns regarding the Applicant's ability to bury offshore export cables to the target burial depths, particularly within the WNNC SAC, Natural England point to cable burial difficulties for other offshore wind farms as a basis for their concerns regarding cabling within this area as raised in their examination submissions (e.g. REP3-076 and RR-047). The Applicant would note, that these comparisons may not be directly applicable to Hornsea Three, primarily due to these projects being consented up to 10 years prior to construction, however the Applicant has demonstrated that where comparisons could be made, learn lessons could be learned from these projects. To address the concerns raised by Natural England and demonstrate lessons learned, the Applicant has gone further than would be normal at this stage and presented a Preliminary Trenching Assessment during Examination (REP6-026). This presents an initial ground model for the Hornsea Three offshore cable corridor within designated sites, drawing on the Applicant's detailed knowledge of the site conditions and target burial depths, and an assessment of tool viability for the ground conditions recorded. The Preliminary Trenching Assessment provides additional confidence on the ability to bury export cables within marine protected areas.

4.8.3.21 Furthermore, the Applicant will work with the MMO and SCNBs via the CSIP to identify the most appropriate tools for cable installation, with a particular focus on the NNSSR and WNNC SACs and with the ultimate aim of minimising the risk that cables would be insufficiently buried and therefore necessitating deployment of cable protection. As described in the outline CSIP (REP7-021), this process will be informed by pre-construction site investigation surveys and detailed design and detailed consultation with the MMO and SNCBs, contractors and engineers to identify the risks and measures to be taken to minimise the risks of inadequate burial. The CSIP will be submitted to and approved in writing by the MMO prior to commencement of construction operations (see paragraph 4.8.3.47 *et seq*.).

Cromer Shoal Chalk Beds MCZ

4.8.3.22 The Applicant's comments on the project envelope and the commitments outlined above for Natura 2000 sites (e.g. CSIP) are equally applicable for the Cromer Shoal Chalk Beds MCZ. The maximum design scenario assessed for this MCZ (including HDD operations discussed further in paragraph 4.8.3.43 below) is based on a project envelope that represents current best practice in the offshore wind industry.

3. Maximum levels of rock protection

Natura 2000 sites

4.8.3.23 The Applicant would note that remedial cable protection has been included in the project envelope as contingency, in the event that sufficient burial is not achieved to target burial depth. Natural sediments/seabed provide the best protection for cables and therefore the Applicant's preference is always to bury the cable, with rock protection only used where necessary and the assessments within the Environmental Statement and RIAA have assessed the maximum design scenario for cable protection measures, where these are required. The Applicant has assessed the effects of cable protection measures on marine processes and benthic ecological receptors (including Annex I features of SACs), using a maximum design scenario for both cable protection associated with asset crossings and remedial cable protection where cable burial fails. For the NNSSR SAC and the WNNC SAC, the proportion of Annex I habitats (and associated sub-features for the WNNC SAC) which may be affected will be very small in the context of the overall extents of the broadscale habitat features (i.e. <0.01% and <0.004% of the extent of the Annex I sandbank features, respectively).

4.8.3.24 The assessment presented in the ES and RIAA is conservative as it assumes long-term habitat loss, whereas ecological function will continue in these areas through the commitment to use rock protection grain sizes which reflect the baseline conditions within designated sites (REP1-138), which will minimise habitat loss effects.

4.8.3.25 Clarifications have been provided during Examination addressing Natural England concerns regarding rock protection within designated sites. These have included the Cable Protection in Designated Sites Clarification Note (REP1-138) which provided justification of the maximum design scenario for cable protection assumptions, evidence to support assessment conclusions with respect to interruption to sediment transport processes and evidence on effects on benthic ecology from cable protection measures.

4.8.3.26 The Applicant submitted an outline Cable Protection Plan as part of the Outline CSIP during Examination (REP7-021) which is the best post consent mechanism by which cable protection requirements will be managed. The Cable Protection Plan will be a live document for construction and operation and maintenance. This would provide the necessary mechanism for MMO and SNCBs to be consulted on cable protection deployed (and/or remedial burial) within designated sites following the completion of each construction phase. This proactive engagement with the MMO and SNCBs through the Cable Protection Plan will help to minimise cable protection requirements during the construction phase, including input to the tendering process for cable installation contractors.

4.8.3.27 On this basis, the Applicant is confident that the maximum design scenario for cable protection measures will not lead to an AEoI of the WNNC SAC or the NNSSR SAC, whether or not cable protection is removed during the decommissioning phase.

Cromer Shoal Chalk Beds MCZ

4.8.3.28 As detailed above for Natura 2000 sites, the Applicant has assessed the effects of cable protection measures on marine processes and broadscale habitat features of the Cromer Shoal Chalk Beds MCZ using a maximum design scenario for both cable protection associated with asset crossings and remedial cable protection where cable burial fails. The assessment concluded that the proportion of the Subtidal Sand feature of the MCZ which may be affected would be very small in the context of this broadscale habitat feature (i.e. <0.02%), and that this does not present a significant risk to the achievement of the conservation objectives for the site. As outlined for the Natura 2000 sites above, the Cable Protection Plan would provide the necessary post consent mechanism to facilitate engagement with MMO and SNCBs and minimise cable protection requirements, wherever possible. On this basis the Applicant considers that a Stage 2 MCZ assessment is not required for the Cromer Shoal Chalk Beds MCZ.

4. Ability to decommission rock protection

Natura 2000 sites

4.8.3.29 The Applicant considered a maximum design scenario in the ES and RIAA that cable and scour protection would remain in situ at the end of the operation and maintenance phase. The assessments undertaken concluded that the associated effects of permanent habitat loss would not lead to an AEoI of the WNNC SAC or the NNSSR SAC. However, in response to Natural England's concerns regarding the potential impacts associated with remedial cable and/or scour protection within designated sites, the Applicant has committed, subject to agreement with the SNCBs and MMO, to decommission any remedial cable and/or scour protection within designated sites at the end of the operation and maintenance phase for the project, (REP4-012). The feasibility of removing rock protection using existing methods and tools, and without permanent impact, has been evidenced by the Applicant (REP6-018).

4.8.3.30 The Applicant considers that the commitment to decommission rock protection is not necessary to avoid AEoI on the NNSSR SAC or The WNNC SAC. Rather, it has been proposed solely to allay Natural England's concerns about permanent habitat loss effects. The Applicant acknowledges that decommissioning would provide the necessary mitigation to avoid permanent habitat loss within designated sites, with habitats recovering to the baseline condition following removal of rock protection (REP6-018).

4.8.3.31 Although the Applicant does not agree with NE's outstanding concerns about the feasibility of rock protection decommissioning (see REP7-076), the Applicant has nevertheless proposed to undertake research, including field trials, to validate the effectiveness of rock protection decommissioning in environments similar to the NNSSR SAC and the WNNC SAC (REP9-050).

Cromer Shoal Chalk Beds MCZ and Markham's Triangle pMCZ

4.8.3.32 The information presented above with respect to the Applicant's confidence regarding the ability to decommission cable protection within Natura 2000 sites is equally applicable for the Cromer Shoal Chalk Beds MCZ and Markham's Triangle pMCZ. The Applicant does not consider that a commitment to decommission rock protection is necessary in order to avoid a significant risk to the achievement of conservation objectives for these designated sites. The Applicant considered a maximum design scenario in the MCZ assessment that cable and scour protection would remain in situ at the end of the operation and maintenance phase and that this would not present a significant risk to the achievement of the conservation objectives. Decommissioning of rock within these sites has, therefore, been proposed solely to allay Natural England's concerns about permanent habitat loss effects within these designated sites.

5. Ability to avoid Annex I reef features

Natura 2000 sites

4.8.3.33 Within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement and the RIAA, the Applicant has presented an assessment of the effects of cable installation on Annex I reef habitats, with a particular focus on the NNSSR SAC. The primary mitigation in relation to Annex I reefs is that micrositing around Annex I reefs, as informed by pre-construction survey data to provide accurate information on the location, extent and composition of Annex I reefs, will ensure direct impacts on these features are avoided. This would be agreed with the MMO and SNCBs prior to commencement of cable laying operations via the CSIP and the final Hornsea Three design plan (which includes a requirement for micrositing), both of which would be submitted and approved in writing by the MMO prior to the commencement of construction operations. Such mitigation measures are proven industry measures for minimising risks to features within and outside SACs and the Applicant has demonstrated that there is adequate space within the offshore cable corridor to microsite export cables to avoid Annex I reef habitats identified at the time of construction. The assessments undertaken have concluded that the maximum design scenario with respect to impacts on any reef features identified during the pre-construction survey will not lead to an AEoI of The WNNC SAC or the NNSSR SAC.

4.8.3.34 During the Examination phase, and in response to Natural England's concerns regarding the feasibility of micrositing around any Annex I reef features (e.g. REP1-213 and REP3-076), the Applicant committed (by adjusting to the Work Plans) to extend a short section of the Hornsea Three offshore cable corridor into the adjacent temporary working areas, to enable cable installation works to occur within the temporary working area (REP6-038). This was proposed to provide further reassurance to Natural England by maximising the width of the offshore cable corridor in the vicinity of the Annex I S. spinulosa reefs, thereby further increasing the potential for micrositing.

4.8.3.35 The Applicant has also confirmed that the area of potential Annex I rocky reef identified by the Eastern Inshore Fisheries and Conservation Authority (IFCA) in the WNNC SAC coincides with the area of Annex I reef identified in the Hornsea Three characterisation within the temporary working corridor and, as such, will not be directly impacted by cable installation. Any activities within the temporary working corridors (e.g. anchor placement, disposal of dredged material) will be managed to avoid any direct impacts on Annex I habitats.

6. Recoverability of sandwaves

Natura 2000 sites

4.8.3.36 The Applicant has undertaken robust assessments of the effects of both sandwave clearance and associated disposal activities on marine processes and benthic ecological receptors (including Annex I features and associated sub-features) within the ES and RIAA (Volume 2, Chapter 1: Marine Processes (APP-061), paragraph 1.11.5.3 *et seq*. and paragraph 1.11.2.66 *et seq*.; Volume 2, Chapter 2: Benthic Ecology (APP-062) paragraph 2.11.1.8 *et seq*., paragraph 2.11.1.40 *et seq*., and paragraph 2.11.1.104 *et seq*.; the RIAA (APP-051), paragraph 5.5.1.2 *et seq*., paragraph 5.5.1.14 *et seq*., paragraph 5.6.1.2 *et seq*. and paragraph 5.6.1.19 *et seq*.) These assessments were supported by sediment dynamics theory, geomorphological processes theory and empirical evidence from the field and concluded that impacts from sandwave clearance activities will be temporary and reversible and will not lead to any AEoI of the WNNC SAC or the NNSSR SAC.

4.8.3.37 Clarifications with respect to sandwave clearance recovery have been provided during Examination addressing Natural England concerns (REP1-183 and REP2-020) by presenting further empirical evidence of recovery of sandwaves following sandwave clearance from Race Bank offshore wind farm monitoring data. The Race Bank monitoring data provides empirical evidence which validates the theoretical assessments for Hornsea Three that i) the environmental conditions which govern the development and maintenance of the sandwave bedforms would not be disrupted by local levelling work; ii) that the levelled sandwaves would recover with time (in the order of months to years) to a natural equilibrium state, either close to their original shape and location, or, with a different shape and/or position; and iii) that the rate of recovery would vary in relation to the rate of local sediment transport processes. The Sandwave Clearance Clarification Note (REP1-183) also provided a robust analysis to establish the degree of applicability of that evidence to the Hornsea Three environment and showed that the monitoring data is an appropriate analogue for Hornsea Three.

4.8.3.38 On this basis, the Applicant is confident that the maximum design scenario assessed for sandwave clearance will not lead to an AEoI of The WNNC SAC or the NNSSR SAC.

4.8.3.39 Furthermore, the Applicant has submitted an Outline CSIP (REP5-011) which includes an outline Sandwave Clearance Plan detailing the measures which will be taken to ensure that the any sandwave clearance activities and associated disposal within designated sites, are appropriately managed (including disposal in appropriate sediments/habitats, including avoiding Annex I reefs). The Sandwave Clearance Plan will also allow for activities to be reported to SNCBs in an auditable and timely manner, within limits set out in the DCO and the RIAA.

Cromer Shoal Chalk Beds MCZ

4.8.3.40 The information presented above with respect to the Applicant's confidence regarding the recoverability of sandwaves within Natura 2000 sites is equally applicable for the Cromer Shoal Chalk Beds MCZ (and Markham's Triangle rMCZ). As outlined in paragraphs 4.8.3.37 and 4.8.3.38, robust assessments were undertaken within the MCZ Assessment with further clarifications provided to support the Applicant's position during Examination. On this basis, and considering the additional post consent control measures outlined in the CSIP, the Applicant is confident in the conclusions of no significant risk to the achievement of the conservation objectives for the two MCZs considered as a result of sandwave clearance activities.

7. Recoverability of Annex I sandbanks sub-features, particularly Subtidal Mixed Sediments and Subtidal Coarse Sediments

Natura 2000 sites

4.8.3.41 The Applicant's assessment on the effects of cable installation on Annex I sandbanks features of the NNSSR SAC and relevant sub-features of the WNNC SAC, considered the implications of impacts from cable installation on the physical and biological attributes of the relevant features/sub-features, including effects on seabed sediments composition and associated infaunal and epifaunal communities. The assessment within the RIAA was drawn from sediment dynamics and geomorphological theory and empirical evidence on the physical environment as presented within Volume 2, Chapter 1: Marine Processes (APP-061) of the Environmental Statement, including the potential for recovery of seabed sediments following disturbance from the range of cable installation tools within the project envelope (e.g. trenching, jetting and ploughing). This was combined with consideration of the sensitivities of infaunal and epifaunal assemblages, including recovery potential of the component communities, including those associated with mixed and coarse sediments, as presented within Volume 2, Chapter 2: Benthic Ecology of the Environmental Statement (APP-062).

4.8.3.42 The Applicant's position is that effects of cable installation will be temporary and reversible and sediments and associated communities will fully recover once the cable is installed. This conclusion is supported by considerable empirical evidence from the offshore and cables wind industries as well as analogous offshore industries, such as aggregate extraction and oil and gas (see REP1-122, Q1.2.10 for a summary of these sources of evidence). On the basis of the evidence presented, the Applicant has concluded that cable installation will not result in an adverse effect on the integrity of the Annex I sandbanks feature, including all associated sub-features, of the WNNC SAC.

8. Construction impacts, particularly from trenching and HDD operations

Cromer Shoal Chalk Beds MCZ

4.8.3.43 The Hornsea Three offshore cable corridor only extends through approximately 1 km of the Cromer Shoal Chalk Beds MCZ. Responding to consultation feedback, the Applicant made to substantial efforts to minimise the footprint of the offshore cable corridor (and therefore effects associated with cable installation) within the Cromer Shoal Chalk Beds MCZ. This included a 40 km reroute of the offshore cable corridor to reduce the length of the offshore cable corridor within this MCZ (and associated impacts with it), following a Section 42 consultation response from Natural England (see section 2 of REP1-138).

4.8.3.44 The Applicant's MCZ Assessment considered all impacts associated with cable installation within the MCZ, including detailed consideration of two scenarios for cable installation at the landfall, i.e. "open cut" trenching (which represented the greatest footprint" and HDD (which would have greater effects on marine processes then trenching). The MCZ Assessment concluded that direct effects, even in the maximum design scenario (for HDD or "open cut", would be limited to one feature of the MCZ, i.e. Subtidal Sand, and that in the maximum design scenario, temporary habitat loss/disturbance would affect up to 1.04% of this broadscale habitat feature (or 0.06% of the MCZ as a whole). These would be temporary and reversible, a conclusion which is supported by empirical presented within the MCZ Assessment and supporting documents (REP1-140; see paragraph 4.8.3.28 for long term impacts). This includes HDD operations, with any effects from the establishment or presence of coffer dams being short term, localised and temporary. Any longer lasting effects were predicted to affect a very small proportion of this broadscale habitat feature. As such, the Applicant's position is that it can be concluded, with confidence, that cable installation activities including HDD operations do not present a significant risk to the achievement of conservation objectives for the features of the MCZ and on this basis, the Applicant considers that a Stage 2 MCZ assessment is not required for the Cromer Shoal Chalk Beds MCZ.

9. Operations and infrastructure within Markham's Triangle pMCZ

4.8.3.45 The Applicant's position is that the maximum design scenario (i.e. 10.5% of Hornsea Three array infrastructure) will not represent a significant risk to the achievement of conservation objectives for the site, i.e. restore to favourable condition. The majority of impacts are temporary and reversible (i.e. primarily from construction), with evidence showing that these will recover following cessation of construction activities. While there will be longer lasting effects (i.e. due to foundations, scour and cable protection) the proportion of broadscale habitat features affected will be very small in the context of these extensive habitat features (see REP3-023). In order to provide further reassurance to Natural England during the Examination, the Applicant reduced the maximum design scenario for Markham's Triangle pMCZ from an assumption of 24% of array infrastructure within the pMCZ boundary in the MCZ Assessment (APP-104) to 10.5% of array infrastructure within the pMCZ boundary (see REP3-023 and REP2-004).

4.8.3.46 As outlined in the MCZ Assessment, restoration of the site to favourable condition will require management measures related to ongoing trawling impacts (i.e. bottom trawling and dredging). It is not currently clear what these measures may entail, but the presence of Hornsea Three will not hinder the implementation or success of such management measures. The Applicant would also note that the presence of array infrastructure within the pMCZ will result in some reduction of fisheries activity and which would therefore facilitate any management measures implemented by JNCC once this site is designated. Further details of this are outlined in the Applicant and Natural England's Position Statement (REP9 -016) , and it should be noted that the area of seabed where commercial fishing intensity (i.e. bottom trawling and dredging) would be reduced due to the presence of Hornsea Three infrastructure would be greater than that affected by long term habitat loss.

Mitigation

4.8.3.47 As identified in the sections above, there are a number of instances where, during both the pre-application phase and Examination phase, the Applicant has committed to additional mitigation in an effort to allay Natural England's concerns with respect to impacts to designated sites. For the avoidance of any doubt, the relevant commitments made by the Applicant with regard to these designated sites are outlined below.

Mitigation 1: Level of rock protection

4.8.3.48 The Applicant's clear preference and objective will be to bury all cables as that affords the best asset protection as well as being a better environmental outcome. However, the need to allow for some rock protection (both for protecting crossed assets and for remedial measures) is clear and cannot be avoided. However, the Applicant has reduced the maximum design scenario assumptions for cable protection from the PEIR from an assumption that all cable protection could be placed within NNSSR SAC to a commitment to limit the level of rock protection within designated sites to no more than 10% of the cable length within that site and to remove all cable crossings from nearshore designated sites (i.e. WNNC SAC and Cromer Shoal Chalk Beds MCZ), thereby considerably reducing rock protection impacts in these sites (see Table 2.1 of REP1-138).

4.8.3.49 The Cable Protection Plan (within the CSIP) outlines the maximum design scenarios for footprint and volume for each designated site, to ensure this is clearly auditable in the post consent phase. The Cable Protection Plan is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 13(1)(h) (generation assets) and Schedule 12, Part 2, Paragraph 14(1)(h) (transmission assets) of the DCO.

Mitigation 2: Type of rock protection within designated sites

4.8.3.50 The PEIR considered that rock protection may comprise a wide range of rock type. However, in the ES, RIAA and MCZ Assessment the Applicant has committed to the deployment of sensitive rock protection utilising grain sizes that reflect the local sedimentary environment, within designated sites. This measure will allow ecological function to continue where rock protection is deployed by minimising the extent of change of seabed sediments in these areas.

4.8.3.51 Cable protection requirements will be detailed in the Cable Protection Plan within the CSIP and scour protection requirements will be detailed in the Scour Protection and Management Plan which will be produced prior to construction and agreed in consultation with statutory consultees. The CSIP is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 13(1)(h) (generation assets) and Schedule 12, Part 2, Paragraph 14(1)(h) (transmission assets) of the DCO. The Scour Protection Management Plan is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 13(1)(e) (generation assets) and Schedule 12, Part 2, Paragraph 14(1)(e) (transmission assets) of the DCO.

Mitigation 3: Duration of rock protection

4.8.3.52 The maximum design scenario assessed in the ES, RIAA and MCZ Assessment considered that rock placement would remain in situ at the end of the operation and maintenance phase resulting in the permanent loss of habitat. However, during Examination, the Applicant has offered to the decommission remedial rock protection within designated sites, subject to agreement with the SNCBs and MMO. This would be secured by the following conditions within the DMLs: Schedule 11, Part 2, Condition 24 (generation assets) and Schedule 12, Part 2, Condition 24 (transmission assets) of the DCO.

Mitigation 4: Ability to bury cables

4.8.3.53 The Applicant has made clear that remedial rock protection is a last resort. Nevertheless, the Applicant has committed to an enhanced CSIP to give Natural England a greater level of input into (and clarity of) the stages that the Applicant will go through (post consent) to achieve cable burial and limit the need for or level of remedial rock protection. This includes provision for an Ecological Clerk of Works and also a specific Cable Protection Plan, which will include detailed consultation with the MMO and SNCBs on cable burial, with a view to minimising, or ideally avoiding, the use of cable protection.

4.8.3.54 The CSIP is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 13(1)(h) (generation assets) and Schedule 12, Part 2, Paragraph 14(1)(h) (transmission assets) of the DCO.

Mitigation 5: Avoidance of Annex I reefs

4.8.3.55 The Applicant has made a commitment to undertake micrositing of infrastructure so as to avoid Annex I reef features wherever possible. This process will be informed by pre-construction geophysical surveys and reported within the Cable Specification and Installation Plan.

4.8.3.56 The CSIP is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 13(1)(h) (generation assets) and Schedule 12, Part 2, Paragraph 14(1)(h) (transmission assets) of the DCO.

4.8.3.57 Furthermore, with regard to the specific concerns relating to a section of the cable route within the NNSSR SAC, the Applicant committed (by amending the Work Plans) to allow cable installation within the temporary working areas within the NNSSR SAC to maximize the width of the offshore cable corridor in turn, maximising the scope for avoidance of Annex I reef habitat.

4.8.3.58 The DCO allows for "up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No.5 consisting of offshore export cables along routes within the Order limits seaward of MLWS including one or more cable crossings" and "a temporary work area associated with Work No. 2 and work No. 3 for vessels to carry out intrusive activities alongside Work No. 2 and Work No. 3" (i.e. temporary working areas; Work No 4). All cable installation will therefore occur within the DCO boundary and therefore there will be no change in the order limits for the project as a result of this mitigation.

Mitigation 6: Sandwave clearance

4.8.3.59 The Applicant has included sandwave clearance within the project envelope as a method of ensuring that cables remain buried beneath natural sediments during the lifetime of the project and thereby avoid cable protection measures. Again the Applicant has committed to an enhanced CSIP to give Natural England a greater level of input into (and clarity of) the stages that the Applicant will go through (post consent) to achieve cable burial and provide a control mechanism for sandwave clearance operations. This includes provision for an Ecological Clerk of Works and a specific sandwave clearance plan for designated sites, which includes commitments to dispose of dredged sediment within designated sites in locations to be agreed with the MMO and SNCBs (i.e. taking into account sediment composition and locations of sensitive habitats including Annex I reef).

4.8.3.60 The CSIP is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 13(1)(h) (generation assets) and Schedule 12, Part 2, Paragraph 14(1)(h) (transmission assets) of the DCO.

Mitigation 7: Reduction in maximum design scenario within Markham's Triangle pMCZ

4.8.3.61 During Examination, the Applicant committed to a reduction in the maximum design scenario from 24% of array infrastructure within the pMCZ to 10.5% of array infrastructure within the pMCZ in order to address Natural England's concerns regarding long-term habitat loss.

4.8.3.62 This is secured in the DCO at Schedule 11, Part 2, condition 2(9) and Schedule 12, Part 2, condition 2(11) of the DCO.

Monitoring

4.8.3.63 The Applicant has proposed a comprehensive monitoring package as outlined in the In Principle Monitoring Plan (REP9-066.

Monitoring 1: Pre-construction geophysical survey

4.8.3.64 The Applicant has committed to undertaking a comprehensive pre-construction geophysical survey to encompass the areas within which construction activity is planned, both within the Hornsea Three array area and along the Hornsea Three offshore cable corridor, up to MLWS. This survey will establish a baseline against which post-construction monitoring outlined below can be compared.

4.8.3.65 The requirement for this pre-construction survey is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 17(2)(a) (generation assets) and Schedule 12, Part 2, Paragraph 18(2)(a) (transmission assets) of the DCO.

Monitoring 2: Post-construction geophysical survey of sandwave recovery

4.8.3.66 The Applicant has committed to undertaking a post-construction geophysical survey at a representative number of locations within the NNSSR SAC and the WNNC SAC where sandwave clearance activity has taken place in order to monitor the recovery of sandwaves. An initial survey will be undertaken within one year following completion of cable installation works and the need for any further monitoring surveys will be discussed with the MMO, with up to a maximum of two additional surveys being undertaken.

4.8.3.67 The requirement for this post-construction survey is secured by the DMLs. Refer to Schedule 12, Part 2, Paragraph 20(2)(a) (transmission assets) of the DCO.

Monitoring 3: Post-construction geophysical survey of cable protection

4.8.3.68 The Applicant has also committed to undertaking a post-construction geophysical survey in the areas immediately surrounding cable protection placement within the NNSSR SAC, The WNNC SAC and the Cromer Shoal Chalk Beds MCZ in order to monitor the effects on the bathymetric profile in designated sites following the application of cable protection. An initial survey will be undertaken within one year following completion of cable installation works and the need for any further monitoring surveys will be discussed with the MMO, with up to a maximum of two additional surveys being undertaken.

