



The Planning Inspectorate Yr Arolygiaeth Gynllunio

The Planning Act 2008

Norfolk Vanguard Offshore Wind Farm

Examining Authority's Report
of Findings and Conclusions

and

Recommendation to the Secretary of State for
Business, Energy and Industrial Strategy

Examining Authority

Panel Lead: Karen Ridge LLB (Hons) MTPL Solicitor

Caroline Jones BA (Hons) DipTp MTP MRTPI

Gavin Jones BSc (Hons) MA MA MRTPI

Grahame Kean BA (Hons) Solicitor HRA

10 SEPTEMBER 2019

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ERRATA SHEET – Norfolk Vanguard Offshore Wind Farm – Ref. EN010079

Examining Authority's Report of Findings and Conclusions and Recommendation to the Secretary of State for the Department of Business, Energy and Industrial Strategy, dated 10 September 2019

Corrections agreed by the Examining Authority prior to a decision being made:

Page No.	Paragraph	Error	Correction
6	1.4.29 1 st Bullet	"Broadland District"	"Broadland District Council"
48	4.5.10	"Broadland LDF"	[LDF should be defined as or corrected to read Broadland Local Development Framework]
48	4.5.10	"...include DPD policy GC 5..."	[DPD should be defined as or corrected to read Development Plan Document]
52	4.5.29	"...first round of SCG"	"first round of SoCG"
52	4.5.34	"...with the lightening protection masts..."	"...with the lightning protection masts..."
54	4.5.42	"...about the 12 lightening protection masts..."	"...about the 12 lightning protection masts..."
60	4.5.79	"...to connect Norfolk and Aylsham"	"...to connect Norwich and Aylsham"
65	4.5.103	"The final OLEM is at..."	"The final OLEMS is at..."
77	4.7.14 (Table 4.1)	"SCG with Highways England"	"SoCG with Highways England"
84	4.7.39	"[1-036]"	"[REP1-036 and omit "SoCG" as superfluous
100	4.7.122	"...the width of the stip"	"...the width of the strip"
106	4.8.26	"In response to NNC's request..."	"In response to NNDC's request..."
112	4.9.14	"...which had been attained..."	"...which had been obtained..."
144	4.15.12	"The EPP provided..."	"The Evidence Plan Process (EPP) is referred to in ES Chapter 22, Onshore Ecology [APP-346] and ES Chapter 23, Onshore Ornithology [APP-347]. It provided..."
360	9.4.54	"Underwater noise is a challenging aspect of the Project this project..."	"Underwater noise is a challenging aspect of the Project ..."

OVERVIEW

File Ref: EN10079

The application, dated 8 June 2018, was made under section 37 of the Planning Act 2008 and was received in full by The Planning Inspectorate on 26 June 2018.

The Applicant is Norfolk Vanguard Limited.

The Application was accepted for Examination on 24 July 2018.

The examination of the application began on 10 December 2018 and was completed on 10 June 2019.

The development proposed comprises:

- Construction and operation of up to 180 wind turbine generators
- Up to two Offshore electrical platforms
- Up to two accommodation platforms
- Up to two meteorological masts
- Measuring equipment (LiDAR and wave buoys)
- Subsea array and fibre optic cables
- Interconnector cables
- Export cables
- Onshore transmission works at landfall
- Onshore cable route, accesses, trenchless crossing technique
- Directional Drilling zones and mobilisation areas
- Onshore project substation
- Extension to the Necton National Grid substation and overhead line modifications.

Summary of Recommendation:

The Examining Authority recommends that the Secretary of State should withhold consent. If, however the Secretary of State decides to give consent, then the Examining Authority recommends that the Order should be in the form attached.

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1. INTRODUCTION

1.1. INTRODUCTION TO THE EXAMINATION

- 1.1.1. The Application for the Norfolk Vanguard Offshore Wind Farm (the Proposed Development) was submitted by Norfolk Vanguard Limited (The Applicant) to the Planning Inspectorate on 8 June 2018 under section 31 of the Planning Act 2008 (PA 2008) and accepted for Examination under section 55 (s55) of the PA 2008 on 24 July 2018 [PD-001].
- 1.1.2. The Proposed Development as accepted for Examination comprises:
- construction and operation of up to 200 wind turbine generators;
 - up to two Offshore electrical platforms;
 - up to two accommodation platforms;
 - up to two meteorological masts;
 - measuring equipment (LiDAR and wave buoys);
 - subsea array and fibre optic cables;
 - interconnector cables;
 - export cables;
 - onshore transmission works at landfall;
 - onshore cable route, accesses, trenchless crossing technique;
 - directional drilling zones and mobilisation areas;
 - onshore project substation; and
 - extension to the Necton National Grid substation and overhead line modifications.
- 1.1.3. The location of the Proposed Development was originally shown on the Location Plan [APP-011], an updated version of which was received at Deadline 2 [REP2-011]. The onshore site lies in the administrative county of Norfolk comprising the districts of North Norfolk, Broadland and Breckland and is wholly in England.
- 1.1.4. The legislative tests for whether the Proposed Development is a Nationally Significant Infrastructure Project (NSIP) were considered by the Secretary of State (SoS) for the Ministry of Housing, Communities and Local Government (MHCLG) in its decision to accept the Application for Examination in accordance with s55 of PA2008 [PD-003].
- 1.1.5. On this basis, the Planning Inspectorate agreed with the Applicant's view stated in the application form [APP-002] that the Proposed Development is an NSIP as it is a generating station with an export capacity of over 100MW and so requires development consent in accordance with s31 of PA2008. The Proposed Development therefore meets the definition of an NSIP set out in s14(1)(a) and 15(3) of PA2008.

1.2. APPOINTMENT OF THE EXAMINING AUTHORITY

- 1.2.1. On 2 October 2018, Karen Ridge, as lead member, and Gavin Jones and Grahame Kean, as Panel members, were appointed as the Examining Authority (ExA) for the Application under s61 and s65 of PA2008 [PD-004]. Following a review of the Relevant Representations (RR), the ExA

was enlarged on 7 December 2018 to a Panel of four with the appointment of Caroline Jones under s65(1)(a) of PA2008 [PD-006].

1.3. THE PERSONS INVOLVED IN THE EXAMINATION

1.3.1. The persons involved in the Examination were:

- persons who were entitled to be Interested Parties (IPs) because they had made a Relevant Representation (RR) or were a statutory party who requested to become an IP;
- Affected Persons (APs) who were affected by a compulsory acquisition (CA) and / or temporary possession (TP) proposal made as part of the Application and objected to it at any stage in the Examination; and
- Other Persons, who were invited to participate in the Examination by the ExA because they were either affected by it in some other relevant way or because they had particular expertise or evidence that the ExA considered to be necessary to inform the Examination.

1.4. THE EXAMINATION AND PROCEDURAL DECISIONS

1.4.1. The Examination began on 10 December 2018 and concluded on 10 June 2019.

1.4.2. The principal components of and events around the Examination are summarised below. A fuller description, timescales and dates can be found in Appendix A.

The Preliminary Meeting

1.4.3. On 9 November 2018, The ExA wrote to all IPs, Statutory Parties and Other Persons under Rule 6 of the Infrastructure Planning (Examination Procedure) Rules 2010 (EPR) (The Rule 6 Letter) inviting them to the Preliminary Meeting (PM) and the first Open Floor Hearing [PD-005], outlining:

- the arrangements and agenda for the PM;
- notification of and agenda for the Open Floor Hearing
- an Initial Assessment of the Principal Issues (IAPI);
- the draft Examination Timetable;
- availability of RRs and application documents; and
- the ExA's procedural decisions.

1.4.4. The PM took place on 10 December 2018 at The Dukes Head Hotel, Kings Lynn, Norfolk PE30 1JS. An audio recording [EV-002 and EV-003] was published on the Planning Inspectorate National Infrastructure website¹.

1.4.5. The ExA's procedural decisions and the Examination Timetable took full account of matters raised at the PM. They were provided in the Rule 8 Letter [PD-007], dated 19 December 2018.

¹ <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/norfolk-vanguard/?ipcsection=overview>

Key Procedural Decisions

- 1.4.6. Most of the procedural decisions set out in the Rule 8 Letter related to matters that were confined to the procedure of the Examination and did not bear on the ExA's consideration of the planning merits of the Proposed Development. Further, they were generally complied with by the Applicant and relevant IPs. The decisions can be obtained from the Rule 8 Letter [PD-007] and so there is no need to reiterate them here.
- 1.4.7. A separate procedural decision was made on 25 April 2019 [PD-014] in relation to a Change Report [AS-009] submitted prior to the start of the Examination outlining some minor changes to some elements of the Project and a minor change request submitted at D4 [REP4-035]. This decision is reported on further in Section 2.2 of this report.

Site Inspections

- 1.4.8. In total, the Panel undertook Unaccompanied Site Inspections (USI) over four days:
- 11 December 2018 - full day of site visits undertaken by all panel members viewing the application site from the landfall, along the cable route and the proposed substation site;
 - 23 April 2019 – One Panel member undertook an USI to view the setting of St Andrews Church, Bradenham in more detail;
 - 25 April 2019 – Three Panel Members visited Cawston to view Link 34 and the Cawston Conservation Area;
 - 25 April 2019 – One Panel member visited Happisburgh to view the surrounding road network; and
 - 26 April 2019– One Panel member visited Cawston to view Link 34.
- 1.4.9. A site note providing a procedural record of each USI can be found in the Examination Library [EV-024a].
- 1.4.10. The ExA held the following Accompanied Site Inspections:
- ASI1, was held on 25 March 2019 to enable the ExA to view physical features seen on or from the application site, including relevant ES viewpoints from Happisburgh, Aylsham, Oulton, Cawston and the Salle Estate;
 - ASI2, was held on 26 March 2019 to enable the ExA to view the physical features seen on or from the application site, including relevant ES viewpoints including Necton, Holme Hale, Bradenham Hall Gardens, Ivy Todd Road, St Andrews Lane, Top Farm, Spicers Corner, Moor Lane and the existing Necton substation.
- 1.4.11. The itinerary for each of the two days of the ASI can be found in the Examination Library [EV-024].
- 1.4.12. The ExA has had regard to the information and impressions obtained during its site inspections in all relevant sections of this Report.

Hearing Processes

- 1.4.13. Hearings are held in PA2008 Examinations in two main circumstances:
- To respond to specific requests from persons who have a right to be heard - in summary terms:
 - where persons affected by compulsory acquisition (CA) and/or temporary possession (TP) proposals (Affected Persons) object and request to be heard at a Compulsory Acquisition Hearing (CAH); and / or
 - where IPs request to be heard at an Open Floor Hearing (OFH).
 - To address matters where the ExA considers that a hearing is necessary to inquire orally into matters under examination, typically because they are complex, there is an element of contention or disagreement, or the application of relevant law or policy is not clear.
- 1.4.14. The ExA held a number of hearings to ensure the thorough examination of the issues raised by the application.
- 1.4.15. Issue Specific Hearings (ISHs) under s91 of PA2008 were held at Blackfriars Hall, The Halls, St Andrew's Plain, Norwich, NR3 1AU, a location that was roughly equidistant for those travelling from Happisburgh and Necton and which was convenient for regional access by the road, rail and bus networks for participants.
- 1.4.16. ISHs were held on the subject matter of the dDCO as follows:
- ISH3, 7 February 2019 [EV-011, EV-012]
 - ISH5, 28 March 2019 [EV018, EV019];
 - ISH7, 25 April 2019 [EV-034, EV-035, EV-036, EV-037, EV-038]
- 1.4.17. ISHs were held on the subject matters of Environmental Matters on:
- ISH1, 5 February 2019 [EV-005a, EV-006, EV-007]; and
 - ISH2, 6 February 2019 [EV-008a, EV-009, EV-010]
 - ISH4, 27 March 2019 [EV-012b, EV-013, EV-014, EV-015]
 - ISH6, 24 April 2019 [EV-026, EV-027, EV-028, EV-029, EV-030, EV-031]
- 1.4.18. These ISHs addressed the following broad subject matters:
- Project design and alternatives
 - Transport and highway safety
 - Construction impacts
 - Landscape and visual impacts
 - Land use and recreation
 - Socio-economic considerations
 - Shipping and navigation
 - Fisheries and fishing
 - Offshore ecology, including Habitats Regulations considerations
 - Offshore construction and physical processes

- 1.4.19. A Compulsory Acquisition Hearing (CAH) was held under s92 of PA2008 at Blackfriars Hall, The Halls, St Andrew's Plain, Norwich, NR3 1AU on:
- CAH1, 28 March 2019 [EV021, EV022, EV023]
- 1.4.20. All persons affected by compulsory acquisition (CA) and/or temporary possession (TP) proposals (Affected Persons or APs) were provided with an opportunity to be heard. We also used these hearings to examine the Applicants case for CA and/or TP in the round.
- 1.4.21. Open Floor Hearings (OFH) were held under s93 of PA2008 on:
- OFH1, 10 December 2019 at Dukes Head Hotel, Kings Lynn, Norfolk PE30 1JS [EV-005]
 - OFH2, 6 February 2019 at Blackfriars Hall, The Halls, St Andrew's Plain, Norwich, NR3 1AU [EV-007b, EV0108]
 - OFH3, 24 April 2019 at Dereham Sixth Form College, Crown Road, Dereham, NR20 4AG [EV-032, EV-033]
- 1.4.22. All IPs were provided with an opportunity to be heard on any important and relevant subject matter that they wished to raise.

Written Processes

- 1.4.23. Examination under PA2008 is primarily a written process, in which the ExA has regard to written material forming the Application and arising from the Examination. These documents are recorded in the Examination Library (Appendix B) and published online. Individual document references to the Examination Library in this report are enclosed in square brackets [REP1-xx] and Appendix B contains links to the published documents. For this reason, this Report does not contain extensive summaries of all documents and representations, although full regard has been had to them in the ExA's conclusions. The ExA has considered all important and relevant matters arising from them.
- 1.4.24. Key written sources are set out further below.

Relevant Representations

- 1.4.25. 267 Relevant Representations (RRs) were received by the Planning Inspectorate [RR-001 to RR-267]. All RRs received the Rule 6 Letter and were provided with an opportunity to become involved in the Examination as IPs. All RRs have been fully considered by the ExA. The issues that they raise are considered in Chapters 4 to 10 of this Report.