4.8.3.69 The requirement for this post-construction survey is secured by the DMLs. Refer to Schedule 12, Part 2, Paragraph 20(2)(a) (transmission assets) of the DCO.

Monitoring 5: Benthic pre-construction reef survey

4.8.3.70 The Applicant has committed to undertaking benthic pre-construction monitoring for Annex I reefs (biogenic and/or geogenic) within and outside designated sites, which will be primarily delivered through the pre-construction geophysical surveys described above in paragraph 4.8.3.64. In the first instance, the pre-construction geophysical survey outputs will be interpreted to identify any areas of potential reef features. Any acoustic signatures synonymous with reef presence will be subject to further ground-truthing through remote sampling techniques (e.g. drop down video) and grab sampling (where appropriate) to establish the presence or absence of any reef features, and where present to determine their extent.

4.8.3.71 The requirement for this pre-construction survey is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 17(2)(a) (generation assets) and Schedule 12, Part 2, Paragraph 18(2)(a) (transmission assets) of the DCO.

Monitoring 6: Benthic post-construction reef survey

4.8.3.72 The Applicant has committed to undertaking benthic post-construction monitoring for Annex I reefs (biogenic and/or geogenic) within and outside designated sites which will be primarily delivered through the post-construction geophysical surveys described above. The coverage of the monitoring will comprise any areas confirmed during the pre-construction surveys as reef habitat within which construction activity occurs within the Hornsea Three array area and offshore cable corridor (to cover direct effects) plus an appropriate buffer (to be agreed with the MMO), and any areas of reef identified within the secondary impact zone. In the first instance, the post-construction geophysical survey outputs will be interpreted to identify any areas of potential reef habitat. Any acoustic signatures synonymous with reef presence will be subject to further ground-truthing through remote sampling techniques (e.g. drop down video) to establish whether the location, nature and/or extent of reef features has changed following construction.

4.8.3.73 The requirement for this post-construction survey is secured by the DMLs. Refer to Schedule 11, Part 2, Paragraph 19(2)(a) (generation assets) and Schedule 12, Part 2, Paragraph 20(2)(b) (transmission assets) of the DCO.

Monitoring 7: Benthic post-construction monitoring of cable installation

4.8.3.74 The Applicant has committed to undertaking benthic post-construction monitoring of cable installation impacts (including HDD exit pits) at a representative number of locations within the NNSSR SAC, the WNNC SAC and the Cromer Shoal Chalk Beds MCZ where cable installation (including excavation of HDD exit pits) has taken place. This monitoring will be delivered through a post-construction geophysical survey, as described above, with the purpose being to establish any changes in the topographic complexity of seabed features and/or sediment composition as a result of the cable burial and excavation of HDD exits pits. The need for any further monitoring surveys will be discussed with the MMO and determined on the basis of the level of recovery of sediments in the locations sampled, up to a maximum of two additional surveys.

4.8.3.75 The requirement for this post-construction survey is secured by the DMLs. Refer to Schedule 12, Part 2, Paragraph 20(2)(c) (transmission assets) of the DCO.

Monitoring 8: Benthic post-construction monitoring cable protection colonisation

4.8.3.76 The Applicant has committed to undertake survey(s) to monitor a representative proportion of the Hornsea Three offshore cable corridor within the NNSSR SAC, the WNNC SAC and the Cromer Shoal Chalk Beds MCZ, in areas where any cable protection material is deployed. These will primarily comprise of seabed imagery surveys to determine the level of colonisation of cable protection and/or accumulation of sediments on cable protection measures. The aim of the surveys will be to determine the success of sensitive cable protection measures (i.e. appropriately sized rock protection) within designated sites by monitoring the behaviour/recovery of the sediments associated with the cable protection over an agreed period of time and by monitoring any recolonisation/recovery of the associated benthic communities. The need for any further monitoring surveys will be discussed with the MMO and determined on the basis of the level of colonisation of cable protection and or accumulation of sediments on cable protection, up to a maximum of two additional surveys.

4.8.3.77 The requirement for this post-construction survey is secured by the DMLs. Refer to Schedule 12, Part 2, Paragraph 20(2)(c) (transmission assets) of the DCO.

4.8.3.78 The Applicant has provided at Appendix 2 to the Applicant's response to Deadline 10, a Benthic Impacts Control Plan (BCIP), which draws together and sets out the approach for Hornsea Three to deliver the identified project mitigation (as outlined in above) with any management measures in relation to the North Norfolk Sandbanks and Saturn Reef (NNSSR) Special Area of Conservation (SAC) and the Wash and North Norfolk Coast (WNNC) SAC.

Comments on the Natural England's position

4.8.3.79 The Applicant considers that the position reached by Natural England on this project with regard to its impacts on the SACs has been unduly influenced by its relatively low confidence in condition assessment and anxiety based on experience from construction of other offshore wind farms which were consented at an earlier point in time and are not fair comparisons with Hornsea Three. The Applicant does not consider that Natural England has reached a balanced conclusion having engaged on the wealth of evidence put forward by the Applicant.

4.8.3.80 Natural England's concerns relating to these SACs has been driven by:

- Their experience of the construction of the Race Bank offshore wind farm; and
- The site condition assessments for the SACs.

1. Race Bank

4.8.3.81 As set out in the Applicant's response to the Natural England paper (Offshore wind farm cabling: ten years' experience and recommendations; REP1-208), the offshore wind industry has evolved over the past ten years (Race Bank was consented in 2009). The Applicant has applied learned lessons to ensure that the Hornsea Three project design envelope was both realistic to encompass all possible impacts. As noted in previous submissions by the Applicant during examination, the Race Bank original consent application (and similar applications developed in Rounds 1 and 2) did not include cable protection and a number of other activities which are included within the Hornsea Three project envelope. This (in the case of Race Bank) necessitated several new marine licence applications since the original consent decision was made, including the marine licence application for cable protection measures on export cables, which the MMO and NE are currently considering. In contrast, the approach taken for Hornsea Three is holistic and includes all possible activities and impacts in the DCO application, thus ensuring a robust and highly precautionary assessments through the EIA and HRA processes, with the objective of avoiding post consent frustrations outlined in Natural England responses during Examination.

4.8.3.82 In response to the Natural England's specific concerns about the ability to bury cables within the WNNC SAC and whether problems encountered during Race Bank cable installation could be relevant to Hornsea Three, the Applicant provided a Preliminary Trenching Assessment (REP6-026; see also paragraph 4.8.3.18 above). This presents a detailed characterisation of the ground conditions within the Hornsea Three offshore cable corridor and discussion of the lessons learned from the Race Bank cable installation, highlighting the difference in ground conditions from those encountered at Race Bank, problems encountered and possible control measures to manage similar risks for Hornsea Three (see also REP7-007 for further clarifications).

4.8.3.83 The Applicant has also proposed that a dedicated Ecological Clerk of Works is employed to manage consultation on the CSIP, and the Sandwave Clearance Plan and Cable Protection Plan within this. This will ensure that lessons learned from previous projects are taken into account during pre-construction planning, that risks to successful cable burial are properly managed (i.e. with a view to avoiding the use of cable protection, wherever possible) and that contractors are aware of the MMO and SNCB priorities prior to procurement (see REP7-021).

2. Site Condition Assessments

4.8.3.84 The Applicant has noted in previous submissions (e.g. the Applicant and Natural England Position Statement on the NNSSR SAC (REP9-016) and the Applicant's comments on the WNNC condition assessment (REP6-019)), that the relevant condition assessments (i.e. features and/or sub-features in unfavourable condition) are primarily based on expert judgement based on the sensitivities of features to activities occurring within the SACs (e.g. including vulnerability assessments; see REP6-019). The conservation objectives acknowledge that confidence in the condition assessments would be improved by better access to information of the activities occurring within sites and better monitoring data. The Applicant has committed to providing clear and auditable information on the proposed cable installation within the SAC (REP7-021) and as outlined in paragraph 4.8.3.63 et seq. above, has proposed a robust package of monitoring commitments which are aligned with the conservation objectives of the SACs.

4.8.3.85 Notwithstanding these commitments, the Applicant's assessments have taken into consideration the current condition of the WNNC SAC or the NNSSR SAC and the Applicant's position is that the impacts related to cable installation will not represent an adverse effect on integrity for either SAC. The Applicant has worked throughout the pre-application phase to minimise impacts on the SACs and will continue to work with SNCBs post consent to ensure that activities minimise changes in substrate/sediment type, in line with conservation objectives for the SACs (e.g. through appropriate disposal of sandwave material and the use of appropriate rock grading to reflect the baseline environment).

4.8.3.86 In an effort to address some of the uncertainties in the site condition assessment that underpin Natural England's position, the Applicant has proposed the support programme outlined in REP9-050 to help NE and JNCC to better manage these sites and help meet their conservation objectives. In summary, these are:

- Project to investigate the effectiveness of fisheries closures on subtidal mixed sediments and subtidal coarse sediments on the North Norfolk Coast, in collaboration with the Eastern IFCA;
- Study on the implications of existing infrastructure on Annex I features within the North Norfolk Sandbanks and Saturn Reef SAC;
- Study to establish and monitor the extent and condition of Sabellaria spinulosa reef habitats in the North Norfolk Sandbanks and Saturn Reef SAC, to inform ongoing condition assessments; and
- Decommissioning of rock protection – demonstrating effectiveness and improving efficiency.

4.8.3.87 For the avoidance of doubt, these proposals have been made by the Applicant without prejudice to the Applicant's position that the maximum design scenario for Hornsea Three (when considered alone or in combination with other plans or projects) would not give rise to an adverse effect on the integrity of either the North Norfolk Sandbanks and Saturn Reef SAC or The Wash and North Norfolk Coast SAC.

4.8.3.88 The Applicant has provided at Appendix 2 to the Applicant's response to Deadline 10, a Benthic Impacts Control Plan, which draws together and sets out the approach for Hornsea Three to deliver the identified project mitigation (as outlined in 4.8.3.47 *et seq*.) or any management measures (including the proposals outlined in paragraph 4.8.3.84) in relation to the North Norfolk Sandbanks and Saturn Reef (NNSSR) Special Area of Conservation (SAC) and the Wash and North Norfolk Coast (WNNC) SAC. This also describes how these would be secured within the DMLs.

4.8.4 Ornithology

4.8.4.1 The Applicant can confirm that it has a number of residual matters of disagreement with Natural England with regard to Special Protection Areas (SPAs). These relate to the following specific sites:

- Flamborough and Filey Coast (FFC) SPA;
- Greater Wash SPA;
- Farne Islands SPA;
- Coquet Island SPA; and
- Forth Islands SPA.

4.8.4.2 Natural England has also suggested that the screening for LSE undertaken by the Applicant has potentially discounted sites that Natural England consider should be progressed to the Appropriate Assessment stage. However, it has not been made clear to which SPAs Natural England are referring and the Applicant is confident that its screening is robust.

4.8.4.3 Scottish Natural Heritage as the Statutory Nature Conservation Body responsible for SPAs in Scotland has not raised any concerns in relation to the Forth Islands SPA.

Natura 2000 sites

4.8.4.4 The Applicant considers that all Special Protection Areas (SPAs) at which there is the potential for LSE due to impacts associated with Hornsea Three alone and in-combination with other plans and projects have been identified. The HRA screening exercise for SPAs is presented in APP-052 with further information responding to comments made by interested parties presented in APP-053 and REP4-081.

4.8.4.5 The extant disagreements relate to the concerns raised by Natural England with regard to its level of confidence surrounding the following matters (although the Applicant understands that these primarily relate to Flamborough and Filey Coast SPA and are not applicable to all sites):

- Offshore Ornithology baseline characterisation;
- Collision Risk Modelling;
- Assessment of displacement impacts;
- Assessment of cumulative and in-combination effects;
- Population modelling; and
- Phenology and apportioning;
- HRA Screening and LSE conclusions; and
- Assessment conclusions.

4.8.4.6 Natural England continue to advise that they cannot rule out the potential for adverse effect on integrity (AEoI) either alone or in-combination for FFC SPA on grounds of contended uncertainty.

4.8.4.7 The Applicant has evidenced (through the original impact assessments as presented within the ES and RIAA and subsequent examination phase clarifications) why a conclusion of no AEoI either alone or in-combination for all SPAs can be reached.

Summary of Applicant's Case

1. Offshore Ornithology baseline characterisation

4.8.4.8 The Applicant undertook a site-specific digital aerial survey campaign of Hornsea Three and surrounding area during 2016 and 2017. Twenty consecutive months of surveys were successfully completed, including virtually full coverage of two breeding seasons. The survey methods were consulted upon, discussed and agreed within the Evidence Plan process. Both Natural England and RSPB set out their preference for 24 months of surveys but did not indicate disagreement with any other key elements of the survey methodology. It was and remains the Applicant's position that:

1. The Hornsea Zone is amongst the most well surveyed areas for wind farm development in the United Kingdom, there being survey data from a previous, zonal survey programme which included data for the proposed Hornsea Three area and that these data provide useful baseline information to complement the digital aerial surveys.
2. The months that were surveyed once using the digital aerial survey method (Dec – Mar inclusive) are less important in impact assessment terms than the breeding season. Previous surveys within the zone confirm that densities and the variability in the density of key species during this period are low, compared to other times of year.

4.8.4.9 The level of survey coverage (both temporally and spatially) achieved during aerial surveys is similar to that achieved for other similar wind farm applications and follows the methodology that has been applied as part of the baseline surveys at a number of other offshore wind farm projects, in addition to surveys conducted for other purposes (e.g. to survey the distribution of birds for the purposes of designated marine SPAs).

4.8.4.10 The precision obtained from aerial surveys is sufficient to inform the analyses and assessments conducted in APP-051 and APP-065. A specific target, in terms of the precision achieved during surveys, has no specific meaning in relation to the assessments required as part of EIA or RIAA. Target levels of precision are sometimes used in monitoring studies to allow for detection of statistically significant changes when comparing between datasets. Natural England queried the precision achieved by aerial surveys in relation to a 'target' 16% coefficient of variation (CV). The Applicant is unaware of Natural England having ever required a target level of precision for any surveys (aerial or boat-based) covering an offshore wind farm. This issue was only raised during the examination of Hornsea Three despite the aerial survey methodology having been agreed with Natural England during Expert Working Group meetings undertaken as part of the Evidence Plan and opportunity for such issues to be raised as part of consultation on a Preliminary Environmental Information Report.

4.8.4.11 Nevertheless, the Applicant presented a comparison between CV values (REP4-096 and REP7-032) associated with survey data collected for Hornsea Three and those associated with survey data from other offshore wind farm projects. This comparison showed that CV values are highly variable by both species and month and that the CV values associated with survey data from Hornsea Three are similar to and in many cases superior to those achieved at other projects.

4.8.4.12 It was agreed in the Evidence Plan process that a detailed 'meta-analysis' of survey data available for the Hornsea Zone would be undertaken to understand variability and to inform assumptions about the densities that should be used for the purposes of impact assessment. This was undertaken but its findings could not be agreed with Natural England and RSPB, initially because there were questions about the prioritisation of the data-sets used within the analysis, but later (during Examination), it transpired, due to more fundamental concerns about the inclusion of data from different survey platforms.

4.8.4.13 The Applicant has undertaken various sensitivity tests of the assumptions in this analysis and has demonstrated that changing the prioritisation of the data sets does not affect assessment conclusions (see REP1-141). With respect to the combination of data from different platforms, the logic for this objection is unclear, as:

1. It is not uncommon for EIAs to draw on multiple data sources, including for offshore wind farm, data obtained from a combination of visual and digital survey methods.
2. The boat-based data obtained for the former Hornsea Zone formed the baseline dataset for use in the assessments undertaken for the Hornsea Projects One and Two. The risk assessments undertaken for those projects relied upon the bird densities derived from those surveys and now form the basis for the consents for those projects.
3. Prior to the recent development of digital aerial survey techniques, boat-based survey methods were considered to be the most accurate method for seabirds and formed the basis of JNCC's own marine survey programmes (e.g. European Seabirds At Sea) with these data used to inform the designation of marine SPAs.
4. If there is any meaningful difference between survey platforms, it is likely that this is in relation to an over-estimation of bird densities derived from boat-based surveys due to 'boat attraction'. Marine Scotland has previously advocated correcting for this phenomenon (e.g. as part of assessments for the Moray East offshore wind farm) assuming that densities could be over-estimated by a factor of 2. Natural England has not advised such a correction, presumably because they consider the densities obtained from that method to be sufficiently accurate without correction.

4.8.4.14 Nevertheless, the Applicant has been willing to quantify risk using whatever reasonable assumptions about the densities in the months of Dec – Mar that others may suggest. In the most recent calculations presented to the Examining Authority at Deadlines 4 and 6 (REP4-049, REP6-042 and REP6-043), input densities (for collision risk modelling) are based on mean values plus associated upper and lower confidence intervals using only data obtained through digital aerial survey, as suggested by Natural England in its response to Deadline 1 (REP1-211).

In conclusion, the Applicant has presented information and conducted analyses that shows that the collection of 20 months of data (with the months of December to March being surveyed only once) does not impact on the impact assessment conclusions. The Applicant considers that Natural England have highlighted these 'missing' data in order to prevent a precedent being set without consideration of the consequences on the assessments produced. 2. Collision Risk Modelling

4.8.4.15 If birds collide with turbine blades then it is assumed that they will be killed. Collision risk modelling is undertaken to estimate the annual mortality rate for species considered to be at risk. These species comprise:

- Gannet;
- Kittiwake;
- Lesser black-backed gull; and

- Great black-backed gull.

4.8.4.16 Following a request from the RSPB, collision risk modelling was also conducted for herring gull (REP1-189).

4.8.4.17 Collision risk modelling (CRM) has been undertaken using the Band (2012) model. Although a newer 'stochastic' version of the model is now available, this was not available until after submission of the application and it has been agreed that this version would not be used in this case (REP3-075).

4.8.4.18 The following sections discuss the assumptions made by the Applicant in relation to parameters and decisions that are incorporated into or form part of the collision risk modelling process. Other model assumptions that are not mentioned are understood to be agreed by Natural England.

Model Option

4.8.4.19 The Applicant recommends the use of collision risk estimates calculated using Option 1 of the Band (2012) CRM because it uses site-specific flight height data of which there is an extensive dataset covering Hornsea Three. The Applicant has also considered collision risk estimates calculated using Option 3 with this providing a more accurate method for calculating collision risk but using generic flight height information that is not considered to represent the flight behaviour of birds at Hornsea Three.

4.8.4.20 The use of collision risk estimates calculated using Option 1 was agreed as the appropriate model Option to use during the examination of the Hornsea Project Two offshore wind farm with Natural England basing their final conclusions on collision risk estimates calculated using this model Option (REP2-023). The dataset and methodology used to derive the proportion of birds at collision height at Hornsea Three is identical to that applied at Hornsea Project Two including the consideration of uncertainty within the dataset.

4.8.4.21 At Hornsea Three Natural England advocates Option 2. This uses a generic flight height distribution compiled from an analysis of the flights heights estimated from a range of boat-based surveys, although these mostly relate to inshore sites. The resulting flight height distributions are not considered to represent the flight behaviour of birds at Hornsea Three. Both Option 1 and 2 use the less sophisticated Basic model of the Band (2012) collision risk model.

4.8.4.22 At Deadline 1, the Applicant submitted the results of Lidar surveys conducted across the Hornsea Three area. Surveys using Lidar synchronised with digital aerial imagery, as conducted at Hornsea Three, compare very favourably with other methods used for measuring bird flight height in terms of the accuracy achieved, with the methodology applied for the surveys conducted at Hornsea Three validated as part of a Marine Scotland project (Cook et al., 2018). The results of the surveys conducted at Hornsea Three support the use of Option 1 for collision risk modelling at Hornsea Three showing similar flight behaviour to that recorded during boat-based surveys.

Avoidance rate

4.8.4.23 The Applicant modelled a range of avoidance rates throughout the application and considered the implications in assessment terms of collision risk estimates calculated using these avoidance rates. Since the submission of the application, the results from the ORJIP study (Skov et al., 2018) have been reviewed by JNCC and they have published a set of recommended avoidance rates (Bowgen and Cook, 2018). The Applicant has adjusted its position based on this new evidence and recommends the use of the values presented in Bowgen and Cook (2018), these being (for Option 1 and 2):

- Kittiwake – 99.0% (Extended model 98%);
- Gannet – 99.5%; and
- Large gulls – 99.5% (Extended model 99.3%).

Flight speed

4.8.4.24 In the absence of a strong empirical evidence base and specific SNCB guidance, collision risk modelling practitioners have had little option but to use assumptions based on the limited data presented in publications such as Alerstam et al. (2007) and Pennycuick (1987). The ORJIP bird collision and avoidance study obtained a large empirical dataset of the flight speeds of birds within an operational offshore wind farm in the UK and this was published in Skov et al. (2018). The Applicant considers this to be demonstrably the best available evidence on flight speeds and notes its use in other wind farm applications elsewhere.

4.8.4.25 The limitations with the flight speed data from Pennycuick (1987) and Alerstam et al. (2007) (small sample sizes, limited representativeness) were previously accepted as an inherent source of uncertainty as the values presented in those studies represented the best available evidence. However, against this background, the data in Skov et al. (2018) are considered to now represent the best available evidence on flight speeds for collision risk modelling.

Nocturnal activity

4.8.4.26 Collision risk modelling practitioners have historically used the subjective classification of nocturnal activity factors presented in Garthe and Hüppop (2004) to inform collision risk modelling. These rankings are translated to percentage values in Band (2012) although this was not the original intention of Garthe and Hüppop (2004). For this reason, where possible, the Applicant has sought to use empirical evidence to inform the nocturnal activity factor used for each species considered for collision risk modelling. In APP-109 the Applicant undertook a literature review and identified empirically derived nocturnal activity factors for gannet, kittiwake, lesser black-backed gull and great black-backed gull with these incorporated into the collision risk modelling used for assessments in APP-051 and APP-065. Following submission of the Hornsea Three application, Furness et al. (2018) and MacArthur Green (2018) were published, providing information in relation to nocturnal activity factors for gannet and kittiwake respectively. The Applicant therefore updated the collision risk modelling conducted in the application to take account of this new evidence. In addition to the aforementioned reports, Skov et al. (2018) was also published, providing anecdotal evidence suggesting that the quantification of the nocturnal activity factors in Garthe and Hüppop (2004) by Band (2012) over-estimated the nocturnal activity of all species.

4.8.4.27 The Applicant considers that the use of empirically derived nocturnal activity factors represents the best available evidence to inform collision risk modelling and notes the use of nocturnal activity factors lower than those presented in Garthe and Hüppop (2004) in assessments in Scotland.

Treatment of uncertainty in assessments

4.8.4.28 The Applicant has incorporated consideration of uncertainty and variability throughout all analyses and assessments conducted for Hornsea Three with the approach taken consistent with that advised by Natural England when using the Band (2012) CRM.

4.8.4.29 The Applicant has presented collision risk estimates utilising mean (density) or maximum likelihood values (flight height distributions) in addition to those calculated using associated upper and lower 95% confidence intervals. The range of values obtained were considered as part of the assessments conducted in APP-051 and APP-065. The Applicant has also sought to reduce uncertainty where possible, using an evidence based approach for various parameters incorporated to collision risk modelling.

4.8.4.30 The Applicant has also sought to reduce the uncertainty associated with cumulative and in-combination estimates by qualitatively considering the over-estimation that may result from differences between assessed, consented and as-built turbine scenarios and from updates to parameters used in collision risk modelling such as nocturnal activity factors or flight speeds.

Migratory species

4.8.4.31 In addition to the regularly occurring species listed above, the Applicant has also undertaken migratory collision risk modelling for five species of migratory seabirds (little gull, common tern, Arctic tern, great skua and Arctic skua) and a suite of migratory waterbirds (APP-109). The suite of species considered for both of these exercises is consistent with those species considered as part of the consent applications for other offshore wind farms located on the same migratory flyway as evidenced by the Applicant for migratory seabirds in REP5-013. The suite of waterbird species considered was also agreed with Natural England as part of these previous projects (APP-109).

3. Assessment of displacement impacts

Methods

4.8.4.32 Birds may be displaced from a wind farm area with this representing a direct loss of habitat for foraging, resting or moulting. In addition, displacement can have an indirect effect on birds in areas some distance from the wind farm due to reduced energy acquisition through competition with displaced birds. Displacement analysis is used to quantify the risk of displacement with JNCC et al. (2017) providing SNCB guidance on this issue.

4.8.4.33 The species considered for displacement analysis at Hornsea Three, as identified in APP-108, are:

- Fulmar;
- Gannet;
- Guillemot;
- Razorbill; and
- Puffin.

4.8.4.34 Four of these species were identified for consideration due to their high vulnerability to displacement impacts and regionally important populations (gannet, guillemot, razorbill and puffin). Fulmar has a low vulnerability to displacement impacts but was identified for consideration through consultation with Natural England.

4.8.4.35 The displacement analysis conducted by the Applicant (presented in APP-108 and REP9-044) follows SNCB guidance (JNCC *et al*., 2017) where possible utilising seasonal mean-peak populations within displacement matrices. Seasonal mean-peak populations have been calculated for Hornsea Three plus a 2 km buffer following SNCB guidance (JNCC et al., 2017).

Assumptions

4.8.4.36 To inform the assessment of displacement in APP-051 and APP-065, a literature review was undertaken to identify appropriate displacement and mortality rates for each species. This review is presented in APP-065 and APP-051 and the approach taken is encouraged by SNCB guidance (JNCC et al., 2017).

Treatment of uncertainty in assessments

4.8.4.37 For displacement analyses the Applicant has followed SNCB guidance (JNCC et al., 2017) in terms of the variability associated with population estimates. For all species seasonal mean-peak populations have been calculated with JNCC et al. (2017) stating that the use of a mean-peak population estimates allows for year-to year variation in the precise time and magnitude of peak abundance estimates to be taken into account. The Applicant has also undertaken a literature review to identify evidence based displacement and mortality rates for use in displacement analysis. Where evidence was lacking or conflicting a range of displacement and/or mortality rates have been used to capture uncertainty in a robust manner.

4. Assessment of cumulative and in-combination effects

Tiering

4.8.4.38 The Applicant has presented cumulative and in-combination assessments that include information for all projects relevant to the species under consideration. In order to account for the uncertainty inherent in those assessments presented for projects considered cumulatively/in-combination, the Applicant has assigned each project to a tier based on the status of that project (e.g. operational, under construction, planning application, etc.). The Applicant's tiering approach takes into account the likelihood of a project being built. This translates three tiers which include projects that have been granted consent and obtained a Contract for Difference (CfD) (Tier 1); projects that either have consent and no CfD and those that have submitted a planning application (Tier 2); and projects that are yet to submit a planning application (Tier 3).

4.8.4.39 At Deadline 1, the Applicant updated the cumulative and in-combination assessments at the request of the Examining Authority to account for projects that had changed tier since the submission of the Hornsea Three planning application. This update did not alter the conclusions in APP-051 or APP-065.

Consideration of updated information in relation to project designs and bird parameters

4.8.4.40 Assessments conducted as part of planning applications are typically made on a worst case scenario, which is frequently more conservative than the design that is actually constructed. In some cases a project may not be fully built out. In addition, key assumptions about the impacts of wind farms on birds may change over time.

4.8.4.41 Throughout the application and examination, the Applicant has explored the extent to which cumulative and in-combination assessments are likely to over-estimate impacts, particular in relation to the differences between the turbine scenarios that were assessed at application versus those that have actually been built. Appendix 4 of the Applicant's Deadline 1 submission (REP1-148) provides further information on these differences and their effect on cumulative and in-combination impacts. The Applicant has identified those projects at which correction factors can be applied (based on parameterisation of the Band model) taking into account confirmed changes in turbine scenarios with these representing an updated worst case scenario for each project.

4.8.4.42 The Applicant considers that the analysis presented in REP1-148 clearly illustrates that there is considerable over-estimation in the collision risk estimates used in APP-065 and APP-051.

4.8.4.43 In addition to the potential over-estimation of cumulative and in-combination assessments due to differences in project designs, the Applicant has also considered the likely changes to cumulative and in-combination collision risk totals that may result if updated information in relation to bird flight speed and nocturnal activity factor is used. In both cases collision risk estimates will decrease.

5. Population modelling

4.8.4.44 Having calculated the likely mortality that can be attributed to the respective breeding population, it is necessary to consider whether the magnitude of that impact would lead to an adverse effect on them. The method advised for this purpose is Population Viability Analysis (PVA) which entails modelling likely population growth (or decline) with and without an assumed level of additional mortality arising from the operation of the wind farm.

4.8.4.45 PVA modelling has been undertaken for the species of interest and model results are presented in REP4-092.

4.8.4.46 The key metrics used to interpret the model outputs relate to:

- Population growth and specifically the ratio of the impacted growth rate to the unimpacted growth rate – referred to as the counterfactual of growth rate or CGR.
- Population size at the end of the operational life of the wind farm (in this case 35 years) and specifically the ratio of the impact population size to the unimpacted population size – referred to as the counterfactual of population size (at 35 years) or CPS35.

4.8.4.47 Natural England provides no guidance on the interpretation of these metrics, however, in Scotland, SNH have advised on this and Marine Scotland has made decisions using these metrics and, in so doing, established some useful precedents for similar species and populations. Additionally, potential impacts arising from Hornsea Project Two on the same populations have been considered with reference to PVA.

6. Phenology and apportioning

4.8.4.48 The likely mortality arising from collision and displacement for each species potentially involves different populations. For the purposes of HRA, it is necessary to determine what proportion of those predicted mortalities are attributable to specific populations that have been screened in to Appropriate Assessment. The method for allocating those predicted mortalities to those populations is referred to as 'apportioning'. During the breeding season, calculation of appropriate apportioning rates involves consideration of age class data collected during baseline surveys and information pertaining to the behaviour, movements and distribution of birds (APP-054). In this case those populations all comprise breeding interest features of the Flamborough and Filey Coast SPA, which lies approximately 150km west of the proposed wind farm site. The approach to calculating apportioning values taken by the Applicant was to apply the agreed methodology (with Natural England) used at the most recently consented project in the former Hornsea Zone, namely Hornsea Project Two.

4.8.4.49 The apportioning rates differ considerably between breeding and non-breeding seasons which makes it important to identify when breeding adult birds are likely to be present at the wind farm during the breeding season. Throughout the application the Applicant applied the seasonal definitions agreed with Natural England as part of the assessments conducted for the most recently consented project in the former Hornsea Zone (Hornsea Project Two) where any further evidence, specifically from baseline surveys, supported these seasonal definitions. The Applicant has reviewed the data on the distribution of the key species and their movements within the North Sea and recommended seasons based on this evidence. These seasons are, in most cases, identical to those assumed for the Hornsea Two project, which lies closer to the breeding colony. Natural England has argued for the use of seasons based on breeding activity at the colony despite this providing different seasonal definitions to those advocated at Hornsea Project Two using similar data and information. Aside from providing little information about activity at the wind farm, where any impact would occur, defining breeding activity is difficult with birds going through stages of attendance, nest forming, mating and chick rearing which may overlap with one another.

4.8.4.50 For gannet and kittiwake the breeding season apportioning approach applied at Hornsea Three is consistent with that agreed with Natural England as part of the assessments conducted for Hornsea Project Two. For gannet it is assumed that all adult birds identified during baseline surveys are breeding adult birds from FFC SPA and therefore the proportion of the population at Hornsea Three that is represented by these birds is used as the breeding season apportioning value.

4.8.4.51 With the exception of first year birds, it is not possible to distinguish immature kittiwakes from adult kittiwake during baseline surveys. If the proportion of adult birds in baseline surveys were to be used for apportioning this would therefore likely provide a considerable over-estimate of the proportion of breeding adults present at a project. The Applicant has therefore applied an approach that was agreed with Natural England during the examination of the Hornsea Project Two offshore wind farm. This approach accounts for older immature birds by calculating the proportion of each age class likely to be present in a population based on the proportion of first year birds recorded during surveys and age-specific survival rates. This approach has also been applied for puffin, another species where older immatures cannot be distinguished from adults birds during baseline surveys.

4.8.4.52 In light of the evidence of activity at the proposed wind farm, the Applicant recommends the following breeding season apportioning rates for breeding adult birds at FFC SPA, which are considered to be precautionary:

- Gannet = 40.4%;
- Kittiwake = 41.7%; and
- Puffin = 0%.

4.8.4.53 The Applicant considers that the rates derived for each species are conservative for the following reasons:

- These rates do not account for sabbatical birds (i.e. breeding adult birds that do not breed in a given year);
- Different proportions of immature age classes being present in natal waters meaning the proportion of older immature birds could be estimated;
- Tracking data suggests limited usage of Hornsea Three by kittiwake (Cleasby et al. 2018) and gannet (Langston et al., 2013);
- The relationship between foraging distance and breeding productivity suggests birds from FFC SPA will not travel as far as Hornsea Three to forage; and
- Site-specific flight direction does not indicate movements of birds from FFC SPA into and out of Hornsea Three.

4.8.4.54 The Applicant considers that there is no connectivity in the breeding season between breeding adult guillemot and razorbill from FFC SPA and Hornsea Three (APP-054). In addition, although the maximum foraging range for puffin, as reported by Thaxter et al. (2012) suggests connectivity between Hornsea Three and breeding adults from FFC SPA, further information and analyses presented in APP-054 suggests that the population of puffin at Hornsea Three is composed of immature and non-breeding birds only.

4.8.4.55 During the non-breeding season, a different approach is used based on the population data and BDMPS populations presented in Furness (2015).

4.8.4.56 Although there is considered to be no breeding adult guillemot, razorbill or puffin present at Hornsea Three during the breeding season, immature birds that may be associated with FFC SPA may be present. Due to the complexities associated with defining a total immature population that may interact with Hornsea Three, the level of impact attributable to immature auk populations associated with FFC SPA was considered in a qualitative manner in APP-051. Following consultation with the RSPB an approach was identified that provided quantitative consideration of impacts on immature birds. This exercise, presented in REP5-014, provided further support for the conclusions reached in APP-051.

7. HRA Screening and LSE conclusions

4.8.4.57 The Applicant considers that the information provided in APP-052, APP-053 and REP4-081 provide a complete and robust HRA screening exercise. This includes consideration of impacts in all seasons (APP-052 and APP-053) and for Hornsea Three alone and in-combination (APP-052 and REP4-081).

4.8.4.58 Throughout the screening exercise the Applicant has identified the potential for Likely Significant Effects presenting information and analyses that clearly indicate, for certain species, that any effect is unlikely to be significant and therefore LSE can be ruled out. Where impacts of negligible magnitude are identified, utilising, for example collision risk modelling, it is considered unnecessary to conduct an in-combination assessment as any contribution from Hornsea Three would not materially alter the current in-combination impact.

4.8.4.59 In summary, the Applicant considers that all SPAs at which an LSE may occur have been identified and assessed in APP-051.

8. Assessment conclusions

4.8.4.60 The assessments presented in APP-051 concluded no adverse effect on the site integrity of any SPA as a result of impacts associated with Hornsea Three alone or in-combination with other plans and projects. In many cases the contribution of Hornsea Three to any in-combination impact is not considered to materially affect the current level of in-combination mortality.

4.8.4.61 The Applicant has maintained these conclusions throughout the examination and has presented further information that provide further support to these conclusions.

9. Mitigation

4.8.4.62 It is the Applicant's position that mitigation is unnecessary as a conclusion of no significant effect (in EIA terms) is concluded for any VOR.

4.8.4.63 With respect to European sites and their features, the conclusion in all cases is that there is no indication of an adverse effect on site integrity arising from Hornsea Three either alone or in-combination with other plans and projects and hence mitigation is unnecessary.

4.8.4.64 It is considered that these conclusions can be made beyond any reasonable scientific doubt as the assessment has identified and addressed potential sources of uncertainty.

4.8.4.65 It is recognised, though, that Natural England advocate different assumptions, due wholly or mainly to their position on the adequacy of the baseline characterisation. The Applicant has sought to set out these different positions and to calculate the different predicted impacts that arise from them, though the Applicant considers the assumptions to be excessive and not based in evidence. If the Examining Authority is minded to recommend or the Secretary of State reach a conclusion based on some or all of the assumptions advocated by Natural England, mitigation has been identified that can reduce predicted impacts to a level at which no adverse effect is predicted on any terms.

4.8.4.66 At Issue Specific Hearing 7 (6th March 2019), the Applicant presented collision risk estimates calculated using two revised turbine scenarios that incorporate increased lower rotor tip heights. The use of increased lower tip heights reduces collision risk estimates due to the skewed nature of the flight height distribution of birds across the sea meaning fewer birds interact with the collision risk window. Collision risk estimates for all species calculated using the original turbine scenario and the two increased lower rotor tip height scenarios were presented in REP7-031.

Comments on Natural England's position

4.8.4.67 At Deadline 7, Natural England submitted a synthesis of impact values that most closely aligned with Natural England advised approach. The Applicant highlighted fundamental concerns with Natural England's position (REP6-007) including:

- The confounding of multiple sources of variability when considering collision risk estimates producing a range of values that is essentially meaningless in terms of the consideration of variability;
- The use of worst case scenarios for all parameters, without acknowledgement, when Natural England have previously advocated the use of a range; and
- A lack of application of an evidence-based approach including in relation to nocturnal activity factors, apportioning rates, flight speeds and avoidance rates.

4.8.4.68 The Applicant does not consider that Natural England has reached a balanced conclusion and have not engaged with the evidence put forward by the Applicant. In addition, Natural England's approach to many areas of the assessment at Hornsea Three, including phenology, apportioning and model Option used for collision risk modelling, is not consistent with Natural England's position and advice on previous projects that are fundamentally similar to Hornsea Three (e.g. Hornsea Project Two) with no new evidence suggesting that the position of Natural England should have changed. In so far as new evidence does exist this suggests that the position of all parties on previous projects was precautionary.

4.8.5 Onshore Ecology and Nature Conservation

4.8.5.1 With regards to onshore ecology and nature conservation, the only outstanding matters of disagreement relate to the content of the Pink-footed Goose Management Plan (PFGMP) and the Soil Management Strategy, both of which form annexes to the Outline CoCP.

Pink-footed Goose Mitigation

4.8.5.2 The Applicant included a mitigation commitment in paragraph 3.11.1.93 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) which sought to minimise the potential for impacts on pink-footed geese, should construction work on functionally linked sugar beet fields occur between November to January inclusive.

4.8.5.3 During the course of Examination, the Applicant was requested by the Examining Authority, following an oral representation by Natural England at ISH1, to produce an outline Pink-footed Goose Management Plan (outline PFGMP). The Applicant produced this plan at Deadline 4 (REP4-023) in line with the commitment within the Environmental Statement. By necessity, due to the need for contractor input, construction programme and details of crop schedules, the outline plan set out the principles of mitigation to be achieved and the methodology for determining the nature of such mitigation through the use of a decision tree. Specific measures would be developed during the detailed design stage once additional information was available.

4.8.5.4 Following the submission of the outline PFGMP as Annex F to the Outline CoCP at Deadline 4 (REP4-023), the Applicant received feedback on its contents from NNDC and the RSPB, both of whom signaled agreement with the principles in the PFGMP. Natural England outlined the following concerns, which remain unresolved:

- The overwintering period defined as November-January (Natural England consider that pink footed geese are tending to arrive before November and leave after January, although no clear alternative time period or evidence has been presented);
- Whether the decision tree process presents the necessary certainty to undertake HRA assessment, and whether the use of the wording 'as appropriate' in paragraph 6.5.1.40 gives the necessary clarity;
- The Applicant's definition of periods where geese are more sensitive to disturbance, including severe weather, which would be a consideration for when to stop residual works as stated in the outline PFGMP;
- The (Decision 6) mitigation trigger set at half the available area of postharvest sugar beet;
- The level of detail for works restrictions (Natural England have indicated that they would require details of exactly what types of works would be classified as 'less intrusive', restrictions on numbers of people outside of vehicles, and noise restrictions specific to pink footed geese); and
- The potential to restrict the planting of sugar beet in areas where there are known works and/or avoiding the end of the overwintering period.

Summary of Applicant's Case

4.8.5.5 The Applicant would summarise that the level of detail requested by Natural England is not possible at this stage of development. The Applicant has, in good faith, provided an outline PFGMP which considers all scenarios where Hornsea Three work may interact with PFG, and provides significant mitigation for potential disturbance impacts to pink-footed goose by excluding cable trenching and other works which require the movement of people and equipment along the cable corridor.

4.8.5.6 The Applicant's position in respect to specific concerns raised by Natural England (first responded to at REP7-007) are set out below.

Overwintering period

4.8.5.7 The Applicant does not consider it necessary or appropriate to place restrictions on the construction work outside the November-January overwintering period. The Report to Inform Appropriate Assessment [APP-051] concluded that should construction works take place outside November-January inclusive, there would be no disturbance impact pathway on pink-footed goose and therefore no adverse effect on pink-footed geese. Natural England did not raise any concerns about this assessment either in EWG meetings prior to the Application being submitted or until Deadline 6 of the Examination. The Applicant considers that there has been no additional evidence presented by Natural England which demonstrates the need for an extended period of mitigation through works exclusions or otherwise.

4.8.5.8 Notwithstanding this, the PFGMP retains appropriate flexibility to adapt should surveys prior to construction indicate different behavior to what has been observed in surveys undertaken by the Applicant in 2017/2018. Paragraph F2.1.3 states that the Zone of Influence (currently defined as November-January, landfall to the village of Hempsted) in the detailed CoCP will be based on scientific evidence and any additional monitoring, and therefore could change. Any updated Zone of Influence would be discussed with Natural England as part of the approval process for the PFGMP.

HRA Assessment

4.8.5.9 The Applicant has comprehensively responded to this point in REP7-007, and would further state that there is a clear hierarchy of decision making in the PFGMP. Natural England raises concerns about decisions being made in 'real-time'; this is not the case, as any construction exclusions would be clearly set in the detailed CoCP for those works at the time of consultation with Natural England prior to approval by North Norfolk District Council. The Applicant has included a measure where the ECoW is consulted about whether works should stop if construction workers identify that PFG are present (on a field containing any kind of crop, as PFG do not feed exclusively on sugar beet) at the time of construction workers arriving at a site within the Zone of Influence for less intrusive works. This is intended as a further safeguard and is not intended to replace the set construction exclusion.

4.8.5.10 The Applicant has changed the wording in paragraph 6.5.1.40 in the Deadline 9 version of the Outline CoCP from 'as appropriate' to 'if required', to add additional comfort to Natural England. As stated in REP7-007, "*assessment can be undertaken on the basis that if the relevant mitigation measure is required, it will be implemented in accordance with the terms and decision tree process set out in the PFG mitigation plan which must be approved as part of the detailed CoCP by the LPA in consultation with the SNCB*". The Applicant considers that this wording provides the necessary certainty for the purposes of HRA.

Sensitivity to Disturbance

4.8.5.11 Natural England has sought clarification on the subjectivity of expert opinion in terms of determining whether work may go ahead at a site which (where intrusive works as defined in F.5.2 of the PFGMP are already excluded). Ornithologist professional judgement would only be used where, on arrival at a scheduled works location, construction workers find Pink-footed Geese already present on the site. The procedure would then be to stay in the vehicle and call the Ecological Clerk of Works for advice. If expert ornithologist advice is that PFG are particularly sensitive to disturbance at that time and place (for example during periods of severe weather), works would stop at that location until PFG had moved to a different location. Where there are set standards to guide this advice (for example severe weather as defined under the Wildlife and Countryside Act (Section 2) where a statutory suspension of waterfowl shooting comes into force) these will be adopted. The Applicant considers this reasonable and appropriate as a further barrier to disturbance, and will incorporate any further guidance which becomes available prior to works commencing.

4.8.5.12 The Applicant would further note that Natural England's request (REP9-022) to include the JNCC Scheme to reduce disturbance to waterfowl during severe winter weather is the same guidance as the Wildlife and Countryside Act and therefore has already been included.

Decision 6 mitigation trigger (Table 3.8.1 of the PFGMP – Annex F of the Outline CoCP)

4.8.5.13 The Applicant proposed the Decision 6 trigger (should works be scheduled on more than half of the available post-harvest sugar beet within the ZoI, the construction exclusion will be triggered) based on ornithologist professional advice. The Applicant has not received any additional evidence from Natural England on an appropriate proportion to include at this decision point, but in the Deadline 9 version of the All Other Matters SoCG (REP9-022) Natural England state that they would be in agreement with the RSPB position (which they considered to be a quarter at the time of writing) The RSPB stated in REP7-105 that following the Applicant's explanation for Decision 6 (REP6-009), they were satisfied with the reasoning for selecting the available area of post-harvest sugar beet influence and therefore were content with the Applicant's original wording. The Applicant does not consider there to be evidence to substantiate Natural England's advice on this point.

Level of detail for residual works

4.8.5.14 The Applicant is not able to provide further detail at this stage on the exact works which could take place within the Zone of Influence (see paragraph 4.8.5.8 of this document for further notes on this), or provide a maximum number of people or any noise limits further to the best practice measures already included in the outline CoCP. The Applicant has provided details of the works which would not occur in paragraph F.5.2.2 of the outline PFGMP. The principles behind this are fully detailed in REP6-009 (Applicant's response to the RSPB) as well as the outline PFGMP. The Applicant has committed to substantial restrictions on works to minimize disturbance to PFG, and considers that these mitigation commitments are sufficient to reduce potential effect on this species to minor adverse. Nevertheless, the Applicant will be able to provide details of residual works in the detailed PFGMP following contractor selection, detailed design and construction scheduling, which will be developed in consultation with Natural England to provide further reassurance.

Soil Management Strategy

4.8.5.15 Natural England agreed all points relating to watercourse protection and the control of sediment as demonstrated in the SoCG submitted at Deadline 1 (REP1-218). Natural England indicated they had new concerns on watercourse protection and sediment lagoons regarding the control of sediment (REP6-057). The Applicant has not received feedback from Natural England on whether they consider these clarifications acceptable (the latest position in the Deadline 9 version of the SoCG, REP9-022 is that this matter is not agreed, with no further feedback).

Summary of Applicant's Case

4.8.5.16 The Applicant's assessment and mitigation measures for watercourse protection were agreed with the Environment Agency (REP1-203) and Natural England (REP1-218) at Deadline 1. Following new concerns from Natural England submitted at Deadline 6 (REP6-057), the Applicant sought to agree clarifications which would close out these concerns (REP7-007). The Applicant does not believe from its engagement with Natural England that these are substantial concerns with the content of the outline CoCP, and that any outstanding clarifications can be provided as part of the detailed CoCP process, during which the Applicant has committed to consulting with the relevant SNCBs (Requirement 17 of the draft DCO).

4.8.6 Landscape and Visual Resources

4.8.6.1 Natural England does not agree that sufficient landscape mitigation has been proposed within the Norfolk Coast AONB, and has advised the Applicant that compensation (Natural England has provided examples of the National Grid Viking Link scheme and the Wormington to Sapperton gas pipeline) is provided through the management body of the AONB (Norfolk Coast Partnership). Natural England has advised the Applicant that it has been in contact with the Norfolk Coast Partnership to advise them that compensation should be requested.

Summary of Applicant's Case

4.8.6.2 The Applicant would note that it has engaged with the Norfolk Coast Partnership in respect to the scope of the landscape assessment and has not identified concerns which require compensation during the course of the examination (the Norfolk Coast Partnership submitted a relevant representation (RR-101) and the Applicant responded (REP1-131)).

4.8.6.3 Matters relating to the North Norfolk Coast Area of Outstanding Natural Beauty (AONB) have been discussed through the Examination period. Following Natural England's Relevant Representation, the Applicant produced a clarification note on impacts on the qualities of natural beauty of the Norfolk Coast AONB (REP1-167) which specifically took into consideration the special protected characteristics of this area. Natural England responded to this in their post hearing submission at REP3-079. In this representation Natural England stated that it considers "that the effects associated with the construction phase will have a significant effect on the landscape fabric and visual amenity afforded by this part of the AONB". Natural England's response (REP3-079) included a number of assumptions which were not in line with the maximum design scenario, for example assuming that all hedgerow replaced following a first phase would be removed for the second phase. The Applicant's response to this (REP4-011) provided clarification on these points. and following this the Applicant has not received any further evidence other than a repeated request for compensation following Deadline 9.

4.8.6.4 Any effect on the AONB would be temporary (maximum duration of construction in the onshore cable corridor would be 30 months within 5.5 years), full reinstatement including hedgerow replanting would take place at the end of each phase (in a two phase scenario the phases would only overlap in the temporary working area and therefore the majority of phase 1 replanting would be retained and protected during phase 2 construction), and there strong evidence for the appropriateness of a 5 year planting management period (see section 4.3.3 of this document).

4.8.6.5 As there is no evidence that there will be a likely significant effects in the AONB, and the development does not conflict with AONB policy, the Applicant does not consider it necessary to offer compensation. Furthermore, as several species poor and defunct hedgerows would be replaced with a native species rich hedgerow mix, there is the potential for a long term enhancement. Further to this, the Applicant, where agreed with landowners, will enhance hedgerows in a 100m enhancement corridor which includes the onshore cable corridor as the same time as reinstatement planting. The Applicant therefore considers that while there would be a temporary short term adverse effect during construction, and that in a relatively short time following the completion of onshore construction there would be an ecological and landscape enhancement as a result of planting works detailed within the Outline LP.

4.8.6.6 Following Natural England's advice to consider previous compensation schemes in similar circumstances, the Applicant has reviewed the Viking Link and Wormington to Sapperton application and decision materials, and has included notes below on how they relate to the Hornsea Three case.

4.8.6.7 The Applicant has not been able to source details of any compensation scheme linked to the Viking Link cable corridor's interaction with the Lincolnshire Wolds AONB. Initially planning permission was refused by one of the local authorities along the route (East Lindsey District Council (ELDC)), but there was a successful appeal (Appeal Ref: APP/D2510/W/18/3208088 December 2018) by Viking Link as promoted by National Grid. The initial refusal was based on concerns on the effect on the AONB and the impact on farming. The Planning Inspector concluded in their appeal decision that while "*during construction, some harm would be caused to the landscape… this harm would be limited in duration, and no permanent or long-lasting damage would result*". Balancing this relative lack of harm against the combination of national and public interest, the appeal decision found no policy conflict. The Applicant would not consider this evidence to support the need for Hornsea Three to provide compensation to the Norfolk Coast AONB.

4.8.6.8 With regard to the Wormington to Sapperton gas pipeline scheme, the Applicant would note that the drystone wall fund established by the developer was in relation to a non-renewable energy scheme, and therefore in policy terms has different weight to Hornsea Three.

4.9 Marine Management Organisation

Summary of Disagreement and Applicant's Case

4.9.1.1 As evidenced within the final SoCG with Hornsea Three and The Marine Management Organisation (MMO) (REP9-023), there are four outstanding areas of disagreement in relating to:

Deployment of cable protection during operation and maintenance.

4.9.1.2 The MMO does not agree that the deployment of new cable protection falls under the definition of maintain/ maintenance but is a construction activity. The MMO has proposed condition wording to reflect that any cable protection authorised under the DCO is required to be deployed within 15 years of the issue date of the original order (REP9-082).