Written Representations and Other Examination Documents

- 1.4.26. The Applicant, IPs and Other Persons were provided with opportunities to:
- make written representations (WRs) (D1);
 - comment on WRs made by the Applicant and other IPs (D2);
 - summarise their oral submissions at hearings in writing (D3, D6 and D7);

- make other written submissions requested or accepted by the ExA; and
- comment on documents issued for consultation by the ExA including:
 - comments on any submission made by the Applicant and other IPs (D2-D9)
 - A Report on Implications for European Sites (RIES) [PD-016] published on 9 May 2019;
 - The ExA's dDCO schedule of changes published on 9 May 2019 [PD-017]

1.4.27. All WRs and other examination documents have been fully considered by the ExA. The issues that they raise are considered in Chapters 4 to 10 of this Report.

Local Impact Reports

1.4.28. A Local Impact Report (LIR) is a report made by a relevant local authority giving details of the likely impact of the Proposed Development on the authority's area (or any part of that area) that has been invited and submitted to the ExA under s60 PA2008.

1.4.29. LIRs have been received by the ExA from the following relevant local authorities:

- Broadland District (BDC) [REP1-065];
- Breckland District Council (BC) [REP1-125];
- North Norfolk District Council (NNDC) [REP1-099]; and
- Norfolk County Council (NCC) [REP1-100]

1.4.30. The LIRs have been taken fully into account by the ExA in all relevant Chapters of this Report.

Statements of Common Ground

1.4.31. A Statement of Common Ground (SoCG) is a statement agreed between the Applicant and one or more IPs, recording matters that are agreed between them.

1.4.32. By the end of the Examination, the following bodies had concluded SoCGs with the Applicant:

- Environment Agency (EA) [REP9-044];
- Eastern Inshore Fisheries and Conservation Authority (EIFCA) [REP8-092]
- Maritime and Coastguard Agency (MCA) [REP9-049];
- Marine Management Organisation (MMO) [REP9-045];
- Natural England (NE) [REP9-046];
- National Federation of Fishermen's Organisations (NFFO) and National Association of Producer Organisations in Dutch Demersal Fisheries (VisNed) [REP8-091];
- Royal Society for the Protection of Birds (RSPB) [REP8-089];
- Trinity House (TH) [REP8-093]
- The Wildlife Trusts (TWT) [REP8-090];

- Whale and Dolphin Conservation Society (WDC) [REP8-087]
- Happisburgh Parish Council (HPC) [REP9-048]
- NCC [REP9-047]
- BDC [REP9-043]
- NNDC [REP8-088]
- BC [REP8-082]
- Anglian Water [REP8-081]
- Cadent Gas Limited [REP8-086]
- East Anglia Three [REP4-007]
- Highways England (HE) [REP8-083]
- Ministry of Defence (MoD) [REP5-006]
- Historic England (HistE) [REP8-084]
- National Grid (NG) Electricity Transmission PLC and NG Gas PLC [REP8-085]
- National Farmers Union (NFU) [REP4-008] (unsigned)
- Network Rail Infrastructure Limited [REP4-014] (unsigned)
- Orsted Hornsea Project Three (UK) Ltd (H3) [REP7-032]
- Oulton Parish Council (OPC) [REP1-057] (unsigned)
- Royal Yachting Association (RYA) [REP1-060]
- Necton Parish Council (NPC) [REP1-091] (unsigned)
- NATs en-route safeguarding [REP1-050] (unsigned)

1.4.33. The SoCGs (other than unsigned or incomplete ones referred to above) have been taken fully into account by the ExA in all relevant Chapters of this Report.

Written Questions

1.4.34. The ExA asked two round(s) of written questions.

- First written questions (ExQ1) [PD-008] and procedural decisions were set out in the Rule 8 letter [PD-007], dated 19 December 2018.
- Second written questions (ExQ2) [PD-012] were issued on 27 February 2019.

1.4.35. The following requests for further information and comments under Rule 17 of the EPR were issued on:

- 21 May 2019 [PD-018];
- 28 May 2019 [PD-019];
- 3 June 2019 [PD-020] and
- 3 June 2019 [PD-021].

1.4.36. All responses to the ExAs written questions have been fully considered and taken into account in all relevant Chapters of this Report.

Requests to Join and Leave the Examination

1.4.37. The following person who was not already an IP requested that the ExA should enable them to join the Examination at or after the PM:

- Polly Brockis on 3 April 2019. On the basis of the information provided, the ExA decided that, should the Order sought by the application be made, Ms Brockis might be entitled to make a relevant

claim. Ms Brockis is therefore within Category 3 as defined in s102B(4) [PD-022].

- 1.4.38. No persons wrote to the ExA to formally record the settlement of their issues and the withdrawal of their representations.

1.5. ENVIRONMENTAL IMPACT ASSESSMENT

- 1.5.1. The Proposed Development is development for which an Environmental Impact Assessment (EIA) is required (EIA development).
- 1.5.2. The Applicant submitted Regulation 6 notification under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (the 2009 EIA Regulations) on 3 October 2016 stating its intention to submit an ES for the application. This was accompanied by a Scoping Report and a request to the Secretary of State (SoS) under Regulation 8 of the 2009 EIA Regulations to provide an opinion about the scope of the Environmental Statement (ES) to be prepared (a Scoping Opinion). It follows that the Applicant is deemed to have notified the Secretary of State under Regulation 6(1)(b) of the EIA Regulations that it proposes to provide an ES in respect of the Project.
- 1.5.3. On 11 November 2016 the Planning Inspectorate provided a Scoping Opinion [APP-192]. Therefore, in accordance with Regulation 4(2)(a) of the EIA Regulations, the Proposed Development was determined to be EIA development, and the application was accompanied by an ES.
- 1.5.4. The Applicant issued a letter to the Inspectorate on 13 June 2018 explaining that although the transitional provisions of the (Environmental Impact Assessment) Regulations 2017 (the 2017 EIA Regulations) apply, it had decided to prepare the ES in accordance with the requirements of the 2017 EIA Regulations. The submitted ES was therefore prepared and examined in accordance with the 2017 EIA Regulations.
- 1.5.5. On 18 September 2018 the Applicant provided the Planning Inspectorate with certificates confirming that s56 and s59 of PA2008 and Regulation 16 of the EIA Regulations had been complied with [OD-014].
- 1.5.6. Consideration is given to the adequacy of the ES and matters arising from it in Chapters 4 and 5 of this Report.

1.6. HABITATS REGULATIONS ASSESSMENT

- 1.6.1. The Proposed Development is development for which a Habitats Regulations Assessment (HRA) Report has been provided.
- 1.6.2. Consideration is given to the adequacy of the HRA Report, associated information and evidence and the matters arising from it in Chapter 6 of this Report.

1.7. UNDERTAKINGS, OBLIGATIONS AND AGREEMENTS

- 1.7.1. By the end of the Examination, there were no matters subject to any separate undertakings, obligations and / or agreements. All relevant considerations are addressed in this Report as bearing on the DCO.

1.8. OTHER CONSENTS

- 1.8.1. The Application documentation and questions during this Examination have identified the following consents that the Proposed Development has obtained or must obtain, in addition to Development Consent under PA2008. The latest position on these is recorded below.

- Coast Station Radio Licence – post DCO
- Energy Generation Licence – post DCO
- European Protected Species Licence – post DCO
- F10 – Notification of Construction Project – post DCO
- Safety Zones – post DCO
- Crown Consent – post DCO
- Environmental Permit for water discharge or waste operations/registration of exempt waste operations and water discharges – post DCO
- Notice of Street Works – post DCO
- Permit for transport of abnormal loads – post DCO
- Temporary Road Traffic Orders (if construction phase requires closure of any public highway outside the Order limits)
- Water abstraction Licence (if required) – post DCO
- Section 16 Wildlife and Countryside Act Licence – post DCO

- 1.8.2. In relation to the outstanding consents recorded above, the ExA has considered the available information bearing on these and, without prejudice to the exercise of discretion by future decision-makers, has concluded that there are no apparent impediments to the implementation of the Proposed Development, should the SoS grant the Application.

1.9. STRUCTURE OF THIS REPORT

- 1.9.1. The structure of this report is as follows:

- **Chapter 1** introduces the reader to the Application, the processes used to carry out the Examination and make this Report.
- **Chapter 2** describes the site and its surroundings, the Proposed Development, its planning history and that of related projects.
- **Chapter 3** records the legal and policy context for the SoS' decision.
- **Chapter 4** sets out the planning issues that arose from the Application and during the Examination.
- **Chapter 5** sets out the planning issues that arose from the Application and during the Examination in regard to offshore ecological matters.
- **Chapter 6** considers effects on European Sites and Habitats Regulations Assessment (HRA).

- **Chapter 7** sets out the balance of planning considerations arising from Chapters 4 and 5, in the light of the factual, legal and policy information in Chapters 1 to 3.
- **Chapter 8** sets out the ExA's examination of Compulsory Acquisition (CA) and Temporary Possession (TP) proposals.
- **Chapter 9** considers the implications of the matters arising from the preceding chapters for the Development Consent Order (DCO).
- **Chapter 10** summarises all relevant considerations and sets out the ExA's recommendation to the SoS.

1.9.2. This report is supported by the following Appendices:

- **Appendix A** – the Examination Events.
- **Appendix B** – the Examination Library.
- **Appendix C** – List of Abbreviations.
- **Appendix D** – the Recommended DCO

2. THE PROPOSAL AND THE SITE

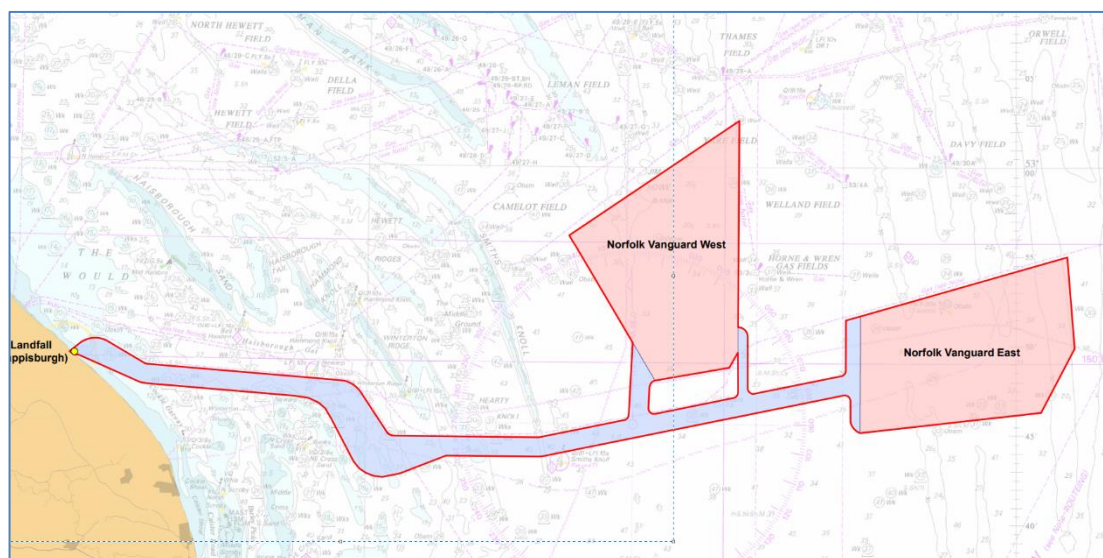
2.1. THE APPLICATION AS MADE

- 2.1.1. The Applicant submitted an application under section 37 of PA2008 for an order granting development consent for what is described on the application form as:

The Application Site

- 2.1.2. The offshore component of the Proposed Development would be situated off the coast of Norfolk, approximately 47km from the shore at the nearest point. It would comprise two distinct offshore array areas, Norfolk Vanguard (NV) East and NV West occupying an area of roughly 592km². The Southern North Sea candidate Special Area of Conservation encompasses Norfolk Vanguard and the offshore cable corridor passes through the Haisborough, Hammond and Winterton Special Area of Conservation.

Figure 1: Offshore Location Plan



- 2.1.3. The buried export cable corridor would connect the offshore development to a landfall at Happisburgh South, Norfolk. The coast at Happisburgh is exposed and subject to rapid cliff erosion. The Shoreline Management Plan (SMP) states that the intended management at landfall is Managed Realignment which means that over the next 100 years erosion will be allowed to occur but in a controlled manner. The surrounding area is characterised by arable farming with the village of Happisburgh lying to the north and north west.
- 2.1.4. The buried onshore cable corridor would run between the landfall and the proposed onshore project substation. The route is approximately 60km long, running through predominantly agricultural land and nearby towns and villages include Happisburgh, North Walsham, Aylsham, Reepham, Dereham and Necton. The proposed onshore substation would occupy a site of around 9.5 hectares (including a temporary construction

compound for ancillary works such as earthworks but excluding landscaping areas and access). The substation would be located to the east of the existing National Grid substation at Necton. A detailed description of the onshore project area is contained within ES Chapter 5- Project Description [APP-329].

Figure 2: Onshore Location Plan



The Proposed Development

2.1.5. ES Chapter 5 provides a full description of the components required for construction, operation, maintenance and decommissioning of the Proposed Development, as well as consideration of the methods used for installation, maintenance and decommissioning. Tables 2.1 and 2.2 of Appendix 2 of the SoCG with the MMO [REP9-045] provide indicative construction programmes for both a single phase and two-phase offshore construction programme. Once built the Proposed Development would have an export capacity of up to 1800MW.

2.1.6. The main offshore components comprise:

- offshore wind turbines and their associated foundations;
- offshore electrical platforms;
- accommodation platforms to house offshore workers as required;
- meteorological masts;
- measuring equipment (LiDAR and wave buoys);
- array cables;

- interconnector cables; and
- export cables.