4.9.1.3 The Applicant position is that its assessment shows that it is not necessary to limit cable protection in the manner suggested by the MMO however, to compromise and reach agreement on this issue the Applicant has provided wording reflecting the MMO's request in the draft DCO as submitted at Deadline 10.

4.9.1.4 As set out in the Applicant's submissions (eg. REP7-007 and REP8-007), the Applicant has sought to take a holistic approach to the assessment of the effects of cable protection for the lifetime of the project and to have the ability to install cable protection during construction or during the operation and maintenance phase. This was to remove the need for further marine licence applications post-consent for any potential cable protection required during the operation and maintenance phase and the associated increase in resource demands on MMO and SNCBs. The Applicant's position is that the Cable Protection Plan (Section 5 of the outline Cable Specification and Installation Plan; REP7-021) would be a live document which would be used both in the construction phase and the operation and maintenance phase of the project. This would provide the necessary mechanism whereby the MMO and relevant SNCBs would be consulted on and agree any cable protection measures to be deployed within designated sites throughout the project lifetime (as well as any other remedial burial operations which may be attempted prior to use of cable protection).

Deemed Marine Licence Condition (18 (3) and (4)) relating to underwater noise monitoring

4.9.1.5 The MMO recommend that the related condition be amended to include the requirement for all pilling to stop should the noise monitoring show significantly different impact ranges to those assessed in the ES or failure in mitigation.

4.9.1.6 For the reasons set out by the Applicant in the first DCO hearing (ISH3, see Applicant's written summary [REP3-005]), the Applicant makes clear that it has committed to the relevant monitoring and reporting proposed by the MMO already at Condition 18 (2(a) and (3)). That component of the MMO's proposed wording is therefore, agreed and already included. It considers the enforcement tail-piece an unnecessary addition to the DCO as the MMO already have those enforcement powers within the Marine and Coastal Access Act 2009 (MCAA) (Section 72 and 102).

Arbitration

4.9.1.7 The MMO's position regarding arbitration remains as set out in their Deadline 3 response [REP3 – 092].

4.9.1.8 The Applicant considers that, consistent with previous DCOs decided by the Secretary of State, all parties should be subject to arbitration. The decisions of the relevant planning authority in respect of the discharge of Requirements relating to onshore matters are subject to the Town and Country Planning Act (TCPA) 1990 appeal provisions as modified and transposed by Article 38 of the dDCO. This is a standard provision of made DCOs.

4.9.1.9 By way of further example, the Applicant has also previously referred to the analogy of a S.106 Agreement in which LPAs regularly agree to their statutory duties and enforcement functions under such agreements being subject to dispute resolution mechanisms, including arbitration.

4.9.1.10 Like the MMO those relevant planning authorities have statutory duties and enforcement functions, yet they raise no complaint about the appeal or arbitration provisions in the dDCO, nor would they be justified in doing so.

4.9.1.11 There is no clear justification for why the duties of the MMO are so different to that of the relevant planning authorities such as to warrant it being treated differently. If the relevant planning authorities can be subject to appeal provisions and arbitration provisions so too could and should the MMO. The Applicant is of the view that it would be a rather perverse outcome that the discharge of Requirements onshore be subject to appeal, but not the discharge of conditions offshore. Consistency in administrative decision making and principles of natural justice demand that the approach to onshore and offshore decision making should be the same, i.e. both subject to appeal and arbitration provisions.

4.9.1.12 In response to concerns raised by the MMO in relation to the arbitration provisions, the Applicant proposed modifications to the marine licensing appeals process to ensure that process applies to; (a) a DML; and (b) conditions attached to a DML. The drafting proposed is clear in that regard. The MMO has submitted that DMLs should be treated the same as MLs granted by the MMO under the MCAA 2009 for which there is no right of appeal in relation to conditions. However, there is a clear distinction to be made here. DMLs are included in DCOs granted in respect of NSIPs, whereas MLs granted by the MMO are not. Those relate to much smaller projects, or discrete aspects of larger projects.

4.9.1.13 The Applicant submits that to meet the urgent need for energy generation projects set out in the NPS, it is just as important for expedience and certainty in respect of the discharge of Requirements and conditions attached to DCO/DMLs as it is in respect of those consents in the first instance by the SoS. It is right that both the onshore and offshore aspects of DCO/DMLs are subject to a right of appeal to ensure the NSIP can be delivered efficiently.

4.9.1.14 In addition to the above, the Applicant notes that in the draft DCO/DMLs submitted at Deadline 4 on 14 April 2019 (REP4-027) in respect of the Norfolk Vanguard application (ref EN010079) the applicant, Vattenfall, has included a deemed approval provision in respect of matters requiring the consent of the MMO (e.g. see Schedule 10, Condition 14(5)). The dDCO/DML for that project already includes the arbitration provisions included in the dDCO/DMLs for Hornsea Three, and so the inclusion of deemed approval mechanism is another attempt at introducing expedience to the DML condition discharge process. That approach will also be included in the Applicant's next iteration of the DCO at Deadline 9 on 26 March 2019.

4.9.1.15 Therefore, the ExA will have three mechanisms before it in relation to the discharge of conditions under the DMLs:

(ii) deemed approval
(iii) appeal provisions
(iv) arbitration

Timescales

4.9.1.16 The MMO has remaining concerns regarding the timescales for the submission of preconstruction documentation. The MMOs position is set out in our Deadline 3 response (REP3-092).

4.9.1.17 The Applicant notes the MMO's concerns, however, it considers that 4 months as proposed is adequate as the MMO will be subject to pre-submission consultation. This consultation is in the interests of the undertaker, as it will ensure that documents submitted stand a good chance of agreement. 4 months is therefore a sensible compromise to ensure that the project programme is abided by but also to give the MMO adequate time to review any final changes since consultation occurred.

4.10 The Wildlife Trust and Norfolk Wildlife Trust

4.10.1 Introduction

4.10.1.1 The following section provides a summary of case for those matters that have been under discussion with The Wildlife Trust and Norfolk Wildlife Trust throughout the examination of Hornsea Three. As evidenced within the final SoCG with The Wildlife Trust (TWT) and Norfolk Wildlife Trust (NWT; REP9-024), all matters relating to onshore ecology and nature conservation are agreed, with outstanding areas of disagreement in relation to benthic ecology and marine mammals discussed below.

4.10.2 Benthic Ecology

4.10.2.1 Many of the concerns raised by TWT in their Relevant Representation (RR-047) and Written Representation (REP1-023), were similar to concerns raised by NE, discussed in section 4.8.3 above. However, during the course of the examination the Applicant has worked to resolve the concerns raised by TWT. The remaining areas of disagreement in relation to benthic ecology are:

- Consideration of fishing within the in-combination assessment, rather than considering this activity as part of the baseline;
- Concerns relating to the condition (i.e. unfavourable recovering) of the WNNC SAC and the effect of Hornsea Three cable installation on the ability of the Subtidal Mixed Sediments and Subtidal Coarse Sediments Annex I sub-features to recover to favourable condition;
- Certainty with regard to effectiveness of sensitive cable protection to avoid adverse effects on integrity of the WNNC and allow the recovery of the site to favourable condition.

Summary of Applicant's Case

4.10.2.2 The Applicant's position with respect to the condition of the WNNC is set out in paragraph 4.8.3.84 et seq., i.e. the Applicant's assessments have taken into consideration the current condition of the WNNC SAC and the Applicant's position is that the impacts related to cable installation will not represent an adverse effect on integrity for the WNNC SAC.

4.10.2.3 With regard to consideration of commercial fishing within the in-combination assessment, the Applicant's position is that the approach taken is appropriate and consistent with best industry practices. The Applicant recognises that fishing has an impact on marine ecological receptors, including Annex I habitat features of SACs; this is inherent in the latest condition assessments of the WNNC and NNSSR SACs, for example, which recognise that part of the reason for the unfavourable condition is due to demersal fishing activity. It is not possible to determine what the baseline conditions would be in the absence of impacts that fishing impacts impose on such receptors and as such, there is no means by which the Applicant can undertake such an assessment.

4.10.2.4 The Applicant's position on sensitive cable protection is that these measures were proposed to minimise the change in substrate/sediment type within designated sites. As set out in paragraph 4.8.3.24 above, although the assessment presented in the ES and RIAA assumes long-term habitat loss in areas where cable protection is deployed, the Applicant has highlighted that this is a conservative assumption, as the use of appropriately sized rocks will allow for some ecological function to continue in these areas, minimising effects of habitat loss. The evidence to support this is outlined in REP1-138, but the Applicant has proposed a robust monitoring plan, including seabed imagery surveys of cable protection within the WNNC SAC, to validate this assumption.

4.10.3 Marine Mammals

4.10.3.1 As evidenced within the updated SoCG between the Applicant and TWT (REP9-024) the following points remain points of disagreement between the parties:

- The differences in approach in the definition of magnitude and sensitivity for the impact assessment across the wind industry;
- The consideration of UXO from other marine activities within the CEA;
- The level of detail on projects within the planning system within the CEA;
- The quantification of all noisy marine activity within the CEA;
- The use of the iPCoD model to inform the impact assessment;
- The use of SNCB advocated thresholds to inform the assessment of impacts on the SNS SCI within the RIAA;
- The level of detail on proposed mitigation measures within the outline SNS Site Integrity Plan (SIP); and
- The level / duration of noise monitoring during construction.

Summary of Applicant's Case

4.10.3.2 The Applicant's position with respect to the definition of magnitude and sensitivity is that it has adopted a robust approach that has been agreed with the SNCB and the MMO. It is recognised that other assessments may take different approaches to the definition of these assessment components, however, that is a) not a matter the Applicant can control, and b) does not detract from the robust approach adopted by the Applicant.

4.10.3.3 With regard to the concerns raised on the CEA, the Applicant considers that it has adopted a robust and transparent approach to the assessment. Where practicable impacts have been quantified, but has not sought to combine different impact types where it would not translate to an ecologically robust cumulative assessment. The Applicant does not agree that it is appropriate to generate theoretical impact scenarios for other projects where they have not presented certain information (such as the clearance of UXO) and has therefore, based its assessment on publicly available information only. Similarly, for the consideration of other projects within the planning system, the Applicant has undertaken a quantified assessment of cumulative and or in-combination effects, where information permits (I.e., where assessment are suitably advanced), but where this detailed is not available the Applicant has limited the assessment to a qualitative nature only. This is in keeping with standard industry practice and advice contained in the PINS Advice Note 17 on cumulative effects assessments.

4.10.3.4 With regard to the use of iPCoD, the Applicant has sought to use the best available scientific evidence to inform the impact assessment. The Applicant notes that it has agreement with the SNCB and the MMO on the assessment methodology.

4.10.3.5 With regard to the RIAA, the Applicant has followed the guidance of the SNCB on the approach to thresholds. This guidance has been applied across a number of offshore wind farm projects and is also applied within the recent BEIS Review of Consent process. The Applicant therefore considers it an appropriate methodology to have adopted for the assessment.

4.10.3.6 With regard to the content of the SIP, the Applicant considers there is sufficient evidence within the current document to demonstrate how any of the mitigation groups identified would serve to mitigate any potential impact. The Applicant notes that the detailed consideration of any specific mitigation option, will be undertaken as part of the formal SIP process that will be undertaken post consent when it is clear if and to what extent any mitigation is required in light of the known cumulative scenario. The Applicant has agreed the SIP content with the SNCB and the MMO.

4.10.3.7 With regard to the noise monitoring, the Applicant notes that it's approach is in line with standard industry practice and has agreement on the commitment and outline approach (as detailed within the In-Principle Monitoring Plan) with the SNCB and the MMO.

4.11 Whale and Dolphin Conservation

4.11.1.1 Discussions between the Applicant and WDC focused on matters relating to Marine Mammals. As evidenced within the updated SoCG between the Applicant and WDC (REP1-219) the following points remain points of disagreement between the parties:

- The inclusion of pile driving with the consent envelope;
- The imposition of strict noise levels during construction; and
- The need for at source noise mitigation during piling.

Summary of Applicant's Case

4.11.1.2 The WDC do not consider that pile driving should be included within the consent envelope based on the concerns they hold with the Applicants assessment and the fact that in their opinion the Applicant has not committed explicitly to the use of at source noise mitigation. WDC go on to note, that any mitigation option applied must be proven in its ability to appropriately mitigate underwater noise. Furthermore, the WDC consider that strict noise limits should be applied and adhered to during pile driving. The Applicant's position is that it has committed to developing a robust MMMP that will contain (based on updated noise modelling outputs on the final scheme design) an appropriate suite of mitigation measures to ensure PTS effects are reduced to negligible levels. The Applicant has not ruled out the use of any particular mitigation option at this stage. The Applicant notes that it has agreed with the SNCB and the MMO the fact that a robust MMMP can be developed for the Project and that it is appropriate to define the content of the MMMP post consent once the final scheme design in defined. The Applicant notes that its commitments to the MMMP to manage underwater noise impacts on marine mammals is in keeping with how the MMO currently regulate underwater noise (noting that it does not operate a noise level system). The Applicant further notes that the SNCB and the MMO agree that the MMMP is the appropriate mechanism to manage underwater noise impacts on marine mammals.

4.12 Environment Agency

4.12.1 Summary

4.12.1.1 All matters within the remit of the Environment Agency have been agreed, as detailed in the SoCG between the Applicant and the Environment Agency (REP9-026).

4.13 Historic England

4.13.1 Summary

4.13.1.1 All matters within the remit of Historic England have been agreed, as detailed in the SoCG between the Applicant and Historic England (REP9-026).

4.14 National Federation of Fishermen's Organisation and VisNed

4.14.1 Introduction

4.14.1.1 The Applicant has engaged with the National Federation of Fishermen's Organisation (NFFO) and VisNed (i.e. Federation of recognised Fish Producer organisations in Dutch demersal fisheries) throughout the pre-application and examination phases of Hornsea Three. This has included the development of an outlined Fisheries Coexistence and Liaison Plan (REP4-079), which is recognised as an important document to ensure that the Hornsea Three and the fishing industry can co-exist, through open and continuous communication between the Applicant and the fishing industry. The Applicant has prepared a SoCG with the NFFO and VisNed which has been submitted at Deadline 10 which sets out the final position on issues between the parties.

Summary of Disagreement

4.14.1.2 As evidenced within the SoCG with Hornsea Three and the NFFO and VisNed (REP6-007), there are four areas of disagreement which remain outstanding, with the detail of these final positions described in the SoCG:

- Impact assessment methodology (including approach to Cumulative Effects Assessment);
- Impact assessment assumptions and conclusions; and
- Additional measures, including commitments to use local fishing vessels and community support funding for the fishing industry.

Summary of Applicant's Case

4.14.1.3 While the Applicant and the NFFO and VisNed disagree on the issues stated above, the parties agree that the FCLP and the successful implementation of measures outlined within it, will help to promote coexistence with the fishing industry through all phases of Hornsea Three. Therefore the FCLP provides the mechanism by which the Applicant and the fisheries industry can move forward during the post consent phase of Hornsea Three. As outlined in Schedule 11, Part 2, Condition 13(4) (generation assets DML) and Schedule 12, Part 2, Condition 14(4) (transmission assets DML) of the draft DCO, a final FCLP will be submitted and approved by the MMO and this will be in accordance with the outline FCLP (REP4-079).

4.15 Eastern Inshore Fisheries and Conservation Agency

4.15.1 Introduction

4.15.1.1 The Applicant has engaged with the Eastern Inshore Fisheries and Conservation Agency (IFCA) throughout the Examination phase and has developed a Statement of Common Ground, the final version of which was submitted at Deadline 7 (REP7-016).

Summary of Disagreement

4.15.1.2 In their Written Representation, the Eastern Inshore Fisheries and Conservation Agency (IFCA) raised some similar concerns to those raised by NE, discussed in section 4.8.3 above, including concerns on the baseline characterisation in the nearshore area and the use of rock protection within the WNNC SAC. However, during the course of the examination the Applicant has worked to resolve the concerns raised by Eastern IFCA with the remaining areas of disagreement limited to the following:

- Effects of cable installation on designated features in the WNNC SAC and the Cromer Shoal Chalk Beds MCZ, in particular Subtidal Coarse Sediments and Subtidal Mixed Sediments (Annex I sub-features of the SAC; broadscale habitat features of the MCZ), where existing/proposed fisheries byelaws aim to protect these features from demersal trawling; and
- Uncertainty over impacts to marine life from electromagnetic fields (EMF), particularly when considered cumulatively.

Summary of Applicant's Case

4.15.1.3 The Applicant has worked with stakeholders to minimise, wherever possible, the effects of cable installation and operation on designated sites. In particular, this included a substantial re-route of the nearshore cable corridor which considerably reduced the footprint of effects on the WNNC SAC and the Cromer Shoal Chalk Beds MCZ combined. While there will inevitably be some disturbance to the seabed areas due to cabling works, however once the cable is installed, the communities will be able to recover, with considerable empirical evidence demonstrating this within the Environmental Statement, the RIAA and submissions during examination to support this conclusion (e.g. REP1-138; see also REP1-122, Q1.2.10 for a summary of these sources of evidence). As such, Hornsea Three will not conflict with the aims of the existing/proposed byelaws for the MCZ/SAC.

4.15.1.4 The Applicant acknowledges that there are uncertainties associated with the effect of EMF on marine ecological receptors, however, even where behavioural effects may occur, the extent of potential areas of effect are expected to be highly localised and would not be significant in EIA terms. This is, however, a generic concern relating to offshore energy developments in the southern North Sea and does not relate solely to Hornsea Three and noting this uncertainty, the Applicant will undertake a desk based assessment on EMF, including attenuation of field strengths, shielding and cable burial depths using industry best practice and the latest evidence available as part of the CSIP, which will be agreed with the MMO, prior to construction.

4.16 Maritime and Coastguard Agency

4.16.1 Introduction

4.16.1.1 The Applicant has consulted with the Maritime and Coastguard Agency throughout the pre-application and post examination phases of the project. Consultation has facilitated the agreement of a set of Layout Development Principles which have been secured within the draft DCO (Applicant's Appendix 8 to Deadline 10). The Layout Development Principles have been designed to provide a framework post consent that will ensure engineers working on the project (noting this could be some years after consent) develop initial array layouts and undertake surveys within the parameters consented and that are in a general sense acceptable to the regulators, rather than within the minimum and maximum parameters used on past approvals. A SOCG was submitted at deadline 10 with all matters agreed with respect to shipping and navigation. One matter remains outstanding with respect to arbitration rules.

Introduction / Summary of Disagreement

4.16.1.2 Arbitration Rules

MCA have raised concerns with the Planning Inspectorate, similar to the MMO, that it would be subject to the Arbitration Clause and do not agree with Article 37

Summary of Applicant's Case

4.16.1.3 The Applicant's view on arbitration are the same as set out in relation to three MMO at paragraphs 4.9.1.8 to 4.9.1.15 above.

4.17 Trinity House

4.17.1 Introduction

4.17.1.1 The Applicant has consulted with Trinity House throughout the pre-application and post examination phases of the project. A SOCG was submitted at deadline 9 with all matters agreed with respect to shipping and navigation. One matter remains outstanding with respect to arbitration rules.

4.17.2 Arbitration Rules

Introduction / Summary of Disagreement

4.17.2.1 Trinity House's position regarding arbitration was set out in their deadline 6 (REP6-059) and deadline 8 (REP8-021) submissions. Trinity House suggests their statutory function to provide safety of navigation could be compromised should the arbitration rules be adopted to include Trinity House and as such request a "saving" provision be extended to the organisation.

Summary of Applicant's Case

4.17.2.2 The Applicant's view on arbitration applying to Trinity House is the same as set out in relation to the MMO at paragraphs 4.9.1.8 to 4.9.1.15 above.

4.18 Royal Society for the Protection of Birds

4.18.1 Introduction

4.18.1.1 The Applicant has agreed all matters relating to ecology and nature conservation onshore, including the Outline Pink-footed Goose Management Plan, as detailed in the SoCG between the Applicant and the Royal Society for the Protection of Birds (RSPB) [REP9-029]. Areas where agreement has not been reached on offshore ornithology matters are detailed in the section below.

4.18.2 Offshore Ornithology

4.18.2.1 The Applicant and the RSPB have agreed that the list of SPAs and associated features for which LSE has been identified and therefore considered within APP-051 is complete and includes:

- Flamborough and Filey Coast (FFC) SPA – fulmar, gannet, kittiwake, guillemot, razorbill and puffin;
- Farne Islands – fulmar;
- Coquet Island – fulmar;
- Forth Islands – fulmar; and
- Greater Wash SPA – red-throated diver, common scoter and Sandwich tern.

Natura 2000 sites

4.18.2.2 The extant disagreements relate to the concerns raised by the RSPB in relation to the following matters (although these are not applicable to all sites):

- Offshore Ornithology baseline characterisation;
- Collision Risk Modelling;
- Assessment of displacement impacts;
- Assessment of cumulative and in-combination effects;
- Population modelling; and
- Phenology and apportioning; and
- Assessment conclusions.

Summary of Applicant's Case

1. Offshore Ornithology baseline characterisation

4.18.2.3 The Applicant and the RSPB are in agreement in relation to the following aspects of the characterisation of the offshore ornithological baseline:

- The methodologies used in relation to availability bias and unidentified birds.

4.18.2.4 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the following topics relevant to the characterisation of the offshore ornithological baseline:

- The temporal adequacy of survey data.

The Applicant's case in relation to Offshore Ornithology baseline characterisation is as described in paragraphs 4.8.4.8 to 4.8.4.14 of Section 4.8.4.

2. Collision risk modelling

4.18.2.5 The Applicant and the RSPB are in agreement in relation to the following aspects of collision risk modelling:

- The list of species considered.

4.18.2.6 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the following topics relevant to collision risk modelling:

- Model Option;
- Avoidance rates;
- Consideration of uncertainty;
- Flight speeds; and
- Nocturnal activity factors.

4.18.2.7 The Applicant's case in relation to these aspects of collision risk modelling is as described in paragraphs 4.8.4.16 to 4.8.4.30 of Section 4.8.4.

3. Assessment of displacement impacts

4.18.2.8 The Applicant and the RSPB are in agreement in relation to the following aspects of the assessment of displacement impacts:

- The list of species considered;
- The displacement and mortality assumptions applied in assessments;
- The methodology applied in relation to the assessments of displacement impacts on red-throated diver and common scoter.

4.18.2.9 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the following topics relevant to the assessment of displacement impacts:

- Seasonal mean-peak populations.

4.18.2.10 The Applicant's case in relation to these aspects of the assessment of displacement impacts is as described in paragraphs 4.8.4.32 to 4.8.4.37 of Section 4.8.4.

4. Assessment of cumulative and in-combination effects

4.18.2.11 The Applicant and the RSPB are in agreement in relation to the following aspects of the assessment of cumulative and in-combination effects:

- The list of projects considered; and
- The tiering approach used.

4.18.2.12 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the following topics relevant to of the assessment of cumulative and in-combination effects:

- The consideration of uncertainty and variability associated with cumulative and in-combination totals.

4.18.2.13 The Applicant's case in relation to these aspects of the assessment of cumulative and in-combination effects is as described in paragraphs 4.8.4.38 to 4.8.4.43 of Section 4.8.4.

5. Population modelling

4.18.2.14 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the approach taken to population modelling. The Applicant's case in relation to population modelling is as described in paragraphs 4.8.4.40 to 4.8.4.43 of Section 4.8.4.

6. Phenology and apportioning

4.18.2.15 The Applicant and the RSPB are in agreement in relation to the following topics associated with the approach taken to defining species phenology and apportioning rates:

- The apportioning rates used for gannet;
- A lack of connectivity between breeding adult guillemot and razorbill and Hornsea Three during the breeding season;
- That consideration has been given to potential impacts on immature guillemot and razorbill; and
- That there is unlikely to be an impact on the breeding adult population of puffin from FFC SPA.

4.18.2.16 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the following topics associated with the approach taken to defining species phenology and apportioning rates:

- The apportioning rates used for kittiwake; and
- The seasonal extents defined by the Applicant.

4.18.2.17 The Applicant's case in relation to these aspects of the assessment of phenology and apportioning is as described in paragraphs 4.8.4.48 to 4.8.4.56 of Section 4.8.4.

7. Assessment conclusions

4.18.2.18 The Applicant and the RSPB are in agreement that, for the Project alone there are no adverse effects on the integrity of any Natura 2000 sites for which LSEs were identified for red-throated diver, common scoter, Sandwich tern, fulmar, gannet and puffin. The Applicant and the RSPB are also in agreement in relation to conclusions of no adverse effect in relation to impacts from the Project in-combination with other plans and projects for red-throated diver, common scoter, Sandwich tern and fulmar. The RSPB have stated that their conclusions in relation to these species are tentative.

4.18.2.19 There are outstanding differences in the positions of the Applicant and the RSPB in relation to the conclusions reached for kittiwake, guillemot and razorbill for impacts arising from the Project alone and for gannet, kittiwake, puffin, guillemot and razorbill for in-combination impacts.

4.18.2.20 The Applicant's case in relation to assessment conclusions is as described in paragraphs 4.8.4.60 to 4.8.4.61 of Section 4.8.4.

4.19 Highways England

4.19.1.1 All matters within the remit of Highways England have been agreed, as detailed in the SoCG between the Applicant and Highways England (REP7-015).

4.20 Conoco Philips

4.20.1 Introduction

4.20.1.1 The Applicant undertook consultation with Conoco Phillips throughout the pre-application phase and during the examination phase of Hornsea Three. This has included commercial discussions, e.g. on crossing and proximity agreements, which will continue into the post consent phase of the project. Although Conoco Phillips submitted a Relevant Representation (RR-036), the Applicant considers that all matters raised in their relevant representation have been fully addressed, as outlined below.