2.1.7. The key onshore components of the Proposed Development would comprise:

- landfall works including ducts installed under the cliff by horizontal directional drilling (HDD) and onshore transition pits;
- sets of ducts for Norfolk Vanguard cables and up to four sets for Norfolk Boreas cables through which the onshore cables would be pulled;
- surface water management, bunding, embankments, boundary treatments and landscaping
- trenchless crossing points at sensitive locations such as some roads, railways and sensitive habitats;
- mobilisation areas;
- highway works;
- onshore project substation; and
- extension to the Necton National Grid substation and overhead line modifications

2.1.8. The parent company of Norfolk Vanguard Limited (Vattenfall Wind Power Ltd) is also developing Norfolk Boreas (Case ref: EN010087) which would share a grid connection location as well as much of the offshore and onshore cable corridors with Norfolk Vanguard. As a result, the Development Consent Order application also includes some enabling works for Norfolk Boreas including:

- installation of ducts to house the Norfolk Boreas cables along the entirety of the onshore cable route from the landward side of the transition pit at the landfall to the onshore project substation; and
- overhead line modifications at the Necton National Grid substation for both projects.

2.1.9. The project design envelope sets out a series of design options for the project and has a reasoned minimum and maximum extent for a number of key parameters. The final design would lie between the minimum and the maximum extent of the consent sought for all aspects of the project. The final detailed design of the project, which would occur post-consent, would fall within this 'envelope'. In addition, post-consent/pre-construction site investigation would further inform the detailed design.

Principal Works

2.1.10. The principal works as proposed are set out in the dDCO Part 1, Schedule 1, Authorised Development and in summary comprises the following components:

- an offshore generating station with an electrical export capacity of up to 1,800 MW at the point of connection to the offshore electrical platform(s) to be located more than 47 km from the coast of Norfolk, occupying an offshore array site of approximately 592 km² over two distinct areas, NV East and NV West;
- up to two accommodation platforms;

- up to two meteorological masts;
- up to two LIDAR buoys and up to two wave buoys; and
- a network of subsea cables.

2.1.11. The maximum number of turbines was initially proposed as 200 with a maximum hub height of 200m (from Highest Astronomical Tide (HAT)), a maximum blade tip height of 350m (above HAT), a minimum blade clearance of 22m and a minimum separation distance of 680m between turbines.

Associated Development

2.1.12. The application included associated development for Works Nos. 2 to 12 in Part 1 of Schedule 1 of the dDCO. This comprises works which are not aims in themselves, but which are required to receive and export the electricity produced by the offshore generating station. Associated development for the Proposed Development includes:

- the offshore electrical platforms;
- subsea cables;
- transition jointing pits (where the offshore cables connect to the onshore cables), onshore underground cables to the onshore project substation, via jointing pits and associated accesses;
- the onshore project substation and associated landscaping and grid connection;
- the overhead line replacement works; and
- the permanent accesses from the A47 together with various miscellaneous matters.

2.1.13. The Proposed Development includes works for a future project. We have examined whether these works constitute associated development and given particular attention to this matter in the context of whether such works are necessary for the purposes of granting CA and TP powers over the Order Land, in Chapter 8 of this Report.

Ancillary Works

2.1.14. Ancillary works are also included in the dDCO (Schedule 1, part 2, Ancillary Works) and comprise:

- temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised development;
- beacons, fenders and other navigational warning or ship impact protection works; and
- temporary works for the benefit or protection of land or structures affected by the authorised development.

Decommissioning

2.1.15. The scope of the decommissioning works would be determined by the relevant legislation and guidance at the time of decommissioning and would most likely involve the accessible installed components. Offshore, this is likely to include removal of all of the wind turbine components, part of the foundations (those above seabed level), removal of some or

all of the array cables, interconnector cables, and offshore export cables. Scour and cable protection would likely be left *in situ*.

- 2.1.16. The Applicant anticipates that decommissioning will be undertaken in the same phased approach as used for construction. Based on previous estimates and experience it is anticipated that decommissioning of each phase would take approximately 1 year. As an alternative to decommissioning, the owners may wish to consider re-powering the wind farm. Should the owners choose to pursue this option, this would be subject to a new application for consent.
- 2.1.17. No decision has been made regarding the final decommissioning policy/plan for the onshore cables or onshore project substation, given that industry best practice, rules and legislation change over time. The ES states that it is likely the cables would be removed from the ducts and recycled, with the transition pits and ducts capped and sealed then left in situ. For the onshore project substation, a full EIA would be carried out ahead of any decommissioning works being undertaken. The programme for decommissioning is expected to be similar in duration to the construction phase of 24-30 months. The detailed activities and methodology for decommissioning will be determined later within the project lifetime, in line with relevant policies at that time, but would be expected to include:
- dismantling and removal of electrical equipment;
 - removal of cabling from site;
 - removal of any building services equipment;
 - demolition of the buildings and removal of fences; and
 - landscaping and reinstatement of the site.
- 2.1.18. The decommissioning methodology cannot be finalised until immediately prior to decommissioning but would be in line with relevant policy at that time.

2.2. THE APPLICATION AS EXAMINED

- 2.2.1. Changes to the key application documents, including the wording of the proposed DCO were submitted between the Acceptance stage and the end of the Examination. The changes sought primarily related to addressing landowner's requests, points raised in RRs, WRs, other submissions by IPs and written and oral questions put to the Applicant by the ExA.
- 2.2.2. Prior to the start of the Examination, the Applicant submitted a Change Report [AS-009] outlining some minor changes to some elements of the Project including minor amendments to the Order limits. These amendments are summarised as:
- an increase in the number and diameter of piles for the offshore electrical platforms;
 - amendments to a number of cable route accesses;
 - minor route amendments; and

- increases to the areas within which the National Grid towers will be located.
- 2.2.3. At D4 the Applicant submitted a minor change request [REP4-035] to extend the acquisition of permanent land rights for Work No 11A in the DCO beyond the overhead line modification area associated with Work No 11A to cover the remainder of the overhead line crossing the affected landowner's land holding.
- 2.2.4. On the 25 April 2019, the ExA made a procedural decision that as the above changes did not constitute a material change to the application, the changes would be examined as part of the application [PD-014].
- 2.2.5. By the end of the Examination the Applicant had decreased the maximum number of turbines to 180 and the minimum separation distance between turbines was increased to 760m due to the removal of the 9MW turbine option. Also, the maximum hub height was confirmed as 198.5m (above HAT). In order to secure additional ornithological mitigation (discussed further in Chapters 5 and 6) the minimum blade clearance was increased to 27m above MHWS. The Applicant also removed floating foundations from the Project Design Envelope. All of these changes to the 'Rochdale envelope' were accepted by the ExA as non-material changes, reflected in the dDCO and the Examination proceeded on the basis of the Application as revised.
- 2.2.6. As is normal during NSIP Examinations, a number of changes/amendments were made to application documents as the Examination progressed. The most up to date versions of the key documents are:
- Works Plan [REP9-003] [REP9-004 and REP9-006]
 - Location Plan Onshore [REP2-010]
 - Land Plans [REP4-022] [REP4-023 to REP4-025]
 - The Draft DCO [REP9-008]
 - The Explanatory Memorandum [REP8-005]
 - Note on requirements and conditions in the DCO [REP9-009]
 - BoR [REP8-010]
 - SoR [REP8-008]
 - Funding statement [REP8-009]
 - Access to Works Plans [REP2-013]
 - Plan showing Rights of Way to be stopped [REP2-014]
 - Important Hedgerows Plan [REP2-016]
 - Outline Code of Construction Practice [REP9-010]
 - Outline Written Scheme of Investigation (Offshore) [REP9-012]
 - Outline Written Scheme of Investigation: Archaeology and Cultural Heritage (onshore) [REP8-012]
 - Outline Landscape and Ecological Management Strategy (OLEMs) [REP9-014]
 - Outline Offshore Operations and Maintenance Plan [REP9-016]
 - Offshore In Principle Monitoring Plan [REP9-018]
 - Outline Project Environmental Management Plan [REP9-022]
 - Outline Scour Protection and Cable Protection Plan [REP9-024]
 - Outline Traffic Management Plan [REP8-013 to REP8-047]

- Outline Access Management Plan [REP8-051 to REP8-053]
- Outline Operational Drainage Plan [REP8-054]

2.3. THE SECRETARY OF STATE'S POWER TO MAKE A DCO

- 2.3.1. The ExA has remained aware throughout the Examination of the need to consider whether changes to the application documents have changed it to a point where it became a different application and whether the SoS would have power therefore under s114 of PA2008 to make a DCO having regard to the development consent applied for.
- 2.3.2. 'Planning Act 2008: Guidance for the examination of applications for development consent' (March 2015), provides guidance at paragraphs 109 to 115 in relation to changing an application post Acceptance. The view expressed by the Government during the passage of the Localism Act was that s114(1) places the responsibility for making a DCO on the decision-maker and does not limit the terms in which it can be made
- 2.3.3. Having considered this context throughout the Examination, it is clear that the changes to the application (primarily consisting of minor changes to the application, a review of these within the framework provided by the ES and technical revisions to the DCO as applied for), and the reduction in the number of turbines in particular, have not resulted in any significant change to that which was applied for. The changes taken into account in reaching this conclusion are documented in Section 2.2 of this Report above.
- 2.3.4. It follows that the SoS has the power to make the DCO as discussed in Chapter 10 and provided in Appendix D to this Report.

2.4. RELEVANT PLANNING HISTORY

- 2.4.1. The ExA has not been made aware of any relevant planning history in relation to any of the land included in the Order limits.

3. LEGAL AND POLICY CONTEXT

3.1. THE PLANNING ACT 2008

3.1.1. The Planning Act 2008 (as amended) (PA2008) is the principal legislation governing the examination of an application for a NSIP. The proposed Norfolk Vanguard Offshore Wind Farm application qualifies as a NSIP as it falls within the terms of s14(1)(a) of PA2008 consisting of the construction of a generating station and is within s15(3) as the capacity exceeds 100MW. The ExA concludes that, having regard to the PA2008, the associated development as listed in Schedule 1 Part 1 of the DCO (and set out in the Explanatory Memorandum) would not constitute an NSIP in its own right.

3.1.2. Section 104(3) of PA2008 requires the SoS to decide the application in accordance with any relevant NPSs, except to the extent that one or more of the exceptions in subsections 104(4) to (8) applies, creating a presumption in favour of NPS compliant development. The exceptions are that the SoS is satisfied that:

- deciding the application in accordance with any relevant national policy statement would lead to the United Kingdom being in breach of any of its international obligations;
- deciding the application in accordance with any relevant national policy statement would lead to the SoS being in breach of any duty imposed on her/him by or under any enactment;
- deciding the application in accordance with any relevant national policy statement would be unlawful by virtue of any enactment;
- the adverse impact of the proposed development would outweigh its benefits; and/ or
- any condition prescribed for deciding an application otherwise than in accordance with a national policy statement is met.

3.1.3. The ExA considers there are three NPSs relevant to this application. Therefore, the application falls to be decided under s104(2) of PA2008, in which circumstance the matters that the SoS must have regard to are:

- any national policy statement which has effect in relation to development of the description to which the application relates (a 'relevant national policy statement');
- the appropriate marine policy documents (if any), determined in accordance with s59 of the Marine and Coastal Access Act 2009;
- any local impact report (within the meaning given by s60(3) PA2008) submitted to the SoS before the specified deadline for submission;
- any matters prescribed in relation to development of the description to which the application relates; and
- any other matters which the SoS thinks are both important and relevant to the decision.

3.2. NATIONAL POLICY STATEMENTS

3.2.1. The relevant National Policy Statements (NPSs), which set out Government Policy on different types of national Infrastructure are:

- EN-1: Overarching National Policy Statement for Energy (NPS EN-1);
- EN-3: Renewable Energy Infrastructure (NPS EN-3); and
- EN-5: Electricity Networks Infrastructure (NPS EN-5).

NPS EN-1

3.2.2. This NPS sets out national policy for energy infrastructure, including the role of offshore wind, which is expected to provide the largest single contribution towards the Government's 2020 renewable energy targets. Part 4 of EN-1 makes clear that the assessment of applications for energy NSIPs "...should start with a presumption in favour of granting consent..." and sets out the assessment principles to be applied. Therefore, the ExA has applied the tests set out in EN-1 as one of the primary bases for its examination of the application.

3.2.3. Section 4.2 of NPS EN-1 sets out the policy principles applicable to the use of a 'Rochdale Envelope' approach in energy development consenting. It states: " ... *[w]here some details [of a proposal] are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.*"

3.2.4. Paragraph 5.3.6 of NPS EN-1 advises that: "In having regard to the Government's biodiversity strategy [the IPC] should take account of the context of the challenge of climate change: failure to address this challenge will result in significant adverse impacts to biodiversity." It goes on to advise that: "The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests."

3.2.5. For development with impacts on the marine environment, decision makers are bound by duties imposed under s125 and s126 of the Marine and Coastal Access Act 2009 (MCAA). The MCAA is dealt with below. Therefore, decision-makers must have regard to the effects of a proposal on any MCZ as may be relevant. The NPS requires decision makers to have regard to sites that are protected nationally, regionally and locally for their biodiversity significance. The NPS also draws attention to the need to safeguard the interests of other habitats and species that have their own, sometimes individual protection, under a range of legislative provisions.

3.2.6. Further aspects of NPS EN-1 are referred to as relevant throughout this report.

NPS EN-3 (RENEWABLE ENERGY INFRASTRUCTURE)

- 3.2.7. This NPS sets out additional policy specific to renewable energy applications, including proposed offshore wind generating stations exceeding 100MW. Section 2.6 of EN-3 sets out detailed assessment principles for offshore wind proposals, and these have been applied by the ExA as one of the primary bases for its examination of the application.
- 3.2.8. Section 2.6 of NPS EN-3 goes on to consider the implications of the Rochdale Envelope approach in the context of renewable energy development. As a matter of policy, NPS EN-3 makes clear that matters such as, but not necessarily limited to, those listed below may not be able to be specified precisely in an application:
- precise location and configuration of turbines and associated development;
 - foundation type;
 - exact turbine tip height;
 - cable type and cable route; and
 - exact locations of offshore and/or onshore substations.
- 3.2.9. The NPS provides them as examples but does not seek to prescribe closely which matters must be assessed precisely and which matters are capable of assessment within a more flexible Rochdale Envelope based approach.
- 3.2.10. NPS EN-3 sets out more detailed considerations relevant to offshore wind farms. In terms of generic impact, NPS EN-3 makes clear that the designation of an area as a Natura 2000 site (a European site) "*...does not necessarily restrict the construction or operation of offshore wind farms in or near that area...*" (para. 2.6.69). It makes clear that mitigation should be considered in terms of the careful design of the development itself and of the construction techniques employed. Ecological monitoring is likely to be appropriate, both to enable the better management of the project itself and also, given the lack of scientific knowledge, to provide further useful information relevant to the management of future projects.
- 3.2.11. Further aspects of NPS EN-3 are referred to where relevant throughout this report.

NPS EN-5 (ELECTRICITY NETWORKS INFRASTRUCTURE)

- 3.2.12. This NPS (paras 1.8.1 and 1.8.2) sets out policy relevant to electricity transmission (400 kilovolt (kV) and 275kV) and distribution systems from transmission systems to the end user (130kV to 230kV). It also covers substations and converter stations.
- 3.2.13. The NPS is therefore relevant to this application insofar as it applies to sub-sea interconnecting cables, sub-sea export cables, onshore undergrounded cables, offshore collector stations and converter stations and the onshore substation extension and HVDC substation.

- 3.2.14. EN-5 also establishes the need for applicants to address possible issues arising from electromagnetic fields that would be created by high-voltage cables.

3.3. MARINE AND COASTAL ACCESS ACT 2009 (MCAA)

- 3.3.1. The MCAA introduced the production of marine plans and designation of Marine Conservation Zones (MCZs) in UK waters, as well as establishing the Marine Management Organisation (MMO). Under the Act, the SoS for Environment, Food and Rural Affairs designated, on 21 November 2013, 27 MCZs around the English coast. Subsequently, a further 64 MCZs have been designated. The primary aim of MCZs is to deliver the Government's vision for an 'ecologically coherent network of Marine Protected Areas (MPAs)' across the UK and to ensure the health of the wider UK marine environment.

UK Marine Policy Statement (MPS)

- 3.3.2. Under s104(2)(aa) of PA2008 the SoS must have regard to "*...the appropriate marine policy documents*". The appropriate marine policy documents for the consideration of this application are the MPS and the adopted East Inshore and East Offshore Marine Plans (EIEOMP).
- 3.3.3. The MPS was adopted by all UK administrations and published in 2011. It provides the policy framework for the preparation of marine plans, establishing how decisions affecting the marine area should be made in order to enable sustainable development. The MPS sets out high level approach to developing Marine Plans and lists high level principles for decision making. All Marine Plans must conform with the MPS unless relevant considerations indicate otherwise.
- 3.3.4. The overarching policy context for the ExA's consideration of the application for offshore works and DMLs is provided by the MPS.

East Inshore and East Offshore Marine Plans (EIEOMP)

- 3.3.5. The East Inshore and East Offshore areas were the first areas in England to be selected for the production of marine plans. The Proposed Development is within both the East Inshore and East Offshore areas, which were formally adopted on 2 April 2014. The East Inshore Marine Plan applies to the landfall and offshore cable route from mean high water out to 12 nautical miles; the East Offshore Marine Plan applies to the remainder of the cable routes and offshore infrastructure.
- 3.3.6. The plans contain a number of objectives and policies that must be taken into consideration. Policies elaborate the ten objectives of the plans and cover economic growth and employment benefits, renewable energy, support for communities, conservation of heritage assets and seascape, conservation of the marine ecosystem, protection of and recovery of biodiversity, support for MPAs, support for climate change adaptation and mitigation, and integration with other plans.

- 3.3.7. In particular, the ExA notes Objective 3 and Policy WIND2 of the EIEOMP which state:

Objective 3

To realise sustainably the potential of renewable energy, particularly offshore wind farms, which is likely to be the most significant transformational economic activity over the next 20 years in the East marine plan areas, helping to achieve the United Kingdom's energy security and carbon reduction objectives.

Policy WIND2

Proposals for Offshore Wind Farms inside Round 3 zones, including relevant supporting projects and infrastructure, should be supported

- 3.3.8. The Applicant considered the above in the submitted ES.

3.4. EUROPEAN LAW AND RELATED UK REGULATIONS

Leaving the European Union

- 3.4.1. The UK is in the process of negotiating departure from the European Union, which is intended to come into effect on 31 October 2019 (exit day). Following exit day, but subject to negotiation, there is intended to be a further implementation period of up to two years in which the UK will abide by all relevant European law and procedure.
- 3.4.2. The European Union (Withdrawal) Act 2018 provides in ss2 – 7 and Schedule 1 that, subject to defined exceptions, European law which was extant up to exit day remains in force and is incorporated into UK law on exit day. These provisions have not yet commenced. However, if commenced, the main effect would be that the body of European law that is applicable to NSIPs (primarily environmental law) would remain applicable unless it is specifically amended or repealed by UK legislation.
- 3.4.3. Therefore, this Report has been drafted on the basis that relevant European Union law will remain in force at the point when the SoS decides this Application. It will be a matter for the SoS to consider any implications in any different circumstances.

The Habitats Directive

- 3.4.4. The Habitats Directive (92/43/EEC) is a European nature conservation policy measure which provides for a network of protected sites and a system of species protection.
- 3.4.5. Habitat types requiring the designation of Special Areas of Conservation (SACs) are listed in Annex I of the directive. Animal and plant species of interest whose conservation requires the designation of SACs are listed in Annex II. SACs form part of the Natura 2000 ecological network of protected sites. Annex IV lists animal and plants species of interest in need of legal protection. All species listed in these annexes are identified as European Protected Species (EPS).

The Birds Directive

- 3.4.6. The European Birds Directive (2009/147/EC) is a European nature conservation policy measure for all wild bird species naturally occurring in the European Union. It requires classification of areas as Special Protection Areas (SPAs) comprising all the most suitable territories for these species. All SPAs form part of the Natura 2000 ecological network.

The Habitats Regulations

- 3.4.7. The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) are the principal means by which the Habitats Directive and the Birds Directive are transposed into the law of England and Wales. Assessment processes taking place pursuant to these regulations are referred to as Habitats Regulations Assessment (HRA). It should also be noted that whilst the Ramsar convention² is a UK treaty obligation and not part of the body of European Law, HRA is the primary UK process that gives effect to the UK's obligations under the Ramsar convention.
- 3.4.8. Regulation 63 of the Habitats Regulations states that:
- (1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which -*
- (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and*
- (b) is not directly connected with or necessary to the management of that site*
- must make an appropriate assessment of the implications of the plan or project for that site in view of the site's conservation objectives.*
- 3.4.9. Regulation 63 of the Habitats Regulations goes on to state the following:
- (5) In the light of the conclusions of the assessment, and subject to regulation 64, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).*
- 3.4.10. Regulation 64 of the Habitats Regulations provides that where the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding importance (IROPI) it may agree to a plan or project notwithstanding a negative assessment of the implications for the European site of the European offshore marine site.

² The Convention on Wetlands of International Importance especially as Waterfowl Habitat signed in Ramsar, Iran, 1971.

The Water Framework Directive (WFD)

- 3.4.11. Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD) sets objectives to prevent and reduce pollution, environmental protection, improve aquatic ecosystems and mitigate the effects of floods. It provides for the production of River Basin Management Plans to provide for the sustainable management of rivers. The Water Framework Directive (WFD) is transposed into law in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

The Air Quality Directive

- 3.4.12. The Air Quality Directive (AQD) 2008 sets limit values for compliance and establishes control actions where the limit values are exceeded for ambient air quality with respect to sulphur dioxide (SO²), nitrogen dioxide (NO²) and mono-nitrogen oxides (NO^x), particulate matter (PM₁₀ and PM_{2.5}), lead, benzene and carbon monoxide. The Air Quality Standards Regulations 2010 give direct statutory effect to the AQD.

The UK Air Quality Strategy

- 3.4.13. The UK Air Quality Strategy establishes the UK framework for air quality improvements³. It establishes a long-term vision for improving air quality in the UK and offers options to reduce the risk to health and the environment from air pollution. Individual plans prepared beneath its framework provide more detailed actions to address limit value exceedances for individual pollutants. In turn, these plans set the framework for action in specific local settings where limit value exceedances are found, including the designation of Clean Air Zones and more localised Air Quality Management Areas (AQMAs) where Air Quality Management Plans are prepared by local authorities. An Air Quality Management Area (AQMA) for traffic related nitrogen dioxide (NO²) in Swaffham, Breckland was declared in March 2017 and an Air Quality Management Plan has been approved. It lies approximately 1km south of the A47 which would form part of the affected road network during construction.
- 3.4.14. The environmental non-governmental organisation Client Earth has brought various proceedings against the UK Government for breaching the AQD. The Government published the 'final' Air Quality Plan on 26 July 2017 and following the requirements of the Judgement and Relief Court Order resulting from the third Client Earth Challenge (handed down on February 2018) the Government were required to prepare a Supplemental Plan. This was published 5 October 2018 during the course of the Examination.
- 3.4.15. In response to a question put to the Applicant [REP1-007] it is understood by the ExA that none of the seven local authority areas assessed within ES Chapter 26 Air Quality are included within the 45 local

³ The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Defra, 2007)

authority areas which required further assessment within the Supplemental Plan as a result of the Judgement.

3.5. OTHER LEGAL PROVISIONS

United Nations Environment Programme (UNEP)

Convention on Biological Diversity 1992

- 3.5.1. The UK Government ratified the Convention in June 1994. Responsibility for the UK contribution to the Convention lies with the Department for Environment, Food and Rural Affairs (DEFRA) who promote the integration of biodiversity into policies, projects and programmes within Government and beyond.
- 3.5.2. As required by Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010, the UNEP Convention on Biological Diversity 1992 has been taken into account in consideration of the likely impacts of the Proposed Development and of appropriate objectives and mechanisms for mitigation and compensation. The UK EIA and transboundary assessment processes referred to below satisfy with regards to impacts on biodiversity the requirements of Article 14 of the Convention (Impact Assessment and Minimizing Adverse Impacts).
- 3.5.3. This is of relevance to the biodiversity and ecological considerations and landscape and visual impact which are discussed in Chapters 4, 5 and 6 of this report.

The Wildlife and Countryside Act 1981

- 3.5.4. The Wildlife and Countryside Act 1981 (as amended) is the primary legislation which protects animals, plants, and certain habitats in the UK. It provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) by NE. The Countryside and Rights of Way Act 2000 (as amended)(CRoW Act) brought in improved provisions for the protection and management of SSSIs and other designations under the Wildlife and Countryside Act 1981.

Natural Environment and Rural Communities Act 2006

- 3.5.5. The Natural Environment and Rural Communities Act 2006 (NERCA 2006) makes provisions for bodies concerned with the natural environment and rural communities, in connection with wildlife sites and SSSIs. It includes a duty that every public body must, in exercising its functions, have regard so far as is consistent with the proper exercising of those functions, to the conservation of biodiversity (the biodiversity duty). In complying with the biodiversity duty, regard must be had to the UNEP Convention on Biological Diversity of 1992. The Act also requires that, as respects England, the SoS must publish a list of the living organisms and types of habitat which in the SoS's opinion are of principal importance for conserving biodiversity. The ExA has had regard to NERCA 2006 and the biodiversity duty in all relevant sections of Chapters 4, 5 and 6 of this Report.

The UK Biodiversity Action Plan

- 3.5.6. Priority habitats and species are listed in the UK Biodiversity Action Plan. The plan is relevant to the Application in view of the biodiversity and ecological considerations discussed in Chapters 4, 5 and 6 of this Report.

Other Natural Environment Legislation

- 3.5.7. The following additional legislation contains relevant provisions that must be met and are considered in this Report:

- Weeds Act 1959;
- Protection of Badgers Act 1992;
- The Environment Act 1995;
- Wild Mammals (Protection) Act 1996;
- The Hedgerows Regulations 1997; and
- Countryside and Rights of Way Act 2000.

Climate Change Act 2008 (CCA)

- 3.5.8. The Climate Change Act 2008 establishes statutory climate change projections and carbon budgets with a target of 80% reduction in CO₂ emissions by 2050. After the close of the Examination on 27 June 2019 Parliament approved a change to section 1(1) of the CCA which now states⁴:

"It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline."

- 3.5.9. The SoS may wish to consider the impact of this change on the recommendation in this report.

The Public Sector Equality Duty (PSED)

- 3.5.10. Section 149 of the Equality Act 2010 establishes a public sector equality duty (PSED) to eliminate discrimination, advance equality of opportunity and foster good relations between persons who share a protected characteristic and persons who do not. The PSED is applicable to the ExA in the conduct of the examination and reporting and to the SoS in decision-making.

The Historic Built Environment

- 3.5.11. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, the ExA has had regard to the desirability of preserving any listed building or its setting, or any features of special architectural or historic interest which it possesses and the desirability of preserving or enhancing the character or appearance of a conservation

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http://www.legislation.gov.uk/ukxi/2019/1056/pdfs/ukxi_20191056_en.pdf

area in Chapter 4 of this Report. The SoS must also have regard to this in making their decision.

Electricity Act Provisions Relevant to Offshore Energy Development and Navigation

- 3.5.12. The Energy Act 2004 amended the Electricity Act for the following purposes:
- to enable the 'appropriate authority' to make declarations extinguishing public rights of navigation (s36A Electricity Act 1989); and
 - providing specific duties on decision-makers in relation to navigation (s36B Electricity Act 1989), not to grant consents that are likely to interfere with the use of recognised sea lanes essential to international navigation and more generally to have regard to any likely cause of obstruction or danger to navigation in any navigable waters, arising from offshore wind development.
- 3.5.13. These Electricity Act 1989 provisions apply to decisions about offshore generating stations taken under s36 of that legislation. They are not applicable to decision-making under PA2008 and a DCO may make its own provision for the extinguishment or suspension of public rights of navigation.
- 3.5.14. As required by regulation 4 of the Infrastructure Planning (Decisions) Regulations 2010, the ExA must have regard to the whether the proposed development is likely to cause a danger to navigation.
- 3.5.15. As required by Regulation 4 of the Infrastructure Planning (Decisions) Regulations 2010, the ExA must have regard to whether the proposed development is likely to cause a danger to navigation.