4.20.1.2 The key concerns raised by Conoco Phillips in their Relevant Representation can be summarised into three headings:

- Crossing and proximity agreements;
- Conoco Phillips decommissioning plans and potential for effects of Hornsea Three on these; and
- Potential for effects on Radar Early Warning Systems (REWS).

Summary of Applicant's Case

4.20.1.3 In relation to crossing and proximity agreements, as set out in section 2.1.36 of REP1-131, the Applicant can confirm that crossing and proximity agreements will be entered into post consent, between the Applicant and the pipeline operator (in this case Conoco Phillips), in consultation with other infrastructure owners on behalf of whom operate, as required. Both parties agree that these agreements will ensure that all issues, including those raised in the Conoco Phillips Relevant Representation are appropriately addressed post consent.

4.20.1.4 In relation to the Conoco Phillips decommissioning plans, the Applicant has confirmed that based on the construction programmes for Conoco Phillips decommissioning and Hornsea Three construction, there is no temporal overlap which could affect these decommissioning plans. Should the programme for Conoco Phillips's decommissioning plan change, these will be taken into consideration, as and when the Applicant is notified of such changes (see section 2.1.36 of REP1-131).

4.20.1.5 In relation to the effect of Hornsea Three on REWS on platforms operated by Conoco Phillips, the Applicant confirmed at Deadline 1 (section 2.1.36 of REP1-131; see also response to Q1.5.8 of REP1-122), that effects on the Saturn, Mimas and Tethys platforms would not be significant in EIA terms. The Applicant would also note that Conoco Phillips, in their Deadline 1 response to Q1.5.8 (REP1-116), did not highlight that mitigation was necessary for effects on REWS on their platforms.

4.21 Spirit Energy

4.21.1 Introduction

4.21.1.1 The Applicant has made considerable progress in reaching agreement with Spirit Energy throughout the examination phase, however the Applicant can confirm that the following areas of disagreement in regard to helicopter operations and shipping and navigation remain (and which have been submitted as matters not agreed by Spirit Energy at D10), which are discussed below:

- ALARP;
- Impact of Hornsea Three array area proximity on operations (aviation);
- Proposed subsea wells C6 and C7;
- Grove; and
- Grove G5 subsea well.
- Impact of array proximity on operations (shipping); and

4.21.1.2 The Applicant can confirm that all other matters raised by Spirit Energy in the Examination remain as set out in the SoCG (REP1-007). The following section should be read alongside the Applicant's response to REP9-077 (at Appendix 4 to the Applicant's response to Deadline 10) where further detail on the Applicant's case is presented.

4.21.2 ALARP

4.21.2.1 The Applicant disagrees with the position of Spirit Energy in regard to ALARP as stated by Spirit Energy (see REP9-077) and summarised as follows:

- That the Applicant is required to demonstrate that the risk to personnel supporting Spirit Energy's operations will remain "as low as reasonably practicable" (ALARP);
- That a small increase in risk to personnel will arise as a result of personnel spending more time on the Normally Unmanned Installations (NUIs) than they would have done had the windfarm array not been present;
- That ALARP would be achieved if no turbines are placed within 6 nm of the array;
- That should the ExA decide that risk to personnel is not required to remain at ALARP, each of the platforms safety cases will be required to be revised with the cost born by the Applicant.

Summary of Applicant's Case

4.21.2.2 The Applicant does not agree and has made the case that, in regard to aviation, the Environmental Statement cannot demonstrate ALARP but does demonstrate that the there is no significant increase in risk to Spirit Energy's assets (see the Applicant's response to REP9-077, Appendix 4 to the Applicant's response to Deadline 10).

4.21.2.3 The Applicant considers that the access restriction as a result of Hornsea Three is not significantly more than the restriction that the platforms experience any way in regard to weather constraints (see paragraph 4.21.3.14). Therefore, the Applicant does not consider there is a significantly higher percentage of time that personnel will remain on the platforms as a result of Hornsea Three. The Applicant also states that remaining on a platform cannot be a safety issue but is a comfort issue as the platform has a safe place of refuge which must comply with PFEER.

4.21.2.4 The Applicant maintains that ALARP is defined by the Duty Holder of a safety case and having never been provided the safety case, nor party to any of the other commercial and operational requirements that feed into a safety case, the Applicant cannot define whether Spirit Energy's ALARP is met. The Applicant does know that Hornsea Three does not result in a significant change to safety risk at a distance of 1.5 nm from the Chiswick platform (see Appendix 4 to the Applicant's response to Deadline 10).

4.21.2.5 The Applicant maintains that Spirit Energy are the Duty Holder of the safety cases for their NUI's and therefore they are responsible for the maintenance of the safety cases. The Applicant has requested but never seen the safety case, or how the restriction on flights is integrated into that safety case. In the event there is a component of the safety case that would require updating as a direct result from restriction to flights resulting from Hornsea Three, the Applicant would require a 3rd party verification process to be able to consider any compensation mechanism.

4.21.2.6 Spirit Energy are of the view that allision risk will be increased by some ships electing to pass to the east of the array under some weather conditions. The risk to personnel on the NUI's may be mitigated by early warning from radar / AIS, a matter on which Spirit Energy and the Applicant are now agreed but it is likely that there would still be an increased risk. *Spirit Energy believe that provision of a 2nm corridor between the array and its permanent platforms would further mitigate this risk to maintain current ALARP levels.* The Applicant disagrees as based on the NRA, this is not expected as north-south traffic is limited and there are alternative routes available in normal and bad weather such as inshore (typically used in bad weather) or via the channel designed for north-south traffic to the west of Hornsea Three (designed in consultation with the MCA and Trinity House, and suitable for use in all weathers). Therefore, any such routeing would be an infrequent event and, in any case, vessels would be outside the wind farm and able to be monitored by the J6A REWS (both on radar and AIS). Based on this there is no justification for a channel to the east of the wind farm due to the lack of any current or future route. (see REP7-010, Applicants submission at deadline 10: Summary statement on Shipping and Navigation).

4.21.3 Impact of Hornsea Three array are proximity on operations (aviation)

4.21.3.1 The space requirements for helicopter operations around each of Chiswick and Grove platforms and subsea wells, C6, C7 and G5 and Kew (subsea well) are not agreed between the Applicant and Spirit Energy.

Summary of Applicants Case

4.21.3.2 The Applicant has identified a restriction in the ability to conduct straight in Airborne Radar approaches (ARA), including the ability to carry out a Missed Approach Procedure or One Engine Inoperative (OEI), in certain weather conditions to the Spirit Energy operated assets, the Chiswick and Grove platforms.

4.21.3.3 The Applicant identified a small increase in the number of days that flights would be restricted to the Chiswick and Grove platforms and assessed that this would not have a significant, operational effect. Spirit Energy did not agree with the assessment and asserted that Hornsea Three would result in a large significant safety effect. The Applicant and Spirit Energy have made considerable progress on aligning their respective assessments, and have reached agreement in the following fundamental areas:

- Agreement has been reached on the regulations underpinning the assessments. The regulations that should be used to underpin the assessments have been agreed to be EASA as used by the Applicant and not IOGP as previously used by Spirit Energy;
- Agreement has been reached on the availability of alternative flights to the platforms, that can be flown within the regulations, namely an en route descent, a shuttle flight and a circling ARA.
- Agreement has been reached on the use of a common data set for assessing the percentage of days restricted, agreed to be the J6A met data provided by Spirit Energy.
- Agreement has been reached on the IMC conditions which require an AR flight to be flown.

4.21.3.4 The Applicant maintains that there is not a significant effect on the availability of flights to the Chiswick and Grove platforms at 1.5 nm to the Chiswick platform, and 2.4 nm to the Grove platform as stated in the Environmental Statement and validated through the Examination (see REP7-040 and Appendix 3 (J6A) submission at D10).

4.21.3.5 The Applicant however sought to address the issues presented by Spirit Energy and in the spirit of co-existence, provided an offer to Spirit Energy of a 2.8 nm restricted zone around the Chiswick platform to enable a greater degree of flexibility for both approaches and take offs from the platform (see Appendix 4 to the Applicant's response to Deadline 10 for further detail).

4.21.3.6 The Applicant advises that this is not a minimum separation distance as stated by Spirit Energy but an agreed separation distance (REP9-053) subject to validation. The Applicant also asserts that as the result of any validation no greater separation distance will be required for the same availability of flights. The 2.8 nm buffer provides for both a circling ARA which requires an agreed footprint of 2.42 nm and a worst case take off which requires an agreed footprint of 1.81 nm (and 1 nm IMC buffer).

4.21.3.7 Considering this separation distance of 2.8nm the Applicant and Spirit Energy have been able to bring the number of days potentially restricted by Hornsea Three to within a difference of 1.5 % (REP9-053) which the Applicant believes is due to disagreement on the criteria used to define icing conditions and disagreement in the application of shift patterns to the data (see submission on joint position on the J6A data (REP9-053)). However, this is not considered to be a material difference due to the quality of the J6A data used (see Applicants submission at deadline 7 (REP7-040)).

4.21.3.8 Spirit Energy, whilst agreeing to the helicopter approach footprints presented by the Applicant (REP7-056) and in turn facilitated closer agreement on the number of days potentially restricted by Hornsea Three, have caveated their position based on the requirement for validation by helicopter operators and simulation trials for the evaluation of pilot workload and environmental factors such as turbulence. The Applicant's position on the validation exercise is:

- The Applicant agrees with Spirit Energy that the footprints should be validated by the helicopter operators and explains the only comments received below;
- The Applicant does not agree with the request for validation of pilot workload through the use of a simulator trial; and
- The Applicant does not agree with the request for validation of environmental factors such as turbulence through the use of a simulator trial.

4.21.3.9 The Applicant has sought feedback from the helicopter operators through the organisation of a meeting with CHC and a helicopter workshop and feedback has been requested on the footprints provided (REP7-056). The Applicant has responded to all the points raised by the operators as summarised to follow. The Applicant is not aware that any more responses have been made to the footprints as alleged by Spirit Energy (REP9-077) and the deadline for receiving responses was provided to the helicopter operators at 25 March 2019.

- In regard to take offs, two issues were raised by the helicopter operators in regard to weight and windspeed. CHC asked for the requirement for a 7000 kg take-off weight for the AW139 to be considered but subsequently agreed that 7000 kg is not a realistic take-off mass as it does not provide out of ground effect hover performance, which would be a reduction in safety compared to the current performance available. The Applicant considers therefore that the weight used in the footprint presented by the Applicant (and agreed with by Spirit Energy in the slides presented at the ISH8 (REP-093) of 6400 kg is a realistic worst case for the Chiswick platform which is further explained in the Applicant's submission at Deadline 10 (Appendix 4 to the Applicant's response to Deadline 10 for further detail). It is important to note that even in the event a greater weight is required at take off, this would result in a weight restriction for a certain take off direction in IMC for a limited period of time; it would not require a greater separation distance from the turbines.
- In regard to the second comment made by CHC, that a wind speed of 0 knots should be applied (against a head wind of 10 knots used in the calculation by the Applicant), the Applicant has explained that a wind speed of below 10 knots (and therefore of 0 knots as requested by CHC) would enable take off to be in any direction and so the take-off would not be towards the wind farm and therefore no restrictions would apply.
- In regard to the Circling ARA, the Applicant and Spirit Energy agree with the footprint available for a circling ARA of 2.42 nm but there is disagreement in regard to Spirit Energy's assertion that if there is any chance of becoming IMC, an additional 1 nm would need to be added. The Applicant advises that during a circling approach, the helicopter will be operating visual flight rules (VFR) in order to conduct a circle and so the 1 nm instrument flight rules (IFR) avoidance criteria is not required. Visual reference is required with the landing site at all times. If the pilot is not able to maintain VFR at the

MAP a go around will be conducted. Feedback from the helicopter operators was sought on this footprint and the only comment was received from CHC, who noted that descents at night and in Degraded Visual Environment (DVE) will require a 2 nm set up. This comment relates to getting visual at the MAP (as for the circling approach) and then the ability to conduct a stabilised visual approach. The Applicant considers the requirement to set up a 2 nm final from any direction, is met for a VFR approach in DVE as sufficient space is available (i.e. at 2.8 nm), even though it does not consider this type of approach is applicable to a circling approach. The standard ARA circling approach, with a visual reference at less than 2 nm, will remain applicable which is available as confirmed by the helicopter operators and within EASA regulations.

4.21.3.10 In regard to the validation of pilot workload by a simulator, the Applicant disagrees with this approach. The diagrams of approach distance requirements (or footprints) provided by the Applicant are based on standard regulatory requirements and the Applicant does not therefore understand the need to fly these in a simulator as they are standard profiles flown every day by the helicopter operators. They do not require any change to procedure or modifications to the operators' operations manuals.

4.21.3.11 For the simulator trial under discussion for Hornsea Three, it is not expected that any increase in workload will occur as the helicopter will be flown using the autopilot upper modes, as per industry guidelines. The flight profiles proposed for the trial are no different to those currently flown and so again no increase in workload should occur. This is further explained in the Applicant's submission (Appendix 4 to the Applicant's response to Deadline 10). The simulator trial, if planned and set up appropriately, will provide the same results that have been put forward by the Applicant as they are both modelled on the same industry guidelines.

4.21.3.12 Despite the Applicant's reservations in regard to the use of a simulator as detailed above, the Applicant has advised that they are willing to work with Spirit Energy on a simulator trial if this is what they see as essential for their validation process, if these are set up using a robust methodology in regard to the issues put forward by the Applicant and the simulator trial is planned and conducted in close cooperation with the Applicant (Appendix 4 to the Applicant's response to Deadline 10).

4.21.3.13 In regard to validation of environmental factors such as turbulence, the Applicant advises that this is not realistically modelled in a simulator. As the Applicant has advised (see REP7-042), what is required by the industry to verify the position of the Applicant that turbulence is not an issue, is real time measurements of turbulence on large wind farm arrays such as Hornsea Three. The Applicant notes that a 1 nm IMC buffer has, in any case, been provided for the worst case take off in the provision of a 2.8 nm separation distance to the Chiswick platform.

4.21.3.14 The Applicant therefore considers that the separation distance of 2.8 nm provided by the Applicant is a maximum required distance in order to resolve the issues raised by Spirit Energy in regard to access. The separation distance provides an access restrictionof 3.5 % (or 5% as put forward by Spirit Energy) which is a not significant operational effect to assets which already have a degree of restriction any way.

4.21.3.15 The Applicant is not able to understand how Spirit Energy have calculated that a 5 % restriction on flights equates to a £0.6 million loss in revenue as presented in their Deadline 9 submission (REP9-077). In the first instance the value provided of a 1 day average delay caused by any restricted flights is simply not correct. Spirit Energy have assessed the ability to access flights using 12 hour shift patterns which the Applicant does not agree with (REP9-053). In the instance of an unplanned event requiring a call out, which is significant enough to stop production if not attended to, then a flight would be made as soon as the bad weather had passed, which could be any time of the day or night, now that night availability has been established at the Chiswick and Grove platforms.

4.21.3.16 Spirit Energy's lost revenue numbers as presented are further questionable given that the same weight in lost production has been applied to a restriction of access to a readily accessed above-sea installation (the Chiswick platform, as to a subsea well which is not designed to be readily accessed and as per Spirit Energy's own submission (REP9-077) is only visited once in every 3 years.

4.21.4 Impact of array proximity on operations (shipping);

4.21.4.1 Spirit Energy assert that for vessels accessing platforms and subsea infrastructure, at least 2nm offset from the array is required to ensure adequate sea room to place anchors and/or adopt appropriate stand-off positions. The Applicant notes that a statutory safety zone of 500 m is already provided for oil and gas surface, and in some cases subsea, installations on the UKCS. Beyond that distance other sea users are free to operate. Experience has shown that the operation of anchor spread vessels can take place within restricted waters, whether the restriction is caused by nearby platforms, nearby turbines or even within wind farm arrays, surrounded by turbines. (REP4-012, Appendix 4 to Applicants response at D10).

4.21.4.2 The Applicant and Spirit Energy have experience with operating respective assets in close proximity to the Walney Extension Offshore Wind Farm where Spirit Energy have three wells (an exploration, appraisal and development well) inside the Walney extension array area. The nearest turbine to these wells is at a distance of 0.86 nm from the exploration well and 1.3 nm from the development and appraisal wells. Periodic intervention is required (typically every few years) but there have no reported issues and in fact the two Operators have a good relationship and coordinate activities when necessary (see Appendix 6 to Applicants response at Deadline 10).

4.21.4.3 In regard to Spirit Energy's assertion that there will be a greater risk of vessel allision as a result of the presence of the windfarm the Applicant is in disagreement. The shipping and navigation assessments within the Environmental Statement were based on the best available evidence and extensive consultation. Passing vessel allision risks are expected to reduce due to traffic being re-routed away from platforms. Drifting vessel risks from third-party vessels are also expected to reduce for the same reason. Wind farm vessels operating in the area will be strictly managed. It will be assured that the existing REWS on J6A will continue to function to provide early warning of any vessel approaching on a hazardous course so that appropriate action can be taken, which is the most effective mitigation, although the rate of alarms from 3rd party vessels is expected to reduce (see (REP4-011) (REP4-012), (REP7-010), Appendix 6 to the Applicant's response at deadline 10).

4.21.5 C6 and C7

4.21.5.1 Spirit Energy consider that the proposed C6 and C7 subsea wells are integral to maximising economic recovery from the Chiswick Field and each of these wells need to be afforded the same space as for a NUI.

Summary of case

4.21.5.2 Spirit Energy have informed the Applicant, subsequent to the submission of the Environmental Statement, of potential subsea exploration wells west of Chiswick platform and located within the Hornsea Three array area. The Applicant notes that these wells have met the criteria to be categorised as contingent resource (REP9-077), in that further work is required prior to them being considered a proven resource and that they are therefore at this stage not confirmed and not proven.

4.21.5.3 The Applicant, in the spirit of coexistence, has however made an offer to Spirit Energy of a buffer around the proposed C6 and C7 wells of 1 nm. This will enable the Applicant to be able to design the final layout with certainty and would provide Spirit Energy with access for their drilling activities via vessel and via helicopter with restricted access in certain weather conditions. It should be noted that this 1 nm buffer is only required in a westerly direction as the wells will have unrestricted access in an easterly direction due to their location at the eastern edge of the Hornsea Three array area. In addition, with the provision of a 2.8 nm buffer being provided around the Chiswick platform, the separation distance around the wells is in fact a shape far greater than 1 nm in all but the most westerly direction.

4.21.5.4 The Applicant considers that if the need for C6 and C7 is material, these well programmes should be brought forward. The Applicant considers it reasonable that an accelerated programme is proposed by Spirit Energy and that this accords with MER policy and the principles of coexistence. The wells would then be able to be drilled with no restrictions imposed by the presence of Hornsea Three.

4.21.5.5 Once the wells have been drilled access can then be maintained to these wells by vessel and by restricted helicopter approaches. Spirit Energy have advised in their own submission that they access subsea wells by vessel, this then should be the operational preference for access to these wells. Likewise when the wells are decommissioned they can be plugged and abandoned from a rig or vessel that if helicopter access is required can be scheduled when weather restrictions due to the proximity of Hornsea Three are least likely to occur.

4.21.5.6 It is disingenuous of Spirit Energy to request the same access as for the Chiswick and Grove platforms when they also state that these wells will only be visited once every three years. Nor can the calculations of revenue lost for restricted access, as presented by Spirit Energy, be the same for a platform as a subsea well. A platform may require unplanned maintenance visits several times a year, a subsea well does not.

4.21.5.7 The assertion made that the buffer of 1 nm being offered around the C6 and C7 wells will restrict access by 89 % is incorrect. Spirit Energy have agreed the criteria for VMC conditions (REP9-053) which from the agreed J6A data set can be flown for up to 77 % of the time (the day annual average) and that shuttle flights can be flown from the Chiswick platform (as agreed by the helicopter operators) for a further 10 % of the time, allowing unrestricted access by helicopter to the wells for up to 87 % of the time.

4.21.5.8 In addition Spirit Energy has not adequately considered alternative means of access to the wells such as the use walk2work vessels. Walk2work vessels are increasingly being used in the industry for programmes such as well work overs. It is noted that Spirit Energy already use walk2work vessels within their operational portfolio.

4.21.5.9 Spirit Energy state that during construction

4.21.5.10 The Applicant maintains therefore that the 1 nm buffer being provided by the Applicant to the C6 and C7 wells will result in no significant restrictions on the ability to conduct planned maintenance visits to these wells every three years and that no greater distance is required.

4.21.6 Grove

4.21.6.1 Spirit Energy advise that the matter not agreed is the timescale for cessation of production and decommissioning of the Grove platform.

Summary of Case

4.21.6.2 The Applicant asserts that the information provided in regard to the Grove platform and its future decommissioning programme both during the Environmental Statement and during examination has all been provided by Spirit Energy. The Applicant asserts that at no point in the pre-application or examination phase has Spirit Energy made any submission in regard to plans for life extension or indeed for an additional well to be drilled at Grove until their submission at Deadline 9 (REP9-077).

4.21.6.3 The Applicant understands from all the consultation to date that the focus of the proximity discussions have been in regard to the Chiswick platform due to the well programmes planned at this field.

4.21.6.4 The restriction on the Grove platform is less than that on the Chiswick as it is further from the Hornsea Three array area (at a distance of 2.4 nm; see APP-071). Approaches in VFR, en route descents and shuttle flights are available for the applicable weather minima at this distance. During recent consultation with the helicopter operator CHC, the Applicant and Spirit Energy were advised that circling ARA could be flown and it was noted that CHC said these flights were manageable at the Grove platform. The footprint provided by the Applicant of the worst case take off with engine failure of 1.81 nm is possible at the Grove platform. All take offs are required to be flown in VMC however in the event there is the potential for IMC after take off, a weight restriction may be required (very broadly approximating to two passengers), if the wind was exactly 10 knots and a westerly take of was required.

4.21.6.5 The assertion by Spirit Energy that an additional proximity to be placed around the Grove platform would have limited impact on the Hornsea Three array area is misinformed as detailed in the Applicant's response to Rule 17 (REP9-013) as alterations to the leading edge of a wind farm has not only economic implications but carries significant consent risk.

4.21.6.6 The Applicant has provided for a protected area around the Grove platform to a distance of 2.8 nm which will which trigger a requirement for a proximity agreement to be entered before construction takes place within this area which will minimise the potential for any issues to arise between both parties in regard to access to the Grove platform.

4.21.7 G5

4.21.7.1 Spirit Energy assert that the Grove G5 subsea well needs to be afforded the same space as a NUI and subsea wells C6 and C7.

The Applicants Case

4.21.7.2 The Grove subsea well head is at a distance of 1.5 nm from Hornsea Three and so any access restrictions to a rig or vessel positioned over the Grove subsea well head are therefore comparable to the Chiswick platform.

4.21.7.3 The Applicant understands the nature of subsea facilities as being those that do not require regular access, or if they did, a surface installation would be built. Any time access is required, the appropriate rig or vessel must first be moved to over the location requiring advanced planning to achieve and, as advised by Spirt Energy, is only required once every three years. The Applicant therefore rejects Spirit Energy's requirement that a well head requires similar access to an above sea installation.

4.21.7.4 VMC, En Route and shuttle flights remain available to the G5 well head which, considering the J6A data provided by Spirit Energy, will be for 87 % of the time (day annual average) (REP7-040).

4.21.7.5 In addition, Spirit Energy must consider alternative means of access to this well, just as they do in other parts of their operations, such as the use of walk2work vessels (see paragraph 4.21.5.8).

4.21.7.6 The Applicant also notes that Spirit Energy have subsea facilities which are proximate to and even within existing wind farms, with a Spirit Energy operated well located at a distance of 0.86 nm from a turbine in Walney extension, for example.

4.21.7.7 The Applicant therefore considers that access to the G5 well head at a separation distance of 1.5 nm is not significantly restricted.

4.21.7.8 The Applicant also advises that the Kew subsea well at a distance of 3nm from the Hornsea Three array is not significantly restricted by the presence of Hornsea Three for the matters in regard to it being a subsea well (paragraph 4.21.7.3 and in regard to the proximity being greater than 2.8 nm as discussed in section 4.21.2.6).

4.22 Neptune E&P Ltd

4.22.1 Introduction

4.22.1.1 The Applicant and Neptune submitted a Letter of Comfort at Deadline 1 (REP1-101) in regard to the single area of outstanding discussion between the parties. This remaining issue under discussion is:

- The physical presence of the Hornsea Three array area may increase journey times for flights from Norwich to the Cygnus group of platforms

4.22.1.2 As stated in the Letter of Comfort there are no other residual points of concern between the two parties.

Summary of Disagreement

4.22.1.3 As set out in the Letter of Comfort, 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, with two platforms on the field; Cygnus A and Cygnus B. Manning of these installations is currently serviced by helicopters from Norwich International Airport and the direct flight path from Norwich to the Cygnus platforms passes over the Hornsea Project One and Hornsea Project Two windfarm array areas but does not pass over the Hornsea Three array area.

4.22.1.4 When the weather requires helicopter flight at a lower minimum safe altitude (MSA) than can be flown over Hornsea Project One and Hornsea Project Two (i.e. 1,700ft), flights would be required to deviate around the eastern edge of the Hornsea Three array area or to transit through a corridor between Hornsea Project One and Hornsea Project Two. As such, both parties agree that there is a two stage mitigation process available for flights to continue to be able to fly to the Cygnus group of platforms when weather conditions require such a deviation.

- The first stage mitigation, as agreed by both parties, is that in visual conditions helicopter operators would be able to use the corridor to the west of the Hornsea Three array area for safe transit.
- The second stage mitigation, as agreed by both parties, is that when weather conditions dictates flight below 1,700 ft and there is low visibility in the corridor to the west of the Hornsea Three array area, a longer deviation would be required around the eastern edge of the Hornsea Three array area.

4.22.1.5 Both parties are in agreement that the increased journey time required to transit through the corridor to the west of the Hornsea Three array area is not significant however the increased journey time required to deviate around the eastern edge of the Hornsea Three array area is significant.

Summary of Applicant's Case

4.22.1.6 The Applicant consulted with Neptune (consultation meeting 28 September 2018) in regard to resolving the outstanding issues. An action from the meeting was to refine the meteorological data presented in the Environmental Statement to include the potential for icing conditions.

4.22.1.7 The Applicant has addressed this action by progressing with further meteorological studies, obtaining a recent data set from the Met Office and analysing the data to assess the potential for icing conditions to arise, leading to potential deviations as outlined above. Based on this, the Applicant is able to advise that the potential for deviations to occur is limited in time to up to 7.7 days or 2.1% (the equivalent of up to 12 flights) per annum.

4.22.1.8 The Applicant has also progressed discussions with the NATS (consultation meeting on 21 November 2018) to discuss flight interventions services that could be made available to increase the availability of flights which could be flown through the corridor to the west of the Hornsea Three array area. The Applicant is currently considering the flight intervention services available, as provided by NATS, against the operational requirements of Neptune, and in consideration of the future requirements of Hornsea Three operations.

4.22.1.9 The Applicant will continue to have dialogue with Neptune in regard to the commercial implications to Neptune of any deviations that are required around the eastern edge of the Hornsea Three array area.

4.23 Shell UK Ltd

4.23.1.1 The Applicant has consulted with Shell UK Ltd (Shell) during pre-application and examination and submitted a signed position statement at deadline 5 (REP5-006). The Applicant acknowledged that it will notify Shell of any works (including sampling and investigations) to be undertaken within 300 metres either side of each Pipeline Corridor of Shell's assets. Shell and the Applicant has agreed to work together to agree the form of proximity and crossing agreements, which are intended to progress after the conclusion of the Examination process and when more detailed designs of the Hornsea Three export cable route have been prepared.

4.24 Norfolk Vanguard Ltd and Norfolk Boreas Ltd

4.24.1.1 The Applicant notes that there are no residual matters of disagreement with these IPs.

4.25 Public Health England

4.25.1.1 The Applicant notes that there are no residual matters of disagreement with this IP.

4.26 East Anglia Two Limited and East Anglia One Limited

4.26.1.1 The Applicant notes that there are no residual matters of disagreement with this IP.

4.27 Greater Norwich Development Partnership

4.27.1.1 The Applicant notes that there are no residual matters of disagreement with this IP.

4.28 Ministry of Defence

4.28.1.1 The Applicant notes that there are no residual matters of disagreement with this IP.

4.29 Campaign to Protect Rural England

4.29.1.1 The Campaign to Protect Rural England (CPRE) have indicated a preference for HVDC and a single phase of construction. CPRE raised concerns relating to the potential impacts on onshore ecology (in particular the Glaven Catchment, white-clawed crayfish and farmland ponds).

Summary of Applicant's Case

4.29.1.2 Section 2.1.4 of this document details the Applicant's case for retaining both HVAC and HVDC transmission systems as options, whilst section 2.2 sets out the need for two phases.

4.29.1.3 The Applicant has undertaken a full assessment of the potential impacts on onshore ecology within Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075), which concluded that there would be no significant effects on the aspects of particular interest to the CPRE. This was supported Annex 2 of REP1-131, the Applicant's Response to Relevant Representations which provided further responses to CPREs specific concerns, for ecology and the wider project. The Applicant has incorporated a number of mitigation measures for the protection of onshore ecology within the outline CoCP and outline EMP, and in respect to farmland ponds, the Applicant has submitted a ghost great crested newt (GCN) licence to Natural England which promotes an option to create additional habitat for GCN (farmland pond restoration and additional habitat connectivity). The Applicant is currently awaiting feedback from Natural England on this proposal.

4.29.1.4 The Applicant considers that CPREs concerns have not evolved during the course of examination in response to the assessments and clarifications provided by the Applicant. For those matters which the CPRE have indicated concerns, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur.

4.30 No to Relay Stations (N2RS)

4.30.1.1 No to Relay Stations have indicated a preference for HVDC.

4.30.1.2 N2RS have also raised concerns regarding the ability for organisations and members of the public to participate in the NSIP process and cumulative impacts of Hornsea Three and Norfolk Vanguard on landscape, tourism, traffic and recreation.

Summary of Applicant's Case

4.30.1.3 Section 2.1.4 of this document details the Applicant's case for retaining both HVAC and HVDC transmission systems as options.

4.30.1.4 The Applicant has undertaken extensive and appropriate statutory and non-statutory consultation in relation to Hornsea Project Three, as summarised within the Consultation Report submitted as part of the Application (APP-034). Since the point of Application, the Applicant has continued to engage with stakeholders in order to explain and gather feedback on mitigation proposals and the ongoing development of the outline management plans. Community consultation events were also held pre-application, in October/November 2016; March 2017 and September 2017, to provide an opportunity for the Applicant to present the project. Stakeholders and members of the public were encouraged at these events to provide feedback and raise concerns relating to Hornsea Three. As part of the Examination process, three open floor hearings have been advertised, which offer the opportunity for organisations and members of the public to provide new or further comment in respect to Hornsea Three. As such, the Applicant considers parties which wish to participate in the examination process, have been given the opportunity to do so.

4.30.1.5 The Applicant has undertaken a cumulative assessment for Hornsea Three, which assesses the potential impact of Hornsea Three and Norfolk Vanguard, as well as other developments, contained within each technical chapter of the Environmental Statement (see APP-073 to APP-083). This has been supplemented during the course of the examination with material relating to traffic and noise and vibration (REP1-174, REP6-039; REP6-037; REP7-048, REP7-046). The Applicant has, where required, identified additional mitigation measures to minimise the potential for cumulative effects and incorporated these into the relevant outline management plan.

4.30.1.6 On the basis of the above, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur in respect to Hornsea Three for the matters identified by CPRE.

4.31 The National Trust

4.31.1.1 The National Trust have raised concerns regarding the potential impacts associated with the use of Oulton Airfield as the main construction compound for Hornsea Three. Although the National Trust have acknowledged that the proposal would not directly impact on land owned or managed by the National Trust, it has concerns regarding the suitability of the Street for the proposed level of traffic and potential for impacts on the undesignated heritage asset of the airfield and Blickling Conservation Area.

Summary of Applicant's Case

4.31.1.2 The Applicant notes the National Trust is a key land and property owner in the Blickling Conservation Area, including several properties within Oulton Street village. The Applicant acknowledges the historic relationship of RAF Oulton to Blickling Hall, however, as detailed in the Applicant's comments on Stakeholder Responses to the ExA's First Written Questions (Q1.8.8, REP2-005), there has been considerable degradation of the airfield since the end of the Second World War. Whilst the airfield can be considered as an undesignated heritage asset, its significance has been much reduced by the loss of many of its original features. The former RAF Oulton falls outside of the designated boundary of Blickling Conservation Area and there is limited opportunity for the public to visit the remaining features as there are no public rights of way (other than roads) in the immediate vicinity of the airfield.

4.31.1.3 Given the temporary nature of the main construction compound, and that no intrusive works are proposed (and thus impacts are reversible), the conclusion of Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077) is that no significant effects would occur on the setting of Blickling Conservation Area from the use of the main construction compound. Agreement has been reached on this matter with Broadland District Council, as set out in the Statement of Common Ground (most recent version submitted at Deadline 10).

4.31.1.4 The Applicant would note that The National Trust states in their submission at Deadline 1 that, *"…it is important that any construction traffic accessing this compound is aware that it should be accessed from the B1149 and not from a northerly direction where it would pass through the village and could adversely impact upon amenities".* The Applicant has committed to only accessing and egressing the main construction compound from the B1149 and thus would not travel northerly through the village, nor towards Blickling Hall Estate. Additional information on the proposed access to the main construction compound is discussed in section 4.32 below. Of particular note however is that the Applicant has committed, within the Outline CTMP (REP9-048), to consultation with NCC regarding events at Blickling Hall which may necessitate additional traffic management measures to be applied on a specific day. This will avoid or minimise potential conflicts associated with increased traffic on event days.

4.31.1.5 On this basis, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur on National Trust interests as a result of the access to and operation of the main construction compound during the construction phase of Hornsea Three.

4.32 Oulton Parish Council

4.32.1.1 OPC have engaged extensively within the examination processes, raising concerns regarding the potential impacts associated with the use of Oulton Airfield as the main construction compound for Hornsea Three. Particular areas of concerns for OPC have been identified as the suitability of The Street for the proposed level of traffic (including abnormal loads), the core working hours of the compound and the potential for impacts on the residential amenity of the residents of the Old Railway Gatehouse.

4.32.1.2 OPC have also made representations requesting that the consideration of an offshore ring main should be recommended to the Secretary of State.

Summary of Applicant's Case

4.32.1.3 The Applicant has engaged extensively with Oulton Parish Council and NCC (as the local highways authority) in respect to the proposed use of The Street to access and egress from the main construction compound. A suite of mitigation measures including highway intervention works have been developed based on this engagement and have been agreed in principle with NCC (as set out in section 4.2 of the Outline CTMP, REP9-048), with no outstanding concerns regarding the use of The Street to access the main construction compound (either for Hornsea Three alone, or under a cumulative scenario with Norfolk Vanguard). It has been agreed that all physical intervention works to the highway would temporary in nature and removed once the use of the main Hornsea Three construction is complete (unless otherwise agreed with the relevant highway authority, in consultation with Oulton Parish Council (OPC). The only exceptions to this are the junction improvements at The Street/B1149 junction and regrading of the road hump which would be permanent as they represent an improvement to general highway safety.

4.32.1.4 In addition to the mitigation measures noted above, the Applicant has also identified a maximum traffic threshold for the Street (for Hornsea Three only) and a cumulative maximum traffic threshold (for Hornsea Three and Norfolk Vanguard), which would not be exceeded without agreement with NCC, unless in the case of an emergency (paragraph 6.2.1.3 and paragraph 9.2.1.4 of the Outline CTMP, REP9-048). The movement of abnormal loads is included within these maximum traffic thresholds, such that any changes to abnormal load assumptions (e.g. if smaller cable drums were to be used to facilitate movement through narrower road links) would not affect the total traffic movements along the link. The Applicant considers this to provide sufficient comfort to OPC and NCC that the maximum total number of traffic movements which may occur along The Street, and for which the mitigation has been designed, will not be exceeded without a need for further consultation and approvals.

4.32.1.5 The main construction compound will be in active use for up to 30 months during the eight year onshore construction window for Hornsea Three. Section 4.4.1 of this document details the Applicant's case for retaining the core working hours as set out in the Outline CoCP and Outline CTMP, which would apply to the main construction compound. There is potential for abnormal load movements to occur outside of these core working hours; however, the Applicant is required to agree the timing, routing and parameters (weight, length and width) of abnormal load movements with the highways authorities prior to any such movements taking place. Should abnormal load movements be planned outside of the core working hours in areas of high sensitivity, such as past the Old Railway Gatehouse, the Applicant has committed to additional site specific measures which will be discussed and agreed with NCC and BDC's EHO, as set out in the Outline CTMP (paragraph 2.1.7.6). This is a standard approach for the planning of abnormal load movements and is considered appropriate for the receptors present in this location.

4.32.1.6 The Applicant has provided through the course of the Examination (REP6-037 and REP7-044) an assessment of the potential for noise and vibration impacts on residential receptors along The Street (specifically The Old Railway Gatehouse). This confirms that, with the design-in and committed mitigation, no significant noise and vibration effects are predicted. The Applicant has committed to extensive mitigation including permanent works to regrade the existing road hump, management of traffic movements through the outline CTMP, and physical alterations to the property itself in the form of enhanced glazing and acoustic fencing.

4.32.1.7 The proposed physical alterations to the property have been informed by discussions with the residents of the Old Railway Gatehouse during the examination, with a formal offer issued to them in March 2019. The Applicant has had extensive engagement with the Broadland District Council Environmental Health Officer, with a particular focus on potential impacts in Oulton and at the Old Railway Gatehouse. The updated Statement of Common Ground, to be submitted at Deadline 10, provides the following update on BDC's position in respect to noise and vibration impacts on the Old Railway Gatehouse: *"BDC notes the combination of noise and vibration reduction measures that the applicant is now proposing in respect of The Old Railway Gatehouse, and the management of abnormal loads outside of the core working hours. The proposed physical alterations to the property need to be agreed with the resident, however the principle of the mitigation measures specified are acceptable and need to be secured by revised wording in the Outline and detailed CTMP."*

4.32.1.8 It is noted that, as set out in section 3.2 of Volume 1, Chapter 3: Project Description of the Environmental Statement (APP-058), the nature of offshore wind projects, means that the level of detail requested by OPC during the examination process, is in some instances not yet available. Some of this detail, for example the detailed timing and natures of abnormal load movements will be determined during detailed design, and captured within the detailed CTMP to be developed and agreed with the local highways authority post-consent. The Applicant remains committed to engaging with BDC, OPC and the residents of the Old Railway Gatehouse during the detailed design stage post-consent as set out in the Outline CTMP (REP6-015).

4.32.1.9 On this basis, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur as a result of the access to and operation of the main construction compound during the construction phase of Hornsea Three.

4.33 Cawston Parish Council

4.33.1.1 CPC have engaged extensively within the examination processes, raising concerns regarding the potential impacts associated with the use of B1145 as a construction traffic route for Hornsea Three (for the purpose of cable section 9 and cable section 10).. Particular areas of concerns for CPC have been identified as the suitability of the B1145 for the proposed level of traffic, pedestrian safety and the potential for impacts on the residential amenity of the residents within the centre of Cawston.

Summary of Applicant's Case

4.33.1.2 Section 4.2.2 of this document details the Applicant's case in respect to impacts on the local road network and the B1145 through Cawston in particular.

4.33.1.3 The Applicant would note that a full assessment of the potential impacts on amenity (e.g. noise and vibration) as a result of construction traffic has been undertaken and reported within the Environmental Statement and accompanying documentation submitted throughout the Examination (REP7-046). This includes an assessment of the potential cumulative impacts should the construction works of Hornsea Three and Norfolk Vanguard overlap. The assessment for Hornsea Three alone, and cumulatively, concludes no significant effects when taking into account the designed-in and committed mitigation.

4.33.1.4 Notwithstanding this, the Applicant is mindful of outstanding concerns within the community and has made additional commitments within the Outline CTMP (as set out in Section 4.2.2) which would minimise impacts on local residents further.

4.33.1.5 The Applicant has had extensive engagement with the Broadland District Council Environmental Health Officer, with a particular focus on potential impacts in Cawston. The updated Statement of Common Ground, to be submitted at Deadline 10, provides the following update on BDC's position in respect to noise and vibration impacts in Cawston: *"BDC welcomes the reduction of traffic through Cawston (based on the HGV reduction) and has reviewed the noise and vibration report following its submission at Deadline 7. BDC notes that the applicant has offered to reduce the length of the 'working day' for traffic movements through Cawston to 9.5 hours, together with the traffic management proposals including a reduced speed limit. The applicant has also offered to maximise the use of Heydon Road where practicable. These details are to be included in the revised CTMP. Based on these mitigation measures BDC are satisfied that it is unlikely that any significant effects will occur on noise and vibration in Cawston."*

4.33.1.6 On this basis, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur as a result of accessing cable sections 9 and 10 utilising the B1145 through Cawston.

4.34 Parish Councils

4.34.1.1 Due to similarity in the matters raised, a summary of the matters raised by Parish Councils (who have submitted a representation during the course of the Examination), as well as the Applicant's final position on these matters, is provided in Table 4.1. Oulton Parish Council and Cawston Parish Council have been summarised separately in sections 4.32 and 4.33 above due to the specific nature of their concerns.

Table 4.1: Summary of Matters Raised with Other Parish Councils

Matters Raised	Relevant Parish Council	Summary of Applicant's Case
Traffic on the local road network and associated impacts on residential amenity.	Wood Dalling Weybourne Edgefield Corpusty and Saxthorpe Mulbarton	The Applicant has minimised the number of traffic movements required to support the construction phase of Hornsea Three, achieving this through a rationalization of the depth of the haul road with the result of reducing the number of HGVs by a substantial proportion. Furthermore, the Applicant has identified a number of designed in mitigation and management measures to minimise impacts associated with construction traffic as far as practicable. The principles of such measures are set out within the Outline CTMP and will be developed further as part of the detailed CTMP(s) secured by Requirement 18. Key measures comprise: • Identification of maximum traffic thresholds along each road link which would not be exceeded without agreement with NCC, unless in the case of an emergency (paragraph 6.2.1.3 of the Outline CTMP, REP9-048); and • A commitment to agree routing and HGV timing of construction traffic movements on key tourist links (such as the A149) during the peak period of June to September. The Applicant would note that a full assessment of the potential impacts on the local road network, and associated impacts on amenity (e.g. noise and vibration) has been undertaken and reported within the Environmental Statement and accompanying documentation submitted throughout the Examination. The Applicant therefore considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur.
Tourism and recreational resources	Weybourne Edgefield Corpusty and Saxthorpe	Section 4.3.4 of this document details the Applicant's case in respect to impacts on tourism and recreational resources.

Matters Raised	Relevant Parish Council	Summary of Applicant's Case
Location of the onshore HVDC converter/HVAC substation and potential for landscape and visual impacts, as well as property value	Mulbarton Swardeston	The Applicant has carried out a robust site search and selection process for the HVDC converter/HVAC substation, as detailed in Section 4.11.5 of Volume 1, Chapter 4: Site Selection [APP-059] of the Environmental Statement and Section 3.2 of Volume 6, Annex 4.3: Refinement of the Onshore Cable Corridor and Associated Infrastructure [APP-094]. The reasons for Option B being chosen and included in the Application documentation are described in detail in the documents referenced above. The Applicant is confident Option B remains the most appropriate site for the onshore HVDC converter/HVAC substation. The access has been subject to extensive consultation with Highways England and Norfolk County Council and is agreed between all parties. The design of the access will be further developed during detailed design, although an outline has been agreed with NCC and included within the Outline CTMP (REP9-048). The Applicant has committed to utilise HDD for the onshore cable corridor crossing of the B1113 to minimise impacts on hedgerows and trees, with the exception of those removed to enable safe access and egress from the onshore HVDC converter/HVAC substation. Furthermore, the Applicant has committed to pre-planting sections of the landscape mitigation at the onshore HVDC converter/HVAC substation within the Outline LP (paragraph 3.1.3.4) in order to maximise the screening provided during construction and in the early years of operation. Design principles and objectives for the onshore HVDC converter/HVAC substation have also been identified by the Applicant (Annex A of REP4,026), designed to further minimise potential landscape, visual and heritage impacts of the infrastructure, and would be applied during the detailed design of the infrastructure, as required by Requirement 7 of the draft DCO. There is no evidence to suggest that the onshore works associated with the Hornsea Project Three Offshore Wind Farm development would have a negative impact on the property value at any location along the route, including at the onshore HVDC converter/HVAC booster station. Notwithstanding this, 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]. On the basis of the above, the Applicant considers that the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur as a result of the onshore HVDC converter/HVAC substation, beyond those identified in respect of the historic environment (see section 4.4.3 of this document and Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077). Best endeavours have been applied in order to minimise the impacts of the onshore HVDC converter/HVAC substation on the receiving environment, with details of the site-specific mitigation to be determined during the detailed design stage, as is typical in this scale of project.
Core working hours	Edgefield	Section 4.4.1 of this document details the Applicant's case for retaining the core working hours as set out in the Outline CoCP and Outline CTMP.
Transmission technology and Phasing	Swardeston Edgefield	Section 2.1.4 of this document details the Applicant's case for retaining both HVAC and HVDC transmission systems as options, whilst section 2.2 details the Applicant's case for retaining up to two construction phases.

4.35 Members of the Public

4.35.1.1 Members of the public have engaged at various stages within the Examination, with key concerns focusing on the impact of traffic movements on the local road network and associated impacts on pedestrian safety (particularly in respect to Cawston), residential amenity (noise, vibration and air quality).

4.35.1.2 Concerns have also been raised by members of the public in respect to the potential for elector-magnetic fields (EMF) above the onshore cables and particularly at the Hornsea Three crossing of Norfolk Vanguard.

Summary of Applicant's Case

4.35.1.3 Table 4.1 details the Applicant's case in respect to impacts on the local road network and associated impacts on residential amenity. The position in respect to Cawston in particular, is set out in Section 4.2.2 and 4.32.

4.35.1.4 In respect to general concerns raised regarding the construction of Hornsea Three, the Applicant would note that it has committed to the preparation of a suite of management plans which set out the various mitigation measures that the Applicant and its construction contractors will be required to adopt and implement for all construction activities associated with Hornsea Three. Outline versions of the Landscape Plan, Construction Traffic Management Plan, Ecological Management Plan and Code of Construction Practice have been prepared and regularly updated throughout the examination in response to feedback from NCC, district councils, parish councils and members of the public. The final outline versions we submitted at Deadline 9 as REP9-048, REP9-060, REP9-065 and REP9-063 respectively. Each of these will be developed during the detailed design phase, as is standard with this type of project, and submitted for approval in accordance with the relevant DCO Requirement.

4.35.1.5 Magnetic field levels for Hornsea Three are provided in Volume 4, Annex 3.3 of the Environmental Statement. 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. Further information is provided in Appendix 19 to the Applicant's response to Deadline 1, which concludes that 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 guideline levels and the combined impact of the projects is compliant. This summary is based on an independent study prepare by National Grid, jointly commissioned by Orsted and Vattenfall.

4.35.1.6 With the implementation of design-in mitigation, and the measures identified within the relevant management plans, the Applicant considers members of the public, the Ex.A and ultimately the Secretary of State can have confidence significant effects (in EIA terms) will not occur as a result of the construction and operation of Hornsea Three.

A.1. Annex 1: Planning Policy Summary Assessments

A.1 This annex provides a summary assessment of Hornsea Three's compliance with National Policy Statements, Marine Policy Statements, the National Planning Policy Framework, and relevant Local Development Plans with relevance to onshore matters and stakeholders. The tables below supplement the Planning Statement (APP-177) and Environmental Assessment of Hornsea Three which accompanied the Application for development consent.

Table 3.1: Compliance with key provisions of National Policy Statements and Marine Policy Statements

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
Offshore – to MHW						
Marine Processes	Paragraphs 5.5.6 to 5.5.11	Paragraphs 2.6.81; 2.6.113; and2.6.190 to 2.6.197		2.6.8.1; 2.6.8.3; and 2.6.8.6	The applicant should undertake the relevant coastal geomorphological and sediment transfer modelling to predict and understand impacts and help identify relevant mitigating or compensatory measures. The applicant must demonstrate how the impacts will be managed to minimise adverse impacts on other parts of the coast.	The Applicant has identified all the specified marine processes details in Volume 2, Chapter 1: Marine Processes of the Environmental Statement (APP-061). This concludes that whilst marine processes themselves are not receptors, any changes to marine processes has the potential to indirectly impact other environmental receptors (such as, for example, benthic ecology). This Chapter concludes that the significance of effect to identified receptors was found to be negligible or minor adverse during the construction, operation and decommissioning phases of Hornsea Three. **Agreed position with Relevant Authority:** Table 3.1 of the Statement of Common Ground – Marine Management Organisation January 2019 (REP4-018) confirms that *'No significant cumulative effects on marine processes pathways are predicted.'* and other matters have been suitably addressed through supplementary statements. Table 3.2 of the Statement of Common Ground – North Norfolk District Council March 2019 (REP7-014) confirms that *'The effects of HDD on the nearshore marine processes (including beach morphology, sediment transport and hydrodynamics) has been robustly assessed'*

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						however NNDC are not in agreement with the Applicant's position on open-cut trenching and prefers HDD for bringing cables onshore. Whilst this is a preference and a matter of disagreement, it is not considered to present a policy conflict as neither the HDD nor the open cut trenching scenarios would result in significant adverse effects in EIA terms on the coastal geomorphology or sediment transport systems at the Hornsea Three landfall or wider north Norfolk coast.
Fish and Shellfish Ecology	Paragraphs 5.3.1; 5.3.9 to 5.3.12 5.3.15 5.3.17 and 5.3.18	Paragraphs 2.6.64 to 6.6.71 2.6.73 to 2.6.77		2.6.1	The applicant is required to assess effects on offshore ecology and biodiversity for all stages of the lifespan of the proposal, identifying species that are the most likely receptors of impacts with respect to feeding areas, spawning grounds, nursery grounds and migration routes.	The Applicant has identified all potential effects on fish and shellfish ecology in Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement (APP-062). This concludes that throughout the construction, operation and decommissioning phases, all impacts were found to have either negligible, minor adverse or minor beneficial effects on fish or shellfish receptors within the study area. Cumulative impacts will be at worst, of minor significance. Transboundary impacts were not predicted to have significant effects on fish and shellfish populations of other European Economic Area (EEA) States **Agreed position with Relevant Authority:** Table 3.3 of the final Statement of Common Ground – Marine Management Organisation (as submitted at Deadline 9) confirms that effects on fish and shellfish ecology from Hornsea Three will not be significant in EIA terms, either alone or cumulatively with other plans or projects.
Historic environment (Marine Archaeology)		Paragraphs 2.6.140 to 2.6.145		2.6.6.3; 2.6.6.5 and 2.6.6.9	The applicant should ensure that the extent of the impact of the proposal on the significance of any heritage assets affected can be adequately understood, and the impacts explained.	The Applicant has identified all potential effects on marine archaeology in Volume 2, Chapter 9: Marine Archaeology of the Environmental Statement (APP-069). Effects are defined throughout the assessment as adverse, nevertheless, they can also be seen as beneficial through improved understanding of human history and prehistory. The potential impacts are considered to be minor adverse (not significant in EIA terms) during the construction, operation, maintenance and decommissioning of Hornsea Three. This has been agreed in the SoCG with Historic England (REP9-026).