3.6. MADE DEVELOPMENT CONSENT ORDERS

- 3.6.1. The Applicant made reference to a number of precedents in made Orders and related approvals (an Order made under other legislation and approval granted by an Act of Parliament). References were made in the final version of the Explanatory Memorandum (EM) [REP8-005].
- 3.6.2. The following made Orders were specifically referred to and have been taken into account in detailed terms:
- East Anglia THREE Offshore Wind Farm Order 2017
 - Triton Knoll Electrical System Order 2016
 - Hornsea TWO Offshore Wind Farm Order 2016
 - Hornsea ONE Offshore Wind Farm Order 2017
 - Knottingley Power Plant Order 2015
 - Wrexham Gas Fired Generating Station Order 2017
 - National Grid (North London Reinforcement Project) Order 2014
 - Network Rail (Ordsall Chord) Order 2015
 - The National Grid (Richborough Connection Project) Order 2017
 - Hinkley Point C (Nuclear Generating Station) Order 2013

3.7. TRANSBOUNDARY EFFECTS

- 3.7.1. The assessment of impacts in other European Economic Area (EEA) States is required in accordance with Regulation 32 of the 2017 EIA Regulations and advice contained within the Inspectorate's Advice Note Twelve: Transboundary Impacts and Process⁵.
- 3.7.2. The ExA is aware that the EIA transboundary process is ongoing and is not contingent upon the examination process. The duties of the SoS in relation to the EIA transboundary procedure are separate and distinct from the DCO examination process, as acknowledged in the Inspectorate's Advice Note Twelve.
- 3.7.3. A transboundary screening under Regulation 24 of the 2009 EIA Regulations [OD-002] was undertaken by the Inspectorate on behalf of the SoS on 16 February 2017 following the Applicant's request for a Scoping Opinion. This concluded that the SoS was of the view that the Proposed Development would be likely to have a significant effect on the environment in the following EEA States:
- Belgium;
 - Denmark;
 - France;
 - Germany;
 - Ireland;
 - The Netherlands; and
 - Norway
- 3.7.4. A notice was placed in the London Gazette on 22 February 2017 [OD-003] and letters were sent to the relevant bodies of Belgium, Denmark, France, Germany, Ireland, Norway and the Netherlands notifying them of the Proposed Development. Of the countries notified, replies were received to the effect that the Netherlands, Belgium, Denmark and Germany wished to participate in the Examination and that the Norwegian Environment Agency wished to be kept informed on studies (baseline and monitoring) on seabirds, ducks and migrating birds and their geographical use of the study area.
- 3.7.5. Following submission of the application, which included the ES and the Applicant's HRA report, the transboundary screening decision was reconsidered on 24 July 2018 [OD-002] under Regulation 32 of the 2017 EIA Regulations⁶.

⁵ <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes>

⁶ On 16 May 2017 the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 2017 EIA Regulations) came into force. Although the Applicant requested the SoS to adopt a scoping opinion in respect of the development to which the screening relates prior to 16 May 2017, it opted to prepare its ES in accordance with the requirements of the 2017 EIA Regulations. The 2017 EIA Regulations were therefore considered to be applicable for the purposes of the second transboundary screening

- 3.7.6. This concluded that on the basis of the information available from the Applicant, the SoS was of the view that the Proposed Development was not likely to have significant effects on the environment in another EEA state.
- 3.7.7. Nevertheless, consultation letters were sent to those EEA states who responded to the previous notification under Regulation 24 of the 2009 EIA Regulations and asked to participate in the procedure. Denmark replied on 21 August 2018 confirming receipt and acceptability of the proposed schedule but did not provide any further responses throughout the Examination [OD-012]. Norway replied on 15 August 2018 [OD-011] confirming that they did not have any stakeholders who wished to partake further in the process although the Norwegian Environment Agency would, as a matter of scientific interest, like to have access to any new documentation on migratory birds/seabirds in the actual area. No responses were received from Germany or Belgium.
- 3.7.8. The Netherlands (Ministry of Infrastructure and Environment (Rijkswaterstaat)) responded on 17 September 2018 [OD-113] raised concerns relating to the cumulative impact of operational offshore wind farms in Belgium, Netherlands and Germany on birds. This is discussed further in Chapters 5 and 6.
- 3.7.9. The French Republic (Préfet du Nord) responded to the Regulation 32 notification on 8 August 2018 [OD-010] highlighting concerns over: impacts of underwater noise and electromagnetic interference to marine mammals; barrier effects to birds; and the displacement of ships into the French fishing area. However, it explained that the environmental impact on the French coasts and marine environment remain low in view of the distance between British wind farm projects and French coasts.
- 3.7.10. The French Republic (Ministère de la Transition Ecologique et Solidaire) responded again in October 2018 [OD-015] highlighting the omission of an assessment of impacts to Bancs des Flandres SPA and Cap Griz-Nez SPA; the need for a cumulative assessment for Littoral seino-marin SPA and Estuaire de la Canche SPA; and reiterating its concerns about displacement of fishing into its waters.
- 3.7.11. The French Biodiversity Agency (a public institution of the Ministère de la Transition Ecologique et Solidaire) also participated directly in the Examination and raised further concerns in November 2018 [REP1-074]. This is discussed further in Chapter 5.
- 3.7.12. The ExA has had regard to those responses and to transboundary matters throughout the Examination; these are discussed in Chapters 5 and 6.
- 3.7.13. The ExA is satisfied that with regard to Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010, all transboundary biodiversity matters have been addressed and there are no matters outstanding that would indicate against the Order being confirmed.

3.8. OTHER RELEVANT POLICY STATEMENTS

3.8.1. Other relevant Government policy has been taken into account by the ExA, including:

- Energy White Paper: Meeting the Challenge (May 2007);
- UK Low Carbon Transition Plan (2009);
- National Strategy for Climate and Energy (July 2009);
- UK Renewable Energy Strategy (July 2009);
- Planning our electric future: White Paper for secure, affordable and low carbon electricity (July 2011);
- UK Renewable Energy Roadmap (2011);
- The National Infrastructure Plan 2011;
- The National Infrastructure Plan update 2012;
- The National Infrastructure Plan 2013;
- The National Infrastructure Plan 2014;
- The National Infrastructure Delivery Plan and Pipeline 2015;
- The National Infrastructure Delivery Plan 2016-2021
- National Planning Policy Framework (NPPF) 2019; and
- National Planning Practice Guidance

3.9. THE NATIONAL PLANNING POLICY FRAMEWORK

3.9.1. The revised National Planning Policy Framework (NPPF) was published in February 2019 and replaced the NPPF published in March 2012 and includes minor clarifications to the revised version published in July 2018. The NPPF and its accompanying Planning Practice Guidance (PPG) set out the Government's planning policies for England and how these are expected to be applied. This is for the particular purposes of making development plans and deciding applications for planning permission and related determinations under the Town and Country Planning Act 1990 (as amended) (TCPA1990). Paragraph 5 of the NPPF makes clear that it is not a source of individual or project-specific policy for NSIP decision making.

3.9.2. Nonetheless, the Applicant has referred to the NPPF within Chapters 20, 22, 25 and 28 of the ES. The application was prepared on the basis of the NPPF that was extant at the time of submission; the March 2012 version. In response to a question put to the Applicant by the ExA, the Applicant has provided an update to the references in the ES and considers that there are no new policies in the revised NPPF that require further consideration [REP8-074].

3.10. LOCAL IMPACT REPORTS

3.10.1. LIRs were received from Norfolk County Council [REP1-100], North Norfolk District Council [REP1-099], Breckland Council [REP1-125] and Broadland District Council [REP1-065]. The content of the LIRs is considered in Chapter 4 of this Report.

3.11. THE DEVELOPMENT PLAN

- 3.11.1. The Development Plan is not a statutory consideration required by s104 or 105 of PA2008. However, paragraph 4.1.5 of NPS EN-1 states that Development Plan Documents or other documents in the Local Development Framework are other matters that may be considered important and relevant to decision-making. However, in the event of a conflict between these or any other documents and a NPS, the NPS prevails for the purposes of NSIP decision making given the national significance of the infrastructure. In the case of this Application the ExA considers that the Development Plans of NCC, BC, BDC and NNDC are important and relevant.
- 3.11.2. The Development Plan in force for NCC is the Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2010-2016 which was adopted in September 2011. The following policies are relevant:
- DM1 Nature Conservation
 - DM2 Core River Valleys
 - DM3 Groundwater and surface water
 - DM4 Flood Risk
 - DM8 Design, local landscape and townscape character
 - DM 9 Archaeological sites
 - DM10 Transport
 - DM13 Air quality
 - DM16 Soils
- 3.11.3. The Development Plan in force for BDC is the Joint Core Strategy for Broadland, Norwich and South Norfolk adopted in March 2011, with further amendments adopted in January 2014, the Development Management DPD adopted in August 2015 and the Site Allocations adopted in 2016. The following policies are relevant:

Joint Core Strategy

- Policy 1: Addressing climate change and protecting environmental assets
- Policy 2: Promoting Good Design
- Policy 3: Energy and water
- Policy 5: The Economy

Development Management DPD

- Policy GC1 Presumption in favour of sustainable development
- Policy GC2 Location of new development
- Policy GC4 Design
- Policy GC5 Renewable Energy
- Policy EN1 Biodiversity and Habitats
- Policy EN2 Landscape
- Policy EN3 Green Infrastructure
- Policy EN4 Pollution
- Policy TS2 Travel Plans and Transport Assessments
- Policy TS3 Highway Safety

- Policy CSU5 Surface Water Drainage

3.11.4. In its LIR, BDC also referred to the Landscape Character Assessment Supplementary Planning Document adopted in 2013 as being relevant to the consideration of the Application.

3.11.5. The Development Plan in force for BC is The Core Strategy and Development Control Policies DPD adopted in 2009, of which the following policies are relevant:

- Policy CP 8 Natural Resources
- Policy CP 9 Pollution and Waste
- Policy CP 10 Natural Environment
- Policy CP 11 Protection and Enhancement of the Landscape
- Policy CP 12 Energy
- Policy DC 1 Protection of Amenity
- Policy DC 12 Trees and Landscape
- Policy DC 13 Flood Risk
- Policy DC 14 Energy Generation and Efficiency
- Policy DC 15 Renewable Energy
- Policy DC 16 Design
- Policy DC 17 Historic Environment

3.11.6. The Development Plan in force for NNDC is The Core Strategy incorporating Development Control Policies which was adopted in September 2008, of which the following policies are relevant:

- Policy SS 2 Development in the Countryside
- Policy SS 4 Environment
- Policy EN 2 Protection and Enhancement of Landscape and Settlement Character
- Policy EN 3 Undeveloped Coast
- Policy EN 4 Design
- Policy EN 6 Sustainable Construction and Energy Efficiency
- Policy EN 7 Renewable Energy
- Policy EN 8 Protecting and Enhancing the Historic Environment
- Policy EN 9 Biodiversity and Geology
- Policy EN 10 Development and Flood Risk
- Policy EN 11 Coastal Erosion
- Policy EN 13 Pollution and Hazard Prevention and Minimisation.

4. THE PLANNING ISSUES

4.1. INTRODUCTION

- 4.1.1. This Chapter deals with the generality of issues covered in the Examination arising from the assessment of principal issues made by the ExA, written and oral submissions, and the LIRs. The Chapter also covers the principles of the development and conformity with various plans, policies and regulations. Biodiversity, biological environment and ecology (offshore only) are considered separately in Chapter 5, followed by consideration of Habitats Regulation Assessment which is in Chapter 6.

4.2. INITIAL ASSESSMENT OF PRINCIPAL ISSUES

- 4.2.1. The ExA made an initial assessment of the principal issues in accordance with s88(1) of PA2008, and issued these to all IPs on 9 November 2018, as Annex B within the Rule 6 letter giving notice of the Preliminary Meeting [PD-005]. The principal issues as set out in the Rule 6 letter were:

Principal issue	Brief amplification
Nature of the proposed development and its relationship with other projects	Nature of the proposal in terms of the 'Rochdale envelope'; design considerations and assessment of alternatives; construction techniques; relationship and timetabling with other possible projects.
Construction impacts – onshore and offshore	Traffic generation, traffic management and highway safety; air quality; noise, dust and other amenity impacts during construction operations; phasing and relationship with other projects; implications of coastal retreat.
Offshore ecology	Ornithology – baseline data and assessment methodologies, Habitats Regulations Assessment, cumulative and in-combination assessment, mitigation, post-construction monitoring; Marine mammals – monitoring and mitigation techniques, unexploded ordnance clearance, in-combination impacts; Benthic species and habitats including <i>Sabellaria spinulosa</i> reef'
Onshore ecology	Impacts on protected species and habitats; baseline data; Habitats Regulations Assessment; trees and hedgerows; mitigation

	and enhancement opportunities; timing of works.
Landscape, seascape and visual impacts	Seascape considerations; landscape and visual impacts of the proposed substation and other works; effect on protected landscapes.
Historic environment	Offshore archaeology; onshore archaeology and effect on heritage assets.
Aviation	Ministry of Defence radar and aviation operations.
Marine processes and environment	Marine water and sediment quality; cable protection; nature and deposition of dredged material; sandwave levelling and recoverability.
Navigation and other offshore operations	Shipping routes; marine safety; other offshore interests; transboundary issues.
Fish and fisheries	Impacts on fishing and fisheries including cumulatively with other projects; co-existence planning; transboundary issues.
Socio-economic	Employment and training opportunities; community benefits; impact on tourism.
Land use	Effects of the proposal on agricultural land and farming operations, soil quality, recreational opportunities, public rights of way and flood risk.
Content of the Development Consent Order (DCO)	Relevant definitions; application and modification of legislative provisions; requirements; protective provisions; structure and content of Deemed Marine Licenses; arrangements for discharge of requirements and conditions; dispute resolution measures.
Compulsory Acquisition (CA)	Nature and extent of land; rights and powers sought by CA; whether a compelling need in the public interest; need for the land proposed to be subject to CA; temporary possession powers; project funding and guarantees for compensation; human rights

	and consideration of alternatives; statutory undertakers' land; Crown land; special category (open space) land; Book of Reference.
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4.2.7. These issues informed the conduct of the Examination through the ExA's proposals for structuring the Examination (which were not challenged), the discussion at the PM relating to possible SoCGs, and the ExA's written questions. The principal issues provided a structure for the topics covered in the various hearings held during the Examination, and for written questions. They are not exclusive, and all important and relevant matters were considered during the course of the Examination.

4.2.8. Not all of the above issues remained of equal relevance and importance as the Examination progressed. Some maintained their significance and are therefore addressed in detail in this Report. Evidence, SoCGs and agreements between the Applicant and other interested parties and invited persons also led to issues that had appeared prospectively relevant and important at the outset of the Examination ceasing to be so on the basis that they were either not a source of significant effects, or that mitigation measures secured in the dDCO could ensure their satisfactory management.

NEED FOR THE DEVELOPMENT

4.2.9. Whilst the in-principle need for the development, in terms of the provision of renewable energy, was not generally challenged in written submissions there were objections relating to the choice of the location of the substation and substation extension and the connection point, as well as the need for an onshore connection. Due to the level of representations and interest in relation to these matters they form part of the consideration of main issues.

4.2.10. Section 3.3 of NPS EN-1 considers the need for new nationally significant infrastructure projects. Paragraph 3.3.1 states that electricity meets a significant proportion of our overall energy needs and our reliance on it is likely to increase. It is critical that the UK continues to have secure and reliable supplies of electricity as we make the transition to a low carbon economy, including, amongst other things, sufficient electricity capacity (including a greater proportion of low carbon generation) to meet demand at all times and a mix of technologies so we do not rely on one technology or fuel.

4.2.11. Paragraph 3.3.10 of NPS-EN1 states that as part of the UK's need to diversify and decarbonise electricity generation the Government is committed to increasing dramatically the amount of renewable generation capacity. Generating and harnessing energy from low carbon, renewable sources, such as offshore wind, is one of the solutions

available to improve the UK's energy security by reducing our dependence on imported fossil fuels, decrease greenhouse gas emissions and provide economic opportunities. The UK has an ambitious target of reducing greenhouse gas emissions by 57% relative to 1990 levels by 2030, and by 80% by 2050. After the close of the Examination on 27 June 2019 Parliament approved a change to section 1(1) of the CCA which now states⁷:

"It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline."

- 4.2.12. Offshore wind currently generates 5% of the UK's electricity and this is expected to double by 2021.

PUBLIC BENEFITS OF THE PROPOSAL

- 4.2.13. The Proposed Development would make a significant contribution to the achievement of UK decarbonisation targets and to global commitments to mitigating climate change. Norfolk Vanguard would be one of the biggest offshore wind projects in the world and together with Norfolk Boreas has the potential, at today's level of UK carbon emissions from the power sector, to prevent more than 4,000,000 tCO₂ from entering the atmosphere. The Proposed Development therefore provides a significant benefit in terms of the UK's contribution to global efforts to reduce the effects of climate change.
- 4.2.14. In addition, the Proposed Development would provide up to 1,800MW of renewable energy, securing supply for up to 1.3 million UK households. This is the equivalent of 2% of the UK's annual energy demand, or 25% of the East of England's electricity demand. The Proposed Development would also bring about economic benefits by providing jobs during all phases.
- 4.2.15. The need for the development as a project to provide renewable energy is not generally disputed. However, the ExA wish to record at the outset that it has considered the need for the project against the tests set out in NPS EN-1 and NPS EN-3. It notes that the strong need case for renewable energy generation infrastructure, as stated in those NPSs, is applicable to this Proposed Development. It accepts that the production of energy from a renewable source accords with NPS policy, provides a clear public benefit and weighs strongly in favour of the Proposed Development. Nothing in the written submissions, and no other matters that the ExA has found to be important and relevant, has indicated against the applicability of that need case or the significant benefits associated with the Proposed Development.

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http://www.legislation.gov.uk/ukxi/2019/1056/pdfs/ukxi_20191056_en.pdf

ISSUES ARISING FROM WRITTEN AND ORAL SUBMISSIONS

- 4.2.16. The matters raised by IPs in WR for D1 largely built on the issues referred to in their RR. The ExA was satisfied that these were covered in the scope of the principal issues noted above which were agreed by IPs at the PM.
- 4.2.17. The Examination processes and events are recorded in Chapter 1 and Appendix A and the principal issues were explored in more detail in the series of hearings, where IPs were given the opportunity to raise any other matters, and written questions. Some issues, such as land contamination and issues such as air quality, noise and disturbance and traffic generation through Cawston and other highway links came to the fore as the Examination progressed.
- 4.2.18. All relevant issues arising during the course of the Examination have been carried forward and are addressed as necessary in Chapters 4, 5 and 6 of this Report.

ISSUES ARISING IN THE LOCAL IMPACT REPORTS

- 4.2.19. LIRs were received from NCC [REP1-100], NNDC [REP1-099], BC [REP1-125] and BDC [REP1-065]. These reports set out the respective Councils' views of the likely impacts of the Proposed Development and record the local planning policy background. The local Councils (NNDC, BDC and BC) deferred to NCC on matters including hydrology, flood risk, ecology, nature conservation, archaeology and traffic and NCC deferred matters relating to noise, local environmental health and any other contamination issue to the local Councils.

Norfolk County Council

- 4.2.20. NCC welcomed the significant contribution which the proposal would make to renewable energy objectives as well as the potentially significant economic benefits that may arise. NCC further welcomed the use of HVDC technology. Other matters referred to can be summarised as follows:
- the potential for electricity to feed into the local transmission networks;
 - stakeholders/communities to be made aware of community benefit funds and having the opportunity to make appropriate bids;
 - appropriate compensation to be paid to fishing businesses affected;
 - highways: NCC placed a holding objection to the proposed use of the former Oulton Airfield as the main work compound. Concerns were also raised regarding the proposed access arrangements on the A47;
 - minerals and waste;
 - flooding and drainage;
 - landscape;
 - archaeology;
 - hedgerows; and
 - coastal erosion.

- 4.2.21. NCC supported the development in principle subject to its holding objection in relation to highways matters being resolved; implementation of appropriate highway, surface water and archaeology conditions being secured through the DCO and other detailed comments being fully addressed.

North Norfolk District Council

- 4.2.22. NNDC fully supported the principle of renewable energy development in helping to tackle challenges faced by climate change and recognised that the Proposed Development's contribution to renewable energy is a significant positive impact. NNDC also welcomed the commitment to HVDC. The matters raised by NNDC in its LIR can be summarised as follows:

- marine processes/coastal erosion;
- ground conditions and contamination;
- water resources and flood risk;
- land use and agriculture;
- onshore ecology and ornithology;
- traffic and transport;
- noise, vibration and air quality;
- onshore archaeology and cultural heritage;
- landscape and visual impact assessment; and
- tourism, recreation and socio-economics.

- 4.2.23. Whilst supporting the principle of the Proposed Development, the commitment to using HVDC and the commitment to bring cables onshore via the 'long' HDD option, NNDC recognised that the Proposed Development has the potential to result in some impacts across the District particularly during construction and emphasised that adverse impacts were reduced as much as possible and appropriately mitigated. NNDC was of the opinion that many of the potential impacts could be made acceptable through the drafting of the DCO.

Broadland District Council

- 4.2.24. In its LIR, BDC set out the policy framework at a local level including the Joint Core Strategy for Broadland, Norwich and South Norfolk, Broadland Development Management Plan DPD, the Supplementary Planning Document: Broadland Landscape Character Assessment and the emerging Greater Norwich Local Plan.

- 4.2.25. Where a common position had been reached and set out the SoCG to identify the required mitigation an impact of the Proposed Development, BDC did not repeat this in the LIR to avoid repetition. As such, BDC concentrated on specific material impacts on which they raised unresolved concerns, namely:

- the cumulative impacts of the construction of the NV wind farm and H3 with particular regard to Oulton;

- the installation of the cable route and the removal of sections of hedgerows and the assessment of those hedgerows under the Hedgerow Regulations 1997; and
- impacts of construction traffic in Cawston in terms of traffic, amenity and impacts on the Cawston Conservation Area and listed buildings.

4.2.26. BDC did not wish to raise an objection in principle with regards to the dDCO but considered that there were still material issues and concerns relating to specific requirements of the on-shore proposals that it considered should be addressed.

Breckland District Council

4.2.27. BC did not dispute that Norfolk should accommodate the creation of wind farms in principle and the benefits of non-renewable energy were supported. In this regard BDC referred to Policy CP12 of the Breckland Core Strategy and Development Control Policies Document 2012 (CS and DCPD) which supports the provision of renewable technologies and commercial scale renewable energy generation development.

4.2.28. BC's LIR centred around the impact of the Proposed Development on the landscape. In this regard, the matters raised by BC included:

- Policy CP11 of the CS and DCPD which states that the landscape of the District will be protected for the sake of its own intrinsic beauty and its benefit to rural character;
- whilst noting the environmental benefits of the reduction in the cable corridor due to the use of HVDC, there would be an adverse obvious consequence for Necton as a result of the increase in height of the grid connection facility to 19m;
- cumulative landscape impacts;
- cumulative visual impacts.

4.2.29. BC considered that the cumulative landscape and visual effects would create negative disbenefits in planning terms. However, BC also considered that there were potential economic and community benefits which may arise including employment roles during both construction and operation and the possibility of apprenticeships and internships for local residents.

4.2.30. BC concluded that it remained supportive of the national and local agenda for using renewable energy technologies and considered it acceptable in principle for this type of development on a commercial scale to be accommodated in the District. However, BC was also of the opinion that the proposed extension to the existing NG substation and the HVDC convertor station would result in a disproportionate and dominant impact on the landscape which had to be balanced against this. BC also considered that if the Proposed Development was judged as acceptable then the local community must be consulted on what other site-specific mitigation measures should be secured and spent locally via a community benefit fund.

Conclusion on LIR matters

- 4.2.31. All matters referred to within the LIRs were considered by the ExA during the Examination. Further analysis of the issues raised is carried forward and addressed in the relevant chapters and sections of this Report so ensure that they are considered as required by the SoS.

ENVIRONMENTAL STATEMENT AND ENVIRONMENTAL IMPACT ASSESSMENT

- 4.2.32. Section 4.2 of NPS EN-1 sets out in brief the legal requirements applicable to EIA and indicates the information that should be provided in the Environmental Statement (ES). The Applicant submitted a substantial ES [APP-191 to APP-634 inclusive].
- 4.2.33. During the course of the Examination other environmental information was presented. In particular additional modelling and data in relation to Offshore Ornithology Collision Risk and cumulative impacts were provided, for example [REP1-008, REP3-038, REP6-019 and REP6-020, REP7-062 and AS-049]; further information on cumulative impacts on marine mammals [REP4-038]; and various technical notes and cumulative impact assessments in relation to highways matters [AS-047, REP4-036 and REP4-037 and REP5-012]. Finally, further air quality assessment information and noise assessments were also provided [REP08-070 and REP7-049]. Other environmental information was provided in other documents and in response to written and oral questions and responses to requests for information.
- 4.2.34. The ES, and all other environmental information provided during the course of the Examination, including cumulative and in-combination effects, has been taken into account under the relevant topic areas within the Examination, as set out in this and Chapters 5 and 6. The ExA considers that the ES is legally robust and meets the test of adequacy.

HABITATS REGULATIONS ASSESSMENT

- 4.2.35. Section 4.3 of NPS EN-1 specifies the approach that needs to be taken by the decision-maker in relation to the Habitats Regulations, which implement the relevant parts of the Habitats Directive and the Birds Directive in England and Wales. The need for a HRA was considered as part of the Examination and the Applicant submitted its Information for the HRA [APP-045], HRA Offshore Screening [APP-046] and HRA Onshore Screening [APP-047] to accompany the application. The HRA Integrity Matrices were updated during the Examination [REP7-035]. HRA matters are discussed in detail in Chapter 6 of this Report.

4.3. MAIN ISSUES IN THE EXAMINATION

- 4.3.1. The remainder of this Chapter will focus on the main issues in the Examination in relation to all onshore matters. Chapter 5 will deal with all offshore matters.

4.4. CONSIDERATION OF ALTERNATIVES

Introduction and Policy Considerations

- 4.4.1. Section 4.4 of NPS EN-1 addresses the policy requirements to consider alternatives in relation to the ES and the Habitats Regulations.
- 4.4.2. Before authorising a project likely to have a significant effect on a European site, the Habitats Regulations require the competent authority (in this case the SoS as decision-maker) to make an appropriate assessment or to enable them to determine whether an appropriate assessment (AA) is required. This information normally takes the form of a HRA report.
- 4.4.3. The HRA process (considered further below) requires a consideration of alternatives, as do the specific requirements of NPS EN-1 sections 5.3 (biodiversity) and 5.9 (landscape and visual), both of which are referred to below. Paragraph 4.4.2 makes clear that the consideration of alternatives must be a proportionate exercise. The 2017 EIA Regulations also require the ES to include a description of reasonable alternatives or to establish whether the proposed project represents the best option.
- 4.4.4. Paragraph 4.4.3 of NPS EN-1 further specifies other guiding principles that the SoS should consider when deciding what weight should be given to alternatives, and in particular whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security and climate change benefits) in the same timescale as the proposed development.

The Applicant's Case

- 4.4.5. The Applicant set out in ES Chapter 4 'Site Selection and Assessment of Alternatives' [APP-328] its approach to selection of a location for the Proposed Development and its consideration of alternatives in relation to both offshore and onshore elements. The offshore project site was limited to areas within the former East Anglia Zone (Zone 5) which was identified as part of The Crown Estate Round 3 Offshore Wind Farm (OWF). Due to the strategic approach of developing Norfolk Vanguard and its sister project (Norfolk Boreas) the site selection process also considered co-location of both projects.
- 4.4.6. In relation to the offshore elements (comprising the array, electrical and accommodation platforms, meteorological masts and monitoring equipment), site selection comprised an iterative process to identify the most suitable locations and configurations. This involved consultation with a variety of stakeholders to refine broad areas of search within Zone 5, having regard to technical constraints and environmental impacts.
- 4.4.7. Following identification of the offshore project areas for the two sister projects, site selection for all other infrastructure was assessed beginning with the identification of a provisional offshore cable corridor route and landfall area. Possible landfall locations were identified along the coastline stretching from The Wash to Harwich with the aim of avoiding

areas covered by high level designations. Three potential landfall sites emerged, and options were identified for offshore cable routes from the array to each of the possible sites. A feasibility report and a cable constructability assessment resulted in identification of the most favourable landfall location.