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
Onshore						
Geology and Ground Conditions	Paragraphs 5.3.3 and 5.3.4 5.3.8 5.3.10 and 5.3.11 5.3.13 5.3.18 5.10.8 and 5.10.9 5.10.22 5.15.1 to 5.15.3		Paragraphs 2.8.8 and 2.8.9		The applicant should clearly set out the effects on internationally, nationally and locally designated sites of geological conservation, groundwater resources, underground infrastructure, and other mineral resources, and show how the project has taken advantage of opportunities to conserve or enhance these interests. The applicant should ensure that construction activities are confined to the minimum areas required for the works.	The Applicant has identified all potential effects on geology and ground conditions in Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement (APP-073) and has given due regard to the appropriate plans and policies within the assessments. This concludes that assuming successful implementation of the proposed mitigation, impacts on geology and ground conditions were assessed as being of minor adverse significance or less during the construction, operation and maintenance, and decommissioning phases of Hornsea Three (Table 1.18 of APP-073). **Agreed position with Relevant Authority:** Table 3.3 of the Statement of Common Ground – Norfolk County Council January 2019 (REP4-019) confirms that *'NCC does not have any minerals and waste planning concerns at this stage. It agrees that the Applicant should continue to consult with NCC as the application is progressed through Examination and the detailed design stage.'* Table 4.1 of the Statement of Common Ground – Environment Agency November 2018 (REP1-203) confirms that the assessment of potential effects on geology and ground conditions receptors, in particular the effects on groundwater quality and groundwater flow is appropriate and no impacts from the construction, operation and maintenance and/or decommissioning of Hornsea Three will be significant in EIA terms, given the implementation of the measures adopted as part of Hornsea Three.
Hydrology and Flood Risk	Paragraphs 4.8.6 and 4.8.8 5.7.4 to 5.7.11	Paragraph 2.3.4	Paragraph 4.4.1		The applicant must take into account the potential impacts of climate change and ensure that the appropriate mitigation of adaptation measures are identified. Consultation should	The Applicant has identified all potential effects on hydrology and flood risk in Volume 3, Chapter 2: Hydrology and Flood Risk of the Environmental Statement (APP-074). This concludes that assuming successful implementation of the proposed mitigation measures the impacts on hydrology and flood risk from Hornsea Three alone were assessed as being of minor adverse significance or less during the

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
	5.7.12 and 5.7.13 5.7.15 and 5.7.16 5.7.18 to 5.7.25 5.15.2 and 5.15.3 5.15.6 to 5.15.10				be undertaken the Environment Agency and other relevant bodies. The application must be supported by an appropriate Flood Risk Assessment, and a Sequential Test has been applied. Impacts to water quality and water resources must be considered.	construction, operation and maintenance, and decommissioning phases of Hornsea Three (Table 2.20 of APP-074). The application is supported by an FRA which takes into account the impacts of climate change (Volume 6, Annex 2.1: Onshore Infrastructure Flood Risk Assessments (APP-124)), focused on the HVAC booster station, HVDC converter/HVAC substation and those areas on the onshore cable corridor in flood zones 2 and 3. It has been demonstrated that the sequential test is not applicable in this case **Agreed position with Relevant Authority:** All matters relating to hydrology and flood risk are agreed in the Statements of Common Ground with Norfolk County Council as Lead Local Flood Authority (REP9-027) and the Environment Agency (REP1 203). The district councils (i.e. Broadland, North Norfolk and South Norfolk) have deferred their position to NCC as the Lead Local Flood Authority. Table 4.1 of the Statement of Common Ground – Natural England November 2018 (REP1-218) confirms Natural England agree that the potential impacts and effects of runoff are considered in Volume 3, Chapter 2: Hydrology and Flood Risk (APP-074) (see paragraphs 2.11.1.14, 2.11.1.9, 2.11.1.19) and no significant effects were identified. As summarised in paragraphs 4.8.5.15 and 4.8.5.16 of the Statement of Case, Natural England have raised new concerns on the Soil Management Strategy in the CoCP which have not yet been resolved but has indicated that the resolution to these would be a clarification not a fundamental change and therefore this is not a policy consideration.
Ecology and Nature Conservation	Paragraphs 4.3.1 5.3.3 to 5.3.11 5.3.13 to 5.3.20		Paragraph 2.7.2		The applicant must set out any effects on internationally, nationally and locally designated sites of ecological conservation importance, on protected species and other species identified as being of	The Applicant has identified potential effects on ecology and nature conservation in Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075). Habitats present within the permanent and temporary land take for the onshore elements of Hornsea Three are predominantly arable land of little intrinsic conservation value. No direct impacts on designated sites from cable installation will occur as HDD is being employed under all

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
					principal importance. The applicant should show how the project would take opportunities to conserve, mitigate and enhance biodiversity conservation interests, and consider reasonable alternatives.	designated sites within the onshore cable corridor. Assuming the successful implementation of the proposed mitigation measures the impacts on ecology and nature conservation from Hornsea Three alone were assessed as being of moderate to minor adverse significance or less, and in some cases minor positive, once proposed habitat enhancements mature. **Agreed position with Relevant Authority:** Table 3.5 of the Statement of Common Ground – Norfolk County Council January 2019 (REP4-019) confirms NCC's agreement that '*the onshore cable corridor avoids most important wildlife areas and* [with] *the inclusion of designed-in mitigation to avoid ecologically sensitive areas…the effects on County Wildlife Sites and habitats are …. not significant in EIA terms*'. Table 3.3 of the Statement of Common Ground – North Norfolk District Council March 2019 (REP7-014) confirms that *'Subject to issues surrounding the potential effects on Pink Footed Geese, NNDC are satisfied that the potential effects on ecology and nature conservation have been adequately assessed.'* With regard to the Outline Pink Footed Geese Management Plan (PFGMP) NNDC '*are reassured that reasonable efforts will be made to ensure that there are no likely significant effect on PFG'*. Table 3.2 of the Statement of Common Ground – Broadland District Council March 2019 (REP7-017) confirms that *'BDC are satisfied that a robust route refinement process has been undertaken to optimise the route in respect of avoiding hedgerows, designated sites and areas of woodland.* BDC also state that they are *'satisfied that sufficient principles are included in the Outline CoCP to protect hedgerows during the construction phase'.* Table 4.3 of the Statement of Common Ground – Environment Agency November 2018 (REP1-203) sets out that the EA agrees in principle that the assessment of potential effects on ecology and nature conservation landward of MHWS during the construction, operation and maintenance, and decommissioning of Hornsea Three in Section

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						3.11 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) is appropriate and accurate given the implementation of the measures adopted as part of Hornsea Three (outlined in Section 3.10 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075)). The EA await site specific evaluation in the detailed CoCP. In their comments on the Report on Implications for European Sites for Deadline 7 (REP7-065) Natural England confirm that '*the potential impacts* [relating to PFG] *can be mitigated, but discussions with the Applicant on the mitigation plan are ongoing*'. A summary of the Applicant's position on this is presented in section 4.8.5 of the Statement of Case. Table 4.1 of the Statement of Common Ground – The Wildlife Trusts and Norfolk Wildlife Trust November 2018 (REP1-227) agrees the EIA's assessment of Policy and Planning, the Baseline environment, the Assessment methodology and the Assessment conclusions, noting the approach taken to GCN mitigation, trees and hedgerows (including the enhancement of hedgerows) is appropriate. All onshore matters are agreed with the RSPB.
Landscape and visual resources and seascape and visual resources	Paragraphs 4.2.8 5.9.5 to 5.9.18 5.9.21 to 5.9.23	Paragraphs 2.4.2 2.5.33 2.6.201 to 2.6.210 2.7.37	Paragraphs 1.7.3 and 1.7.5 2.2.6 2.6.1 2.8.2		The applicant should ensure that the development incorporates good design in respect of landscape and visual amenity and considers the effects on landscape and seascape character and individual landscape and seascape elements, during construction and operation. Where the applicant has identified a precise route for	Hornsea Three has assessed effects on landscape, seascape and visual resources in Volume 2, Chapter 10: Seascape and Visual Resources (APP-070), and Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement (APP-076) and had due regard to relevant policy. The identified landscape and visual impacts for Hornsea Three vary from negligible to major adverse; the proposed mitigation measures through the Outline Landscape Plan (REP4-025) seek to mitigate any significant impacts. The offshore components of Hornsea Three would not cause any significant landscape or visual effects on land-based receptors. During the operation phase the onshore cable would be buried and not result in any landscape or visual impacts.

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
					the cable from the wind farm to an onshore substation, the applicant should asses the effects of the cable. Any significant adverse impacts must be clearly outweighed by the environmental, social and economic benefits.	The identified seascape impacts for Hornsea Three during the construction and decommissioning phases range from negligible to moderate adverse. Cumulative impacts range from negligible to moderate adverse. There is no potential for significant transboundary effects. **Agreed position with Relevant Authority:** All relevant planning authorities agree that the Applicant has identified all relevant policies and had due regard to them within their assessments. The Applicant refers to section 4.3.3 of the Statement of Case for a summary of the outstanding areas of disagreement between the Applicant and NNDC on landscape and visual receptor matters, which comprise the timing and duration of maintenance of landscape planting. The Applicant refers to section 4.4.2 of the Statement of Case for a summary of the outstanding areas of disagreement between the Applicant and SNC, which comprise the assessment of trees and hedgerows and the timing and duration of maintenance of landscape planting. Table 3.3 of the Statement of Common Ground – Broadland District Council March 2019 (REP7-017) confirms that *'BDC has no specific concerns to raise in respect to the baseline and assessment methodology, they are considered appropriate to inform the assessment.'* BDC agree with the Applicant on all matters. **Natural England Position:** Natural England does not agree that sufficient landscape mitigation has been proposed within the Norfolk Coast AONB and has advised the Applicant that compensation (Natural England has provided examples of the National Grid Viking Link scheme and the Wormington to Sapperton gas pipeline) is provided through the management body of the AONB (Norfolk Coast

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						Partnership). The Applicant's position on this matter is set out in section 4.8.6 of the Statement of Case and supports the Applicant's position that it is compliant with policy in regard to this matter. The outstanding concerns highlighted above do not comprise a policy conflict, as the Applicant has agreed the content (mitigation and enhancement) of the Landscape Plan with the LPAs. Table 3.2 of the Statement of Common ground – South Norfolk Council March 2019 (REP7-103) confirms that the Applicant has identified all appropriate plans and policies relevant to landscape and visual resources in the application area and has given due regard to them within the assessments. However, SNC does not agree that sufficient tree and hedgerow information has been provided and whilst it does not disagree with the assessment conclusions it '*considers that relevant surveys for both hedgerows and trees should not be a matter left until post consent*'.
Historic environment (Onshore)	Paragraphs 5.8.8 and 5.8.9 5.8.11 to 5.8.18		Paragraph 2.2.6		The applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The applicant should have consulted the relevant Historic Environment Record and assessed the heritage assets themselves.	The Applicant assessed effects on the historic environment in Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077). The Applicant has consulted with Historic England and Norfolk County Council to agree the appropriate survey methodologies. The significance of the effects of Hornsea Three on heritage assets during the construction, operation and decommissioning phases of the development vary from negligible to moderate adverse and are not significant in EIA terms. Cumulative impacts are predicted to result in effects of minor to moderate adverse significance. The Applicant has developed a substantial soft landscaping proposal at both the onshore HVAC booster station and onshore HVDC converter/HVAC substation as set out in the Outline LP (REP9-060) to minimise potential effects. The assessment concludes that the HVDC converter/HVAC substation would impact the setting of Keswick Hall, but that the harm caused would be less than substantial based on the NPPF test (as there would

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						be no physical harm to the designated asset) and that this harm should be weighed against the public benefits of the proposal **Agreed position with Relevant Authority:** NCC defer above ground historic environment matters to the district councils. NNDC and BDC are in agreement with the Applicant on all matters relating to the historic environment. Table 3.3 of the Statement of Common Ground – South Norfolk Council March 2019 (REP7-013) confirms that *'South Norfolk Council agrees with these statements.'* relating to planning and policy, the baseline environment, assessment methodology and conclusions of Volume 3, Chapter 5: Historic Environment of the Environmental Statement (APP-077). SNC have indicated that the mitigation for the onshore HVDC converter/HVAC substation will be more effective under the HVAC scenario (where there is a maximum building height of 15 m), and less effective, and not sufficient, under the HVDC scenario (where there is a maximum building height of 25 m). However, the Applicant and South Norfolk Council agree that there remains a difference of professional opinion on the magnitude of impact to Keswick Hall, both the Applicant and SNC agree the impact on its setting would be less than substantial based on the NPPF test (as there would be no physical harm to the designated asset) and that this harm should be weighed against the public benefits of the proposal. The Applicant's position on this matter is set out in section 4.4.3 of the Statement of Case. As set out in the Statement of Reasons, the Applicant considers that the public benefits of the proposal, namely the delivery of renewable energy, is material to this application and outweigh the potential harm caused to Kewsick Hall such that Hornsea Three can be considered compliant with NPPF Paras 193-196.

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						Table 4.1 of the Statement of Common Ground – Historic England January 2019 Historic England confirms their agreement with the baseline, assessment methodology and assessment conclusions.
Land Use, Agriculture and Recreation (Land Use)	Paragraphs 5.10.5 5.10.7 to 5.10.9 5.10.14 to 5.10.16 5.10.24				The applicant should seek to minimise effects on best and most versatile agricultural land, preferably using land in areas of poorer quality, and seek to minimise impacts on soil quality. The applicant should safeguard any mineral resources and include mitigation measures to address adverse effects on coastal accesses, National Trails and other Public Rights of Way.	The Applicant has assessed effects on land use, agriculture and recreation in Volume 3, Chapter 6: Land Use, Agriculture and Recreation of the Environmental Statement (APP-078). This concludes that assuming successful implementation of the proposed mitigation measures, and the restoration of temporarily affected land to its former agricultural use, the impacts from Hornsea Three alone were assessed as being of moderate adverse significance or less, and not significant in EIA terms. Following input from the National Farmers Union and Land Interest Group, additional reassurances have been agreed regarding the role of the Agricultural Liaison Officer and Soil Management Strategy (Outline CoCP) among other issues. **Agreed position with Relevant Authority:** All matters relating to land use, agriculture and recreation have been agreed with Norfolk County Council. North Norfolk District Council has one outstanding point of disagreement with the Applicant on this issue; they would prefer that ducting for all phases was carried out at the beginning of the project to reduce impacts. The Applicant's position on this is set out within the Statement of Case and on the basis of this, the Applicant does not consider there to be a policy conflict.
Traffic and Transport	Paragraphs 5.13.1 to 5.13.9 5.13.11 and 5.13.12	Paragraphs 1.7.2 and 2.6.4			The applicant should consider and mitigate transport impacts, including the transportation of materials, good and personnel to and from a development during all project phases. Where appropriate, the applicant	The Applicant has assessed effects on traffic and transport in Volume 3, Chapter 7: Traffic and Transport of the Environmental Statement (APP-079) with due regard to all relevant policy. The identified Traffic and Transport impacts for Hornsea Three during the construction, operation and maintenance, and decommissioning phases, assuming successful implementation of the proposed mitigation measures, were assessed as being of minor adverse significance or less, and therefore not significant in EIA terms. The Applicant has minimised the number

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
					should prepare a travel plan including measures to mitigate transport impacts.	of traffic movements required to support the construction phase of Hornsea Three, achieving this through a rationalization of the depth of the haul road with the result of reducing the number of HGVs by a substantial proportion. Furthermore, the Applicant has identified a number of designed in mitigation and management measures to minimise impacts associated with construction traffic as far as practicable. The principles of such measures are set out within the Outline CTMP and will be developed further as part of the detailed CTMP(s) secured by Requirement 18. The Applicant has prepared a voluntary Outline Travel Plan (REP2-013) which provides the basis for the detailed Travel Plan to be provided as part of the detailed CTMP(s). **Agreed position with Relevant Authority:** North Norfolk District Council, Broadland District Council and South Norfolk Council defer to Norfolk County Council for traffic and transport matters. Traffic and transport assessments, and the need for mitigation at key links have been discussed and in principle agreed with Norfolk County Council and Highways England, with consultation from other stakeholders including parish councils and residents. Table 3.9 of the Statement of Common Ground – Norfolk County Council March 2019 (REP9-027) confirms that all matters are agreed with the exception of mitigation through Cawston (where the outline mitigation scheme requires further development) and cumulative impacts with Norfolk Vanguard (where discussions are ongoing due to the continued Examination of Norfolk Vanguard). However, NCC have indicated that both the outstanding matters can be resolved through the development of the detailed CTMP(s), as is standard for typical large scale onshore construction projects. Table 3.1 of the Statement of Common Ground – Highways England March 2019 (REP7-015) confirms that *'Highways England is satisfied*

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						with the assessment provided' and no outstanding concerns remain, indicating no policy conflict.
Noise and Vibration	Paragraphs 5.11.4 to 5.11.13 5.11.6	Paragraph 2.4.2			The applicant should consider the impacts of noise and vibration throughout the construction, operation and decommissioning of the proposal, including impacts from ancillary activities.	The Applicant has identified all potential noise and vibration effects in Volume 3, Chapter 8: Noise and Vibration of the Environmental Statement (APP-080). Surveys have been undertaken to determine the measures baseline sound levels at locations representative of the potentially most affected noise receptors. The identified impacts for Hornsea Three were assessed as being of minor adverse significance or less, and therefore not significant in EIA terms. **Agreed position with Relevant Authority:** All matters relating to noise and vibration are agreed with Norfolk County Council (REP4-019) and North Norfolk District Council (REP7-014). It was agreed that information relating to the operational design criteria of the onshore HVAC booster station in terms of the tonal and frequency noise elements would form part of the Noise Management Plan to be agreed post consent and secured by the DCO. South Norfolk Council disagrees with the Applicant's position on core working hours (i.e. the Applicant's proposal to start at 07:00) with regard to noise and vibration impacts on nearby sensitive receptors. However, South Norfolk Council agree with the conclusions of the assessment that the effects are not significant in EIA terms, and therefore, it is not considered to be a policy conflict. All matters relating to traffic associated noise and vibration are agreed with Broadland District Council (submitted at Deadline 10).
Air Quality	Paragraphs 5.2.6 and 5.2.7	Paragraph 2.6.37			The applicant should describe any significant air emissions, their mitigation and any residual effects, distinguishing between the project stages and taking account of any significant and predicted	The Applicant has identified all potential effects on air quality in Volume 3, Chapter 9: Air Quality of the Environmental Statement (APP-081). This concludes that assuming successful implementation of the proposed mitigation measures within the Outline CoCP, the effects on air quality from Hornsea Three were assessed as being not significant in EIA terms.

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
					absolute emissions from any road traffic generated by the project.	**Agreed position with Relevant Authority:** The Applicant has an agreed position with NNDC (REP7-014), BDC (REP7-017), SNC (REP7-013) and NCC (REP4-019) that the potential air quality effects are not significant in EIA terms, and therefore, it is not considered to be a policy conflict.
Socio-Economics	Paragraphs 5.12.2 and 5.12.3 5.12.6 to 5.12.9				The applicant should consider the likely socio-economic impacts and effects at a local or regional level, including the provision of jobs, local services, improvements to infrastructure and tourism throughout the construction, operation and decommissioning phases of the development.	The Applicant has identified all potential effects on socio-economics in Volume 3, Chapter 10: Socio-Economics of the Environmental Statement (APP-082). The approach considers the impact of the construction, operation and management, and decommissioning phases of Hornsea Three on the UK as well as the local economic development study area. This concludes that during the construction phase and operations and maintenance phase there is potential for significant beneficial impacts in relation to employment creation and access to employment among local residents. Whilst some potential adverse impacts have been identified in terms of tourism and recreation, these impacts are not assessed as significant in EIA terms. The Applicant has also produced an Outline Skills and Employment plan (REP4-064) which sets out a vision for ensuring a proactive and transparent approach to communicating skills and employment related information and opportunities relating to Hornsea Three in the two sub-regions and establishes the scope of the final Skills and Employment Plan that will be approved under Requirement 22 of the DCO. The benefits which will be delivered by the project are in compliance with the NPS, particularly with regards to employment creation. **Agreed position with Relevant Authority:** Broadland District Council and Great Yarmouth District council (as a neighbouring LPA with post facilities) are in agreement with the Applicant regarding socio-economics issues. Table 3.12 of the Statement of Common Ground – Norfolk County Council March 2019 (REP9-027) states that *'NCC have no specific points to raise to assessment conclusions.'* and that *'While welcoming*

Issue	NPS-1	NPS-3	NPS-5	MPS	Summary of Policies	Response
						the reduction in construction duration, it is felt that Ørsted should commit to providing appropriate compensation for businesses and communities adversely affected by the construction works. In this regard, NCC welcome continued engagement with the Applicant in respect to a Community Benefit Fund' North Norfolk District Council do not agree with the Applicant's position on tourism impacts as presented in Volume 3, Chapter 10: Socio-economics of the Environmental Statement (APP-082). The Applicant's position is set out within the Statement of Case and confirms that as the onshore cable corridor is limited to a relatively small part of NNDC as a whole, and thus has the potential to impact a small proportion of its visitor economy. As such, the Applicant considers the assessment in APP-082 meets the policy requirements and does not represent a conflict with the NPS policy.
Electro-magnetic fields (EMF)			Paragraphs 2.10.5 2.10.9 and 2.10.15		The applicant should have considered factors relevant ensuring compliance with the Electricity Safety, Quality and Continuity Regulations 2002: optimal phasing of overhead lines, and any new advice emerging from the Department of Health.	Magnetic field levels for Hornsea Three are provided in Volume 4, Annex 3.3 of the Environmental Statement. 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. Further information is provided in Appendix 19 to the Applicant's response to Deadline 1, which concludes that 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 guideline levels and the combined impact of the projects is compliant. This summary is based on an independent study prepare by National Grid, jointly commissioned by Orsted and Vattenfall. This information concludes that the levels of EMFs from the proposed development would be well below the guideline public exposure reference levels set to protect health and as such does not represent a conflict with policy.

Table 3.2: Compliance with key provisions of the National Planning Policy Framework

Issue	NPPF Para	Summary of Policies	Response
Geology and Ground Conditions			
Minerals Safeguarding	Para 204	Sets out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place.	Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement (APP-073) identifies the relevant designated sites and assesses impacts by Hornsea Three. This concludes that there would be no significant effects on geology and ground conditions and there would be no conflict with this policy. **Agreed position with Relevant Planning Authority:** Table 3.3 of the Statement of Common Ground – Norfolk County Council January 2019 (REP4-019) confirms that *'NCC does not have any minerals and waste planning concerns at this stage.'*
Designated Sites	Para 170	This policy seeks to protect and enhance sites of biodiversity and geological value and soils.	Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement (APP-073) identifies the relevant designated sites and assesses impacts by Hornsea Three. This concludes that there would be no significant effects on geology and ground conditions and there would be no conflict with this policy. **Agreed position with Relevant Planning Authority:** Table 4.1 of the Statement of Common Ground – Environment Agency November 2018 (REP1-203) sets out agreement between the parties on this matter.
Hydrology and Flood Risk			
Flood Risk	Paras 155-165	The NPPF seeks to steer development away from the areas at highest risk of flooding, and where necessary in such areas the development should be made safe from flooding for the lifetime of the development.	The Applicant considers the policy considerations for this matter to be the same as those set out for hydrology and flood risk in Table 3.1 above.
Ecology and Nature Conservation			

Issue	NPPF Para	Summary of Policies	Response
Designated Sites and Habitats and Ecological Enhancement	Para 170, Para 175	These policies seek to conserve and enhance the natural environment, particularly within designated sites, by minimising impacts on biodiversity and providing net gains in biodiversity where possible.	Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) considers potential effects on designated sites and habitats and concludes that there would be no significant effects in EIA terms. The Applicant has sought, where practicable, to provide ecological enhancements (for example the management of new woodland at substation sites, planting replacement hedgerows with a species-rich mix, promoting a habitat creation variant for great-crested newt mitigation works) as set out in the Outline Ecological Management Plan (REP7-019) and the Letter of No Impediment issued by Natural England on 1st April 2019 as submitted into at Deadline 10. **Agreed position with Relevant Authority:** Table 4.3 of the Statement of Common Ground – Environment Agency November 2018 (REP1-203) and Table 4.1 of the Statement of Common Ground – Natural England November 2018 (REP1-218). There is no policy conflict on these matters.