- 4.4.8. Next came the identification of a National Grid connection point undertaken by National Grid Electricity Transmission plc (NGET) and the Applicant, which resulted in a grid connection offer to the existing Necton substation being made by National Grid plc to Norfolk Vanguard Limited. Following this exercise, the offshore cable corridor was further refined and the landfall location identified. Finally, the onshore cable corridor was designed, with the aim of minimising permanent visual impacts during the operational life of the project. The decision was taken to provide a new underground cable system rather than overhead lines. Following consultation, the Applicant decided to use HVDC technology to reduce the working width of the cable corridor and to remove the requirement for cable relay stations.

Planning Issues

- 4.4.9. Several IPs, including Holme Hale Parish Council [RR-081] and Necton Parish Council [RR-113], made representations to the effect that consultation was inadequate and there had been inadequate or no consideration of alternative sites for the connection point and substation infrastructure. The action group, Necton Substation Action Group and several Necton residents put forward suggestions as to alternative sites at Scarning and Top Farm in Necton, which they say have been disregarded.
- 4.4.10. The representation of Mr George Freeman MP [RR-154] contains legal advice which sets out the view that there was a failure to comply with regulation 14(2) of the Infrastructure Regulations in that the process described by the Applicant does not describe the alternatives or to indicate why the preferred option was a substation at Necton.
- 4.4.11. Many IPs advocated a more strategic approach by the development of an offshore ring main to service the proposed offshore wind farm projects off the East Anglia Coast. These points were made in many representations and repeatedly at open floor hearings.
- 4.4.12. The local Member of Parliament, Mr George Freeman, provided his written objections and spoke at the first open floor hearing [RR-154 and AS-008]. He pointed to inadequate consultation and shared the concerns of his constituents regarding the siting of the substation. In his oral submission to the Examination Mr Freeman strongly advocated the use of an offshore ring main and a more strategic approach to the development of offshore wind farms. Mr Freeman's letter to the Secretary of State for Housing, Communities and Local Government reflects the concerns of many IPs. He comments:

"Understandably, as is often the case when a Nationally Significant Infrastructure Project of this scale is being proposed, the application has caused considerable concern in Necton, along with a number of the surrounding villages. It has brought to the fore a number of issues concerning Localism and the NSIP planning process too, as well as the lack of any strategic planning in respect of the connection of offshore wind farms to the National Grid.

It is clear that ... the continued ramshackle approach to NSIP applications (particularly in relation to the offshore wind energy sector), will only serve to greatly undermine public trust in the planning system as a whole ... (I am sure you are aware of the various other offshore wind farm applications that are currently on the cards here in the East -and the huge furore they are causing within the communities that will be affected by their cable corridors and substations)." [RR-154]

- 4.4.13. Local residents also pointed to the length of the onshore cable routes, and Colin King [RR-122], Sir Edward Evans-Lombe [RR-199] and others, contended that if the Hornsea Three Project and the Proposed Development exchanged connection points then the cable corridors for each project would be considerably shorter, suggesting some 80km of cabling could be saved.
- 4.4.14. Objections were also received regarding the actual siting of the substation and substation extension within the Necton location. Some local residents, for example Patricia Lockwood [REP1-098], felt that the National Grid's Guidelines on Substation Siting and Design 'The Horlock Rules' had not been adhered to. Concerns related to the location of the built development on higher ground. Happisburgh Parish Council and some Happisburgh residents questioned the choice of Happisburgh as the landfall location.
- 4.4.15. The action group 'No to Relay Stations' (N2RS) was established in April 2017 in response to concerns about the impact of major onshore infrastructure to support offshore wind farms in the pipeline. Its stated aim is to promote HVDC technology and as such it has welcomed the commitment by the Applicant to the use of such technology [RR-078]. Similarly, the East of England Energy Group, representing 300 local businesses made representations fully supporting the Proposed Development [RR-024].

ExA Reasons

Consultation

- 4.4.16. A Consultation Report [APP-043] together with appendices [APP-055 to APP-190] sets out the process followed by the Applicant in terms of publication of the proposal and consultation with stakeholders such as local communities, local authorities, statutory bodies and persons with an interest in land potentially affected. Consultation was undertaken in a series of phases and A Statement of Community Consultation prepared [APP-155]. The Consultation Report sets out the pre-application consultation which was undertaken at each stage in the EIA process,

records the number of respondents and sets out how those responses have been addressed.

- 4.4.17. In response to the consultation the Applicant made certain revisions to the proposal such as a commitment to ducting Norfolk Vanguard and Norfolk Boreas in one construction operation, settling upon Happisburgh for the landfall location and making the decision to adopt Horizontal Direct Drilling as well as refinements to the onshore cable corridor and the incorporation of some trenchless crossings.
- 4.4.18. Examination documents [AoC-001 to AoC-011] contain responses regarding the adequacy of consultation from eleven district and local councils, as well as County Councils and City Councils. Save for South Norfolk Council which offered no comment, all other councils confirmed that they considered the statutory duty to publicise and consult on the application had been complied with.
- 4.4.19. Whilst there were no specific responses from IPs to the Applicant's response, throughout the Examination several IPs reiterated their concerns that there had been insufficient consultation and that it was difficult to engage with the Examination process due to the large volumes of technical documents. These concerns generally reflected criticisms of the process and Act which fall outside the remit of the ExA.
- 4.4.20. Having regard to the above the ExA is satisfied that there has been consultation which has engaged with relevant stakeholders and that efforts have been made to identify and, in some instances, address emerging issues of concern. The commitment to HVDC technology is one such example. On the whole, the ExA finds that the consultation undertaken was adequate and sufficient to satisfy the requirements of the Planning Act 2008.

Consideration of Alternatives

- 4.4.21. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the ES to include at least:
- 14(2) (d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;...
- 4.4.22. The SoS is referred to the Applicant's submission 'Strategic Approach to Selecting a Grid Connection Point' [AS-007]. This outlines the process undertaken which resulted in the selection of Necton as the onshore connection point (OCP). The document underlines the extent to which applicants seeking a connection point can influence the process. Essentially it makes the point that the final decision on a connection point is taken by National Grid Electricity Transmission PLC (National Grid) following a connection application by developers and joint discussions with developers. The assessment process considered matters from an economic and strategic perspective, with consideration given to the cost

ultimately to be borne by the consumer. The final decision on the onshore connection point was made following selection of the landfall location and assessment of alternatives.

- 4.4.23. The Applicant contends that the OCP near Necton was separately fixed by National Grid (with input from Vattenfall) under a separate process. The SoS is further referred to the Applicant's response to FWQ 2.1 at [REP1-007] which summarises the approach to the identification of an OCP. The joint process between the Applicant and National Grid started with the identification of a long list of potential OCPs. Locations requiring longer transmission distances and other inland locations which did not make use of existing/proposed substation infrastructure were then eliminated on grounds of higher financial and environmental costs. Options involving three inland substation locations remained at Norwich Main, Necton and Eye.
- 4.4.24. Attention was then turned to the landfall location and potential cable routes. Discussions with National Grid revealed that the provision of a new coastal connection point within the required time-frames would be unlikely. This left Necton and Norwich Main as the options available for an OCP and these were subject to a constraints mapping exercise which identified Necton as the preferred OCP option due to increased environmental and other implications for Norwich Main.
- 4.4.25. The assessment of potential landfall locations is supported by various technical documents⁸. A scoping exercise was undertaken along the coastline to identify appropriate sections and three sections emerged. There then followed a theoretical exercise designed to ascertain provisional offshore cable routes from the arrays to each of the landfall options. This process was supported by two studies and sites were further assessment and ranked. The process undertaken was complex given the number of variables in terms of the various elements of the project and the assessment of a number of constraints. It appears to be thorough and methodical.
- 4.4.26. The development of an onshore ring main to facilitate the bringing onshore of electricity generated offshore is something which appears to require co-ordination between projects. As such it is not an alternative which can be considered within the confines of the examination of a single offshore wind farm project. Similarly, arguments that if the connection points of Norfolk Vanguard and Hornsea Three Project were exchanged, then the total onshore cable routes would be reduced, appear sensible propositions but are suggestions which are outside the scope of this Examination.
- 4.4.27. Having regard to the process undertaken between the Applicant and National Grid the ExA is satisfied that the process adequately describes the reasonable alternatives which have been considered and disregarded and that the approach to the final selection of the OCP and the landfall

⁸ Preferred Location Technical Note at APP-196 and Figure 5.3 Landfall Zone at APP-378. Also see other documents APP-362 to APP-365 inclusive

location is justified and adequate in terms of satisfying the aforementioned regulations.

Siting within Necton area

- 4.4.28. Once Necton was chosen as the OCP, a search area of 3 kilometres around the existing Necton substation was defined. The location of the substation extension, and associated overhead line modification works, was largely determined by the location and configuration of the existing substation because the extension works need to follow the alignment of existing busbar infrastructure. This resulted in an indicative development area which was subject to consultation and further refinement.
- 4.4.29. The Horlock Rules [REP1-008] set out guidance developed by National Grid on the siting and design of substations. They have no formal policy status within the planning regime. At section III paragraph 4, the rules provide:
- ‘the siting of substations, extensions and associated proposals should take advantage of the screening provide by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum’.
- 4.4.30. Via the process outlined above the Applicant identified 4 potential footprints for the onshore substation. Following a detailed environmental assessment, the proposed footprint emerged as the preferred option. The other three options were ruled out due to concerns over visibility from nearby properties and Necton village, buried archaeological deposits and noise concerns. The ExA was satisfied that the ES adequately addressed the concerns raised by IPs regarding the siting of the substation, setting a clear rationale for the siting of the building within the identified development envelope.
- 4.4.31. The requirement in NPS EN-1 is not to establish that the preferred option is the best option, having established that a range of reasonable alternatives have been considered. The ExA is satisfied that the Applicant has adequately demonstrated compliance with national policy statement objectives in relation to the choice of siting of the substation infrastructure at the OCP location.

Conclusion

- 4.4.32. It is the ExA's view that the Applicant's approach in terms of the assessment methodology and consultation in relation to EIA requirements is reasonable and adequate and in accordance with national policy objectives.
- 4.4.33. The ExA finds that, in accordance with the requirements of the current system, the Applicant has followed an appropriate process and made reasonable decisions in terms of the consideration of alternatives. Whilst it is not part of the ExA's remit to comment upon the current arrangements for allocating connection points, the ExA consider it appropriate to make the SoS aware of the many representations from IPs

advocating an overarching strategic approach to the provision of such connection points. The SoS should also be aware of the strongly held views that, in view of the number of offshore wind farm projects coming forward in this region, there should be a strategic approach in terms of contributions towards the development of an offshore ring main.

4.5. LANDSCAPE AND VISUAL ASSESSMENT

Introduction

- 4.5.1. The impact of the Proposed Development has been assessed by the Applicant in relation to its three principal components; the offshore wind turbine array, the onshore cable corridor, and the proposed substation/substation extension at Necton. As part of its EIA the Applicant undertook a Landscape and Visual Impact Assessment (LVIA) [APP-315 to APP-317] and which is summarised within ES Chapter 29 'Landscape and Visual Amenity' [APP-353]⁹. The potential impacts were determined by considering the worst-case scenario and the effects were established having regard to mitigation embedded in the Proposed Development.
- 4.5.2. A detailed description of the onshore project area is contained within ES Chapter 5-Project Description [APP-329]. A summary of the worst-case scenarios in relation to the various elements relating to the LVIA is presented in table 29.8 of Chapter 29-Landscape and Visual Impact Assessment [APP-353]. Photomontages from a series of selected viewpoints were submitted with the application [APP-613 to APP-628] inclusive. Additional photomontages were requested and are supplied at [REP3-024 to REP3-029].
- 4.5.3. The offshore components of the Proposed Development were scoped out of the assessment because of their distance from the coast, approximately 47 kilometres and 70 kilometres respectively for the two arrays. The ExA agrees with this approach.

Policy Considerations

- 4.5.4. Paragraph 5.9.8 of NPS EN-1 provides that:
- “Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape providing reasonable mitigation where possible and appropriate”.
- 4.5.5. EN-1 notes that good design is a means by which many policy objectives in the NPS can be met. Paragraph 4.5.3 states that:
- “Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be

⁹ Supported by the figures and appendices contained at APP-601 to APP-612.

opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation”.

- 4.5.6. The need for the demonstration of good design for renewable energy infrastructure in respect of landscape and visual impact is reiterated in Paragraph 2.4.2 of NPS EN-3.

“Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology.”

- 4.5.7. The ExA has had regard to NPS EN-5 in relation to Electricity Networks but concluded that it is of limited relevance given that overhead lines are not being used and the embedded mitigation includes underground cabling.

- 4.5.8. The National Planning Policy Framework (NPPF) overarching policy ambition is to achieve sustainable development by, amongst other things, protecting and enhancing our natural environment, making effective use of land and mitigating and adapting to climate change, including moving to a low carbon economy. It directs that planning policies and decisions should contribute to and enhance the natural and local environment by recognising the intrinsic character and beauty of the countryside.

- 4.5.9. Development plan policy considerations: the onshore cable route passes through the administrative districts of Norfolk County Council (NCC), North Norfolk District Council (NNDC), Broadland District Council (BDC) and Breckland Council (BC). A comprehensive list of relevant local policies can be found in ES Chapter 3¹⁰. Key policies include DM8 from the NCC Core Strategy and policy EN2 from NNDC Core Strategy which both directs that development should not harm the conservation of, or prevent the enhancement of, key characteristics of its surrounding in relation to the character of the landscape.

- 4.5.10. NNDC policy SS2 lists renewable energy projects as being acceptable development in the countryside. Policies SS4 and EN7 confirm that renewable energy projects will generally be supported where impacts on amenity, wildlife and landscape are acceptable. Broadland LDF policies include DPD policy GC5 which provides that proposals for renewable energy technology and associated infrastructure will be encouraged where its impacts are (or can be made) acceptable and EN2 which directs proposals to have regard to the Landscape Character Assessment (LCA).