Issue	NPPF Para	Summary of Policies	Response
Protected Species	Paras 170 & 174	The planning system should contribute to the protection and enhancement of the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, including the protection and recovery of priority species	Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) considers the potential effect on protected species from the construction and operation of Hornsea Three. This concludes that there would be no significant effects in EIA on protected species, with the mitigation described in the Outline EMP in place, and there would be no conflict with these policies. **Agreed position with Relevant Authority:** *Environment Agency*: All matters have been agreed in the SoCG between the Applicant and the Environment Agency (REP1-203). *RSPB:* All matters relating to onshore protected species, including Pink-footed Goose, are agreed as set out in the SoCG between the Applicant and the RSPB (REP9-029). *Natural England* - In Natural England's comments on the Report on Implications for European Sites for Deadline 7 (REP7-065) Natural England confirmed that '*the potential impacts* [relating to Pink-footed Goose] *can be mitigated, but discussions with the Applicant on the mitigation plan are ongoing'*. The Applicant will continue to develop the Pink-footed Goose Management Plan (PFGMP) with Natural England, but does not consider there to be policy conflict in this case as the Applicant has committed to significant mitigation to minimise disturbance to this species, and with this mitigation in place there is no LSE (see section 4.8.5 of the Statement of Case for further details). The Applicant would note that Letters of No Impediment have been received from Natural England in respect to badgers (REP4-029) and Great Crested Newts (submitted at Deadline 10).
Landscape and visual resources and seascape and visual resources			

Issue	NPPF Para	Summary of Policies	Response
Landscape Character and Settlement Character	Para 170	This policy places great weight on the protection and enhancement of valued landscapes and the need to recognise the intrinsic character and beauty of the countryside.	Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement (APP-076) concludes that there is potential for landscape effects as a result of the onshore HVDC converter/HVAC substation and onshore HVAC booster station. The onshore cables will be buried underground for their entire length and are not predicted to have significant landscape or visual effects on sensitive receptors following construction. With the proposed landscape planting, Hornsea Three would not conflict with this policy. **Agreed position with Relevant Authority:** Table 4.2 of the Statement of Common Ground – Natural England, November 2018 (REP1-218) does not identify any policy conflict.
Area of Outstanding Natural Beauty	Para 172	The NPPF places great weight on the conservation and enhancement of landscapes within the AONB, which have the highest status of protection.	Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement (APP-076) considers the landscape effect of the onshore cable route on the AONB. The Hornsea Three onshore cable corridor would not undermine the social qualities of the AONB, or the reasons for its designation. The assessment further concludes that the HVAC booster station would have a negligible effect on the AONB. This concludes that there would be no significant effects in EIA terms on the AONB and its setting and there would be no conflict with these policies **Agreed position with Relevant Authority:** Table 4.2 of the Statement of Common Ground – Natural England, November 2018 (REP1-218) does not identify any direct policy conflict, however a number of items are under discussion with regards to the construction impacts around the landfall area and public rights of way. The Applicant's position on this matter is set out within the Statement of Case, and confirms that any effect on the AONB would be temporary during construction, and that in a relatively short time following the completion of onshore construction there would be an ecological and landscape enhancement as a result of planting works detailed within the Outline LP. This is therefore considered to compliant with policy. The Applicant has further considered the special qualities of the AONB, and the policies detailed within the Norfolk Coast AONB management plan, and is not in conflict with any of these due to being a renewable energy development with considerate design.
Historic environment (Onshore)			

Issue	NPPF Para	Summary of Policies	Response
Setting of Heritage Assets	Para 193 -196	These policies place great weight on the protection of heritage assets and the setting of heritage assets. Where a proposal leads to less than substantial harm the harm still must be weighed against the public benefit of the proposal.	The Applicant considers the policy considerations for this matter to be the same as those set out for Historic Environment (onshore) in Table 3.1 above.
Archaeology	Para 189	Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment.	Volume 3, Chapter 5 Historic Environment of the Environmental Statement (APP-077) considers the effects of the onshore elements of Hornsea three with regards to buried archaeological remains. This concludes that the no significant effects in EIA terms are predicted and therefore there is no policy conflict. **Agreed position with Relevant Authority:** NNDC, BDC and SNC all defer their comments on archaeology to NCC. Table 3.7 of the Statement of Common Ground – Norfolk County Council January 2019 (REP4-019) confirms that NCC '*has no specific points to raise'* in respect to planning policy, baseline, assessment methodology or assessment conclusions. It also states '*The impacts of the onshore cable route and infrastructure of the Hornsea Three Offshore Windfarm have been assessed in the Environmental Statement in respect of the buried archaeological remains and the setting of designated heritage assets. Mitigation works including a Written Scheme of Investigation (WSI) in consultation with NCC are agreed*'. Table 4.1 of the Statement of Common Ground – Historic England March 2019 (REP9-026) confirms Historic England's agreement with the baseline, assessment methodology and assessment conclusions and content of the Outline Onshore Written Scheme of Investigation as submitted into the Examination (REP6-044).
Land Use, Agriculture and Recreation (Land Use)			

Issue	NPPF Para	Summary of Policies	Response
Agricultural Land Classification	Para 170 and footnote 53 in Para 171	This policy seeks to recognise the economic and other benefits of best and most versatile agricultural land. '*Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality*'	Volume 3, Chapter 6 Land Use and Recreation of the Environmental Statement (APP-078) considers the effects of the onshore elements of Hornsea Three with regards to agricultural land and sets out within the consideration of alternatives how the site selection process followed the NPPF approach, and as such is compliant. **Agreed position with Relevant Authority:** The Applicant has an agreed position with NNDC (REP9-021), BDC (Deadline 10), SNC (REP7-013) and NCC (REP9-027) that the potential effects on agricultural land are not significant in EIA terms, and therefore, it is not considered to be a policy conflict.
Public Rights of Way and Recreational Resources	Paras 96, 97 & 98	These policies seek to protect and enhance public rights of way and access, and provide a network of high quality open spaces and opportunities for sport and physical activity.	Volume 3, Chapter 6 Land Use and Recreation of the Environmental Statement (APP-078) considers the effects of the onshore elements of Hornsea Three with regards to impacts on public rights of way. It is assessed that the magnitude of the temporary effect on the Peddars Way and Norfolk Coast Path National Trail (which has a high sensitivity), taking into consideration the provision and length of a dedicated temporary diversion is assessed to be moderate. The significance of effect on this resource will therefore be of temporary moderate adverse significance, which is significant in EIA terms. However, from a policy perspective the NPPF requires the protection and enhancement of PRoW. As set out in the Outline CoCP, a Public Right of Way Management Plan will be prepared, in accordance with the principles set out in the Framework of PRoW Management Measures (REP4-068) submitted at Deadline 4 which seek to protect and manage the PRoW affected by Hornsea Three. The final CoCP will be agreed with the relevant planning authorities and with these measures in place, Hornsea Three is considered to be policy compliant. **Agreed position with Relevant Authority:** Table 3.8 of the Statement of Common Ground – Norfolk County Council January 2019 (REP4-019) does not identify any policy conflict. It states that "*NCC agree with the proposals in principles but note that site specific management measures will need to be developed as part of the Public Right of Way Management Plan post-consent, to ensure that members of the public adhere to traffic management …*"
Traffic and Transport			

Issue	NPPF Para	Summary of Policies	Response
Transport Impacts	Paras 108, 109 & 111	These policies seek to promote sustainable transport modes, ensure safe and suitable site access and ensure that significant impacts on the transport network can be mitigated.	The Applicant considers the policy considerations for this matter to be the same as those set out for transport in Table 3.1 above.
Noise and Vibration			
Residential Amenity	Para 180	This policy requires development to mitigate and reduce to a minimum potential adverse noise and avoid noise giving rise to adverse health impacts and quality of life.	Volume 3, Chapter 8 Noise and Vibration of the Environmental Statement (APP-080) considers the temporary effects of construction works with respect to noise as well as the operational noise associated with the HVAC booster station and HVDC converter/HVAC substation. With the benefit of the proposed mitigation, no significant environmental effects are anticipated as a result of the construction works onshore. During the operation and maintenance phase of Hornsea Three the only sources of onshore noise will be the HVAC booster station and HVDC converter/HVAC substation. It has been concluded that it will be feasible achieve mitigation on site such that there would be no more than minor adverse effects at all residential noise sensitive receptors. **Agreed position with Relevant Authority:** Table 3.7 of the Statement of Common Ground – North Norfolk District Council March 2019 (REP7-014) indicates policy compliance and confirm that the noise management measures in the Outline CoCP *'are comprehensive'*. NNDC have questions relating to the tonal and frequency noise from the operation of the onshore HVAC booster station However, it was agreed that information relating to the operational design criteria would form part of the Noise Management Plan. South Norfolk Council disagree with the Applicant's position on working hours relating to noise impacts on residents (REP4-020). The Applicant has set out its position on this matter within the Statement of Case and maintains that the core working hours proposed are appropriate. Notwithstanding this, an assessment of impacts on residential amenity has been undertaken and concluded that there would be no significant effects, and as such are not considered to present a policy conflict. South Norfolk Council March 2019 (REP7-013) confirms that *'South Norfolk Council does not disagree with'* the assessment conclusions. All matters relating to residential amenity have been agreed with BDC, and therefore no policy conflict arises.

Issue	NPPF Para	Summary of Policies	Response
Air Quality			
Construction Dust and Construction Traffic Emissions	Paras 170 and 181	These policies prevent new development from contributing towards unacceptable risks from soil, air, water or noise pollution, and require decisions to sustain and contribute towards compliance with relevant values or national objectives for pollutants.	The Applicant considers the policy considerations for this matter to be the same as those set out for air quality in Table 3.1 above.
Socio-Economics			
Tourism and Local Economy	Para 8	This policy sits at the heart of the NPPF which seeks to achieve sustainable development which includes both economic and social dimensions, as well as environmental.	The Applicant considers the policy considerations for this matter to be the same as those set out for Socio-Economics in Table 3.1 above.

Table 3.3: Offshore to MHW Compliance with key provisions of the Local Development Plans

Issue	North Norfolk	Norfolk County	East Inshore & East Offshore Marine Plan	Summary of Policies	Response
Marine Processes			ECO1, MPA1	Cumulative impacts affecting the ecosystem of the East marine plans and adjacent areas (marine, terrestrial) should be addressed in decision-making and plan implementation. Any impacts on the overall marine protected area (MPA) network must be taken account of in strategic level measures and assessments, with due regard given to any current agreed advice on an ecologically coherent network.	The Applicant considers the policy considerations for this matter to be substantially the same as those set out for marine processes in Table 3.1 above.
Fish and Shellfish Ecology			ECO1, MPA1	Cumulative impacts affecting the ecosystem of the East marine plans and adjacent areas (marine, terrestrial) should be addressed in decision-making and plan implementation. Any impacts on the overall marine protected area (MPA) network must be taken account of in strategic level measures and assessments, with due regard given to any current agreed advice on an ecologically coherent network	The Applicant considers the policy considerations for this matter to be substantially the same as those set out for fish and shellfish ecology in Table 3.1 above.

Table 3.4: Onshore: Compliance with key provisions of the Local Development Plans

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
Geology and Ground Conditions						
Minerals Safeguarding		JCS Policy 1	JSC Policy 1	CS16	Safeguarding of existing and planned minerals sites, and to prevent sterilisation of currently safeguarded, but not yet allocated or developed, minerals extraction sites in Norfolk	The Applicant considers the policy considerations for this matter to be the same as those set out for mineral safeguarding in Table 3.1 above.
Groundwater		JCS Policy 1	JCS Policy 1		This policy seeks to protect groundwater sources by minimising water use.	The Applicant considers the policy considerations for this matter to be the same as those set out for geology and ground conditions in Table 3.1 above.
Hydrology and Flood Risk						
Flood Risk	EN10	JCS Policy 1	JCS Policy 1	DM4	These policies seek at a high level to minimise flood risk, taking into consideration climate change, steering development to areas at the lowest risk of flooding, using a sequential approach.	The Applicant considers the policy considerations for this matter to be the same as those set out for hydrology and flood risk in Table 3.1 above.
Ecology and Nature Conservation						

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
Hedgerows and Woodland	SS4, EN9	JCS Policy 1, EN1	JCS Policy 1, DM4.8		These policies seek preserve environmental assets, deliver an overall net gain in biodiversity and avoid the fragmentation of habitats.	Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) considers the effect on hedgerow habitat and woodland with regards to open cut trenching and cable installation. This concludes that there would be no significant effects in EIA terms on hedgerows and woodlands and there would be no conflict with these policies. **Agreed position with Relevant Planning Authority:** Table 3.3 of the Statement of Common Ground – North Norfolk District Council March 2019 concludes *'NNDC is satisfied that, subject to the above comments, the measures adopted in relation to the loss of hedgerows/trees/woodland is sufficient given the minor adverse effect of the proposed development.'* Table 3.2 of the Statement of Common Ground – Broadland District Council March 2019 (REP7 -017) confirms that *'BDC are satisfied that a robust route refinement process has been undertaken to optimise the route in respect of avoiding hedgerows, designated sites and areas of woodland.'* Table 3.2 of the Statement of Common Ground – South Norfolk Council March 2019 (REP7-013) captures the discussions and final position regarding the provision of pre-construction arboricultural surveys of trees to be removed within the onshore cable corridor. These discussions relate to the landscape value of the hedgerows and woodland, rather than biodiversity. For a summary of the Applicant's case on this point see section 4.4.2 of the Statement of Case.

Designated Sites and Habitats	EN9, SS4	CS Policy 1 EN1	CS Policy 1		These policies seek to ensure that development proposals avoid or minimise both direct or indirect adverse effects to nationally designated or other designated sites.	Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (APP-075) considers the effect on designated sites and habitats with regards to Horizontal directional drilling (HDD) drilling beneath, and to open cut trenching and cable installation as a result of airborne pollutants and runoff. This concludes that there would be no significant effects in EIA terms on designated sites and habitats and there would be no conflict with these policies. Specific measures have been identified within the Outline Ecological Management Plan. **Agreed position with Relevant Planning Authority:** Table 3.3 of the Statement of Common Ground – North Norfolk District Council March 2019 (REP7-014) states *'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.'* Table 3.5: of the Statement of Common Ground –Norfolk County Council January 2019 (REP4-019) - *With an onshore 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 County Wildlife Sites (CWS) and habitats are considered to be of negligible to minor adverse significance i.e. not significant in EIA terms.'* No identified policy conflict raised by Broadland or South Norfolk within LIRs. However, in its written submission at Deadline 3 (REP3-079), Natural England has challenged that the special qualities of the Norfolk Coast AONB may be adversely affected by the duration of construction effects. The Applicant has set out its position on this matter in the Statement of Case and Table 3.1 above, and confirms that any effect on the AONB would be temporary during construction, and that in a relatively short time following the completion of onshore construction there would be an ecological and landscape enhancement as a result of planting works detailed

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
						within the Outline LP. This is therefore considered to compliant with policy.
Protected Species	EN9	CS Policy 1 EN1	CS Policy 1		All new developments must ensure that there will be no adverse impact on protected species.	The Applicant considers the policy considerations for this matter to be the same as those set out for protected species in Table 3.2 above.
Landscape and visual resources and seascape and visual resources						

Landscape Character and Settlement Character	SS4, EN3	EN2	DM1.4, DM4.5, DM4.8, DM4.9		These policies seek to protect and enhance the natural and built environment assets and their local distinctiveness , including the protection of the undeveloped coast.	Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement (APP-076) considers the landscape effect of the HVAC booster station and onshore HVDC converter/HVAC substation which are predicted to have some major adverse landscape effects on sensitive receptors, but not to have significant effect on others. Furthermore, the onshore cables will be buried underground for their entire length, and are not expected to have significant landscape or visual effects on all sensitive receptors. With the proposed landscape planting Hornsea three would not conflict with these policies. **Agreed position with Relevant Planning Authority:** Table 3.4 of the Statement of Common Ground – North Norfolk District Council March 2019 (REP7-104) acknowledges that the maximum design scenario of the HVAC booster considers that these effects have been fully assessed and has not raised any policy conflict. Table 3.3 of the Statement of Common Ground – Broadland District Council March 2019 (REP7-017) *'BDC note that all infrastructure within their jurisdiction, with the exception of the main construction compound is associated with the onshore cable corridor and as such impacts on landscape and visual receptors are temporary and during the construction period only. BDC have no specific concerns to raise in respect to the onshore cable corridor assessment.'* Table 3.2 of the Statement of Common Ground – South Norfolk Council March 2019 (REP7-013) within this SNC has identified ongoing discussion with respect to the potential landscape impacts associated with tree and hedgerow information. SNC has stated that it does not disagree with the assessment conclusions in Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement (APP-076) and although no specific policy conflict is identified the matter, it '*considers that the relevant surveys for both hedgerows and trees should not be a matter left until post consent*'. SNC also has also expressed conflict of the proposed landscape planting at the onshore HVDC converter/HVAC substation with the

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
						landscape policy on undeveloped approaches, which is discussed in the section below "Undeveloped Approaches".
Undeveloped Approaches			DM4.6		Sets out policy aiming to protect the openness of a zone around the Southern Bypass, avoid undermining the rural character of undeveloped approaches to Norwich and specific Key Views of the city.	Section 5.2.4.39 of the Planning Statement May 2018 (APP-177) sets out that the onshore HVDC converter/HVAC substation would affect this 'undeveloped approach' adjoining the A47, in an area where it is already influenced by large scale infrastructure. **Agreed position with Relevant Planning Authority:** Table 3.2 of the Statement of Common Ground – South Norfolk Council March 2019 (REP7-013) summarises the discussions between the Applicant and SNC regarding the potential conflict with policy to retain openness around the Southern Bypass. SNC has expressed a preference for the landscape mitigation planting to be provided at the onshore HVDC converter/HVAC substation despite the conflict with the policy, however discussions with SNC would continue post consent to ensure that the mitigation planting reflected the final design of the HVDC converter/HVAC substation whilst maintaining the openness of the bypass protection zone as far as possible. SNC have indicated that the mitigation for the onshore HVDC converter/HVAC substation will be more effective under the HVAC scenario (where there is a maximum building height of 15 m), and less effective, and not sufficient, under the HVDC scenario (where there is a maximum building height of 25 m).
Norfolk Coast Area of Outstanding Natural Beauty and The Broads	EN1				This policy places a limit on development which would have a detrimental effect on the special qualities of the AONB.	The Applicant considers the policy considerations for this matter to be the same as those set out for AONB in Table 3.2 above. Hornsea Three would have no impact on The Broads.

Design	EN4, DM4.9	Policy 2 GC4	Policy 2 DM3.8		These policies seek to secure a high level of design in development projects, which are required to reflect local character and including scale, landscaping and appearance.	Volume 3, Chapter 4 Section 4.11 Landscape and Visual Resources of the Environmental Statement (APP-076) considers the assessment of significance and uses the maximum design scenario. Hornsea Three has committed to implement landscape screening at the onshore HVDC converter/HVAC substation as set out in Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement, the Outline LMP (REP7-025) and the Outline CoCP (REP7-060). **Agreed position with Relevant Planning Authority:** Table 3.4 of the Statement of Common Ground – North Norfolk District Council March 2019 (REP7-014) acknowledges that the maximum design scenario of the HVAC booster station considers that these effects have been fully assessed and has not raised any policy conflict. Table 3.3 of the Statement of Common Ground – South Norfolk Council March 2019 (REP7-013) states that 'If the height were to be reduced to 15m through the use of HVAC technology, then the mitigation would be more successful. Although perhaps less effective, the Applicant maintains that the soft landscaping proposals identified as mitigation for the onshore HVDC converter/HVAC substation are appropriate in either the HVDC or HVAC scenario. The Applicant has committing to pre-planting within the Outline LP (paragraph 3.1.3.4) in order to maximise the screening provided during construction and in the early years of operation. Furthermore, design principles and objectives for the onshore HVDC converter/HVAC substation have been identified (Annex A of REP4,026), designed to further minimise potential landscape, visual and heritage impacts of the infrastructure, integrating it into the receiving environment. These principles would be applied during the detailed design of the infrastructure, as required by Requirement 7 of the draft DCO. The Applicant considers that all best practice design measures have been incorporated into the plan for the HVDC Converter/HVAC Substation while retaining the necessary function of the building.

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
						Broadland District Council raised no conflict with regard to design in the LIR.
Historic environment (Onshore)						

Setting of Heritage Assets & Archaeology	EN8	Policy 1	Policy 1		These policies seek to preserve or enhance buried archaeology, designated heritage assets or other important historic buildings and their settings. Development which has an adverse impact on the special historic, archaeological or architectural interests will not be supported.	Volume 3, Chapter 5 Historic Environment of the Environmental Statement (APP-077) considers the effects of the onshore HVAC booster station and onshore HVDC converter/HVAC substation on the settings of heritage assets. Landscape planting is proposed around the HVAC booster station. The effect of the development however remains significant in EIA terms. There is potential for conflict with Policy EN8, however, on balance, it is considered that the significant benefits of Hornsea Three in terms of the delivery of renewable energy, is material to this application and would outweigh that conflict. As with the HVAC booster station the HVDC converter/HVAC substation could result in long term reversible effects on the settings of heritage assets and that the effect remains significant in EIA terms. There is potential for conflict with Joint Core Strategy Policy 1 in South Norfolk District however, on balance, it is considered that the significant benefits of Hornsea Three in terms of the delivery of renewable energy, is material to this application and would outweigh that conflict. **Agreed position with Relevant Planning Authority:** Table 3.7 of the Statement of Common Ground –Norfolk County Council January 2019 (REP4-019) states '*The impacts of the onshore cable route and infrastructure of the Hornsea Three Offshore Windfarm have been assessed in the Environmental Statement in respect of the buried archaeological remains and the setting of designated heritage assets.*' Table 3.3 of the Statement of Common Ground –South Norfolk Council March 2019 (REP7-013) states: *'South Norfolk Council agrees that there is a difference of professional opinion and that the harm caused to Keswick Hall and its setting would be less than substantial based on the NPPF test, but disagrees that the mitigation is appropriate or sufficient to mitigate the impact of a 25m in height substation. If the height were to be reduced to 15m through the use of HVAC technology, then the mitigation would be more successful. This*

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
						presents an area of disagreement from a policy compliance perspective'. Table 3.4 of the Statement of Common Ground –Broadland District Council March 2019 (REP7-017) indicates agreement that there would be no significant effects on heritage assets or their settings. In respect to archaeology he Applicant considers the policy considerations for this matter to be the same as those set out for archaeology in Table 3.2 above.
Land Use, Agriculture and Recreation (Land Use)						
Development in the Countryside	SS2				In areas designated as Countryside development will be limited to that which requires a rural location and is specifically listed, which includes renewable energy projects.	As set out in paragraph 5.2.6.19 of the Hornsea Three Planning Statement (APP-177) Policy SS2 "Development in the Countryside" limits development to certain categories including renewable energy projects. Hornsea Three would not conflict with this policy.

Public Rights of Way and Recreational Resources	SS6	Policy 1, Policy 6	Policy 1, Policy 6		These policies seek the protection and enhancement of existing provision/facilities, open space, walking and cycling networks and PRoWs	Volume 3, Chapter 6 Land Use and Recreation of the Environmental Statement (APP-078) considers the effects of the onshore elements of Hornsea Three with regards to public rights of way and recreational resources. Hornsea Three will have temporary moderate adverse effects on the operation of a number of national and local PRoWs during the construction phase. However, from a policy perspective the policies require protection and enhancement of PRoW. As set out in the Outline CoCP, a Public Right of Way Management Plan will be prepared, in accordance with the principles set out in the Framework of PRoW Management Measures (REP4-068) submitted at Deadline 4 which seek to protect and manage the PRoW affected by Hornsea Three. The final CoCP will be agreed with the relevant planning authorities. Thus, although potentially significant effects are reported in the Environmental Statement, it is concluded that through the appropriate management measures agreed, and secured through the DCO, the PRoW network would continue to operate with management where necessary, and there would be no conflict with Policy SS6. **Agreed position with Relevant Planning Authority:** Table 3.5 of the Statement of Common Ground –North Norfolk District Council March 2019 (REP7-014) states *'. 'NNDC note the amendments to the CoCP and would wish to work with Ørsted so as to enable a project phasing which can minimise the period/duration of construction impacts.'* Whilst this matter is a preference for NNDC it is not considered that a policy conflict has been raised. Table 3.8 of the Statement of Common Ground – Norfolk County Council January 2019 (REP4-019) does not identify any policy conflict. It states that "*NCC agree with the proposals in principles but note that site specific management measures will need to be developed as part of the Public Right of Way Management Plan post-consent, to ensure that members of the public adhere to traffic management …"*

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Traffic and Transport						
Transport Impacts	CT5	Policy 6	Policy 6, DM3.11		These policies seek to manage the transport effects of the operation and maintenance phase of new development, particularly residential development.	The Applicant considers the policy considerations for this matter to be the same as those set out for transport in Table 3.1 above.
Safeguarded Land for Transport	CT7				This policy safeguards land for sustainable transport uses and seeks to protect former railway trackbeds and other railway land from development that would be prejudicial to the re-use of the railway, or sustainable transport links and facilities.	Volume 3, Chapter 7 Traffic and Transport of the Environmental Statement (APP-079) considers the temporary effects of construction works with respect to safeguarded land for transport. The Hornsea Three onshore cable corridor will use HDD to enable the construction of the onshore cable corridor around railway infrastructure. The construction of the onshore cable corridor is temporary and would have no long-term implications on the function of former railway trackbeds. No policy conflict is identified within the NNDC LIR.
Noise and Vibration						
Residential Amenity	EN7, EN13	GC4	DM3.13		These policies seek to protect the amenity of existing properties, which includes noise impacts associated with new developments.	The Applicant considers the policy considerations for this matter to be the same as those set out for residential amenity in Table 3.1 above. The Applicant considers there to be no employment policy conflict.
Air Quality						
Construction Dust and Construction Traffic Emissions	EN13				Proposals will only be permitted where, individual or cumulatively, there are no unacceptable impacts on air quality	The Applicant considers the policy considerations for this matter to be the same as those set out for air quality in Table 3.1 above. The Applicant considers there to be no employment policy conflict.
Socio-Economics						

Issue	North Norfolk	Broadland	South Norfolk	Norfolk County	Summary of Policies	Response
Employment	EN7	Policy 5, Policy 21	Policy 5, Policy 21		These policies seek to support sustainable economic development to support jobs and economic growth in both urban and rural locations.	The Applicant considers the policy considerations for this matter to be the same as those set out for socio-economics in Table 3.1 above. The Applicant considers there to be no employment policy conflict.
Tourism and Local Economy	EN7	Policy 5, Policy 21	Policy 5, Policy 21		These policies seek to support sustainable economic development including specific reference to tourism, leisure, environmental and cultural industries.	The Applicant considers the policy considerations for this matter to be the same as those set out for socio-economics in Table 3.1 above. The Applicant considers there to be no employment policy conflict.