- 4.5.11. BC Core Strategy contains policy DP11 which seeks to protect the aesthetic qualities of the landscape and DC12 directed at protecting trees, hedgerows and other natural features. Particularly CS policy DC15 confirms that proposals for renewable energy will be supported in principle and permission will be granted unless there is a significant detrimental impact or a cumulative detrimental impact upon matters

¹⁰ Pages 16 to 24

including the surrounding landscape. Policy CP 11 of the Adopted Core Strategy and Development Control Policies DPD seeks the protection and enhancement of the landscape.

The Applicant's Case

- 4.5.12. The relevant application documents are contained at [APP-315, APP-316, APP-317, APP-353, APP-602 to APP-612]. Viewpoints for the photomontages are at [APP-614-APP-628 inclusive].
- 4.5.13. The Applicant's assessment addresses the landscape, visual and cumulative impacts of the onshore components during construction, operation and decommissioning phases. The detail and scope of the decommissioning works will be determined at the time of decommissioning having regard to current legislation and best practice. For the purpose of the LVIA impacts during the decommissioning stage are assumed to be no worse than those identified during the construction stage. The ExA accepts that this is the correct approach to assessment.
- 4.5.14. Assessment followed the principles set out in the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3). The potential impacts were determined by considering the worst-case scenarios¹¹ and the effects were established having regard to mitigation embedded in the Proposed Development.
- 4.5.15. The offshore project may be constructed as one or two phases and elements of the onshore construction would be phased to reflect this. The indicative total construction window for the one phase scenario is anticipated to be five years and six years for the two-phase scenario.
- 4.5.16. The Applicant's assessment groups the potential impacts of the project on the landscape and visual receptors into four categories: physical effects, effects on landscape character, effects on views and cumulative effects. A Zone of Theoretical Visibility (ZTV) was generated using GIS software to demonstrate the extent to which the onshore project substation and National Grid substation extension may theoretically be seen from any point in the study area. A series of viewpoints were selected and these are illustrated by the viewpoint visualisations referred to above.
- 4.5.17. The assessments and conclusions within the LVIA are contained within Tables 29.9 to 29.20 inclusive. The nature of the effects are categorised as beneficial, neutral and adverse.

Planning Issues

Necton

- 4.5.18. The LIR of BC [REP1-125] sets out the Council's views with regard to the effect of hosting the substation infrastructure in Necton and balancing

¹¹ See table 29.8 ES Chapter 29 [APP-353]

this with wider national policy requirements in terms of the provision of renewable energy:

"It cannot be disputed that Norfolk should accommodate the creation of wind farms in principle and the benefits of non-renewable energy are supported for Breckland. However, the District enjoys a special and unique landscape character and this development proposal would have a significant visual impact on the countryside. Local Planning Authorities should ensure that protecting the local environment is properly considered alongside the broader issues of protecting the global environment."

- 4.5.19. In terms of the impact on Necton, BC commented: "This is defined as a national infrastructure project for a reason and it will appear disproportionately dominant against the landscape which is remote from Necton. The new structures would be of such a size that the perceived distance from the A47 would appear relatively short. This would be a prominent and obtrusive feature against the skyline."
- 4.5.20. Mr George Freeman MP articulated and endorsed the views of many of his constituents when he contended that the part of the application site relating to the substation and substation extension is incorrectly sited on *"some of the highest land in Norfolk ... Having visited it several times, spent time in the heart of the village and viewed it from surrounding villages, it is clear that any construction there will be a significant visual blight"*. [RR-154]
- 4.5.21. Necton Parish Council [RR-113] opposes the development on a number of grounds, including the following:
- "The Parish Councillors of Necton unanimously believe that, given the constraints listed, the small rural parish of Necton is not a suitable location for this massive industrial development, which when completed will be the biggest of its kind in the world, and when viable alternatives exist"*.
- 4.5.22. Little Dunham Parish Council [RR-006] was concerned that *"This development represents an over expansion of the existing site. Whilst landscaping will ameliorate the impact of the low-lying structures proposed on the 120-acre site, the large converter buildings will only be partially disguised, and this is conceded by the applicants in their submission"*. Holme Hale Parish Council expressed similar views [RR-081].
- 4.5.23. Mr Colin King suggested the use of planting on top of earth banks to screen the substation buildings. Some residents expressed frustration at the content of the visualisations which rely on a Rochdale Envelope approach. Necton Substation Action Group [REP1-096] reflected the concerns of many local residents, regarding expansion of the existing Dudgeon substation:

"On paper it seems more efficient to put all infrastructure together and ruin just one area environmentally, but in practice the massive sizes

proposed, show it isn't efficient or environmentally friendly. Whilst a village could deal with one project, placing three next to one village is inhumane."

Onshore cable route

- 4.5.24. BDC, in its LIR [REP1-065] highlighted concerns over hedgerow removal along the onshore cable route (OCR) and the long-term effects to the landscape at locations where hedgerows could not be replaced. These concerns were shared by NNDC, especially in relation to hedgerow trees which may be lost along the OCR and which could not be avoided by micro-siting.
- 4.5.25. Concerns regarding the issue of the loss of hedgerows and trees and replacement planting were raised by NNDC [REP7-080]. In particular, NNDC believed that hedgerow replacement alone could not compensate for the loss of hedgerow trees resulting from development and that DCO R18 did not require the landscape plans to include details of the trees to be removed. By D9 this issue had been resolved with the incorporation of additional wording in R18.

Landfall

- 4.5.26. Happisburgh residents expressed their concerns both in written representations and at Open Floor Hearings, to the effect that the compound would represent a *"permanent blot on an idyllic landscape, spoiling views of the village and lighthouse"*. Natural England (NE) sought commitment to trenchless crossings at intersections with the England Coast Path due to concerns that there could be significant impacts over the 20-week construction period.

General matters

- 4.5.27. The above representations provide a general flavour of the opposition of many of the local residents and others to the Proposed Development in terms of landscape and visual impact generally. These objections remained unresolved throughout the course of the Examination. Additionally, there were particular objections and concerns raised about individual matters. For instance, a number of Necton residents were concerned about the effects of lighting around the substation and extension on the character of the area.
- 4.5.28. One discrete issue arose regarding the appropriate time-frame for replacement planting as directed in dDCO R19. The submitted dDCO [REP9-007] includes provision for the replacement of mitigation planting which fails within the first 5 years after planting. In its LIR [REP1-099], and throughout the Examination, NNDC strongly advocated a 10-year time frame be applied to replacement planting given the slower growth rates typically experienced in North Norfolk. This remained a matter of contention throughout the process.
- 4.5.29. The Applicant's approach to the LVIA assessment, in terms of the methodology, survey data, visual baseline and viewpoints, was mostly

agreed by all of the relevant district councils in the first round of SCG at D1 and was agreed in full by the end of the Examination.

ExA Reasons

Introduction

- 4.5.30. Having regard to the nature of the development and the main issues, the ExA's consideration of these matters will be broken down into three main areas: the Necton substation location, the onshore cable route and the landfall site. The three elements/component parts of the project will be considered both during the construction phase and during the operational phase. Effects will be assessed both in terms of landscape impact and visual effects.
- 4.5.31. Issues relating to landscape impact and visual amenity were examined by written questions and during oral hearings. The issues and arguments about the effects on landscape impact and visual amenity were well-documented and rely upon subjective judgments. They were not subject to detailed questioning at the oral hearings given that the ExA was satisfied that there was sufficient information in the written representations and other submissions to enable it to come to a conclusion on these matters.
- 4.5.32. The ExA carried out a number of unaccompanied site visits within the vicinity of the substation(s) site using the original viewpoints and photomontages as guides. A full accompanied site inspection took place on 25 and 26 March 2019.
- 4.5.33. Before embarking on an analysis of the effects of each of the components it is useful to record some observations of the ExA regarding the methodology and assessment applied. Firstly, the ExA notes that in calculating the ZTV the potential screening effect of areas of woodland was factored into the calculation and an average height of 10m was applied. The ExA bears in mind that the screening is an average and that, in some instances, screening would be greater or less than that assumed in the model. In addition, the visualisations assume mitigation planting as at 20 years which would be well into the life-span of the project.
- 4.5.34. Secondly, the project design is based on a Rochdale Envelope approach which effectively presents the outer limits of the project in terms of parameters and thus provides a worst-case scenario. In terms of the visualisations of the National Grid substation and its extension, the Rochdale envelope approach resulted in a blue dashed 3D box set at 25m indicating the maximum extent of the built development and apparatus. The maximum height of the built development stands at 19m with the lightening protection masts at a maximum of 25m. During the examination the ExA requested viewpoints depicting the blue box at 19m to provide an indication of the extent of the built development. [REP3-024 to REP3-028 inclusive].

Necton

- 4.5.35. The ExA acknowledges at the outset of this assessment, that the project's new substation and the extension to the existing substation would represent significant additions to the existing built environment and its supporting infrastructure. Further, it is accepted and noted that the new buildings and associated infrastructure are of such scale and extent that they would not be capable of total screening such as not to be seen at all. As such the development in Necton would represent a material change to the landscape character and visual characteristics of this locality. This assessment seeks to ascertain the extent and effect of those changes.
- 4.5.36. Substation extension and overhead line modifications: The Necton substation would require an extension, of maximum height 15m, to accommodate the connection points, taking the existing substation from 20,300 sq.m to over 50,000 sq.m in terms of its overall floor area. (Work No. 10A, Sch.1, Part 1 DCO).
- 4.5.37. The building would sit within a 67,500sq.m compound which would also accommodate plant, materials and welfare facilities. Two new overhead line towers would be required, in proximity to the existing corner tower (to the north-east of the existing Necton substation) with a maximum height of 50m. (Work No. 11, Sch.1, Part 1 DCO). The existing corner tower would be demolished resulting in a net increase of one tower. These design parameters would be secured by R16 of the DCO.
- 4.5.38. Substation Access Briefing Note [REP4-036] set out various options in relation to highway access to the project sites. At the end of the Examination the options for access points were narrowed to three distinct accesses (A, B and D1) to provide access to the works to the existing substation; access to the new project substation and access to the overhead line modification works. Accesses A and D1 would be simple rural junctions.
- 4.5.39. Access A already exists and access B would be the existing farm access. D1 is an existing field access. Access A would not require any significant vegetation clearance since visibility splays are already compliant. Access B would require the creation of a new visibility splay and road widening associated with the A47 access junction would require the removal of existing roadside vegetation. Until replacement planting became established this would result in greater visibility of the project site for travellers along the A47. Access D at Moor Lane would also require the removal of existing vegetation and the potential removal of some established trees to create a compliant visibility envelope.
- 4.5.40. The new project substation: the onshore project substation would be located to the south-east of the existing Necton substation. During the construction phase a temporary construction compound (200m x 100m) would be created. The HVDC option would require 2 converter buildings and 2 outdoor compounds, a control building and access roads. R16 of the DCO would secure the maximum design parameters in relation to the new onshore substation (Work No. 8A, Sch.1, Part 1 DCO).

- 4.5.41. The OCR would come into the substation compound and would result in a 20 to 25m break in existing hedgerows and trees. There would also be a break along the southern side of the A47 to accommodate the new road junction. The indicative construction phase would last for 24 months. During operation the permanent footprint of development would be 250m x 300m.
- 4.5.42. In terms of the concerns about lighting, the onshore substation has been designed so that it does not require permanent lighting. [REP3-031] provides information on the proposed substation lighting and indicator lights system as well as information about the current red and green lights displayed which denote the status of the current substation entry system. [REP3-023] sets out information about the 12 lightening protection masts proposed for the project.
- 4.5.43. Mitigation planting for the onshore project substation would largely comprise indigenous woodland species to be located around the onshore project substation¹². Faster growing (nurse) species and slower growing (core) species would be used. Existing contours would be levelled to accommodate the substation and extension and the earthworks would be used to form a bund of up to 2m along the western side of the onshore substation, with woodland being planted on top of the bund¹³.
- 4.5.44. The Applicant provided details of the planting on top of the earth bund and the construction measures necessary to ensure the bund's stability in response to FWQ14.7 at [REP1-007]. The bund would assist in providing more graduated screening of the substation. These measures would be secured via R18 of the DCO and in accordance with the Outline Landscape and Ecological Management Strategy (OLEMS) [REP9-014].
- 4.5.45. The Applicant has assumed average growth rates of 250mm per annum for the core species such as oak, beech and horse chestnut and 350mm per annum for the nurse species. Overall some 5m to 7m growth is anticipated over 20 years for the core species, with assumed heights of 7.25m to 9.75m for the nurse species. Whilst advanced planting is not relied upon, the Applicant has expressed an intention to implement such planting at the start of the construction phase where possible. The ExA has not assumed advanced planting in its assessment given that it cannot be guaranteed. Furthermore, a degree of caution has been factored into the assessment with regard to the growth rates.

Assessment of effects on landscape character-Necton

- 4.5.46. The substation location is not subject to any national or local landscape designations which would denote a special sensitivity being ascribed to it. It is within the Mid-Norfolk National Character Area. Within the Breckland LCAs the substation and associated infrastructure would straddle North

¹² Mitigation planting can be seen in figures 29.9a and 29.10b of the ES [APP-609].

¹³ See Applicant's response to FWQ14.7 for suggested method of planting on bund.

Pickenham Plateau, Beeston Plateau and the River Wissey Tributary Farmland.

- 4.5.47. The two plateau LCAs make up a largely flat landscape whilst the Beeston Plateau is somewhat more elevated overlooking the adjacent Wissey tributary farmland character. All three areas are typically rural, with isolated farms, hedgerow framed rural roads and much of the area is in productive agricultural use. Overhead power lines form a prominent feature in some views. Views within the River Wissey Tributary Farmland type are largely contained by mixed enclosure hedges and hedgerow oaks. Mature hedges and trees on skylines are a feature of this landscape area.
- 4.5.48. The new substation: would be located in the River Wissey Tributary Farmland on its upper slopes adjacent to the Beeston Plateau LCA. Within the valley views are medium range due to containment by the wider valley setting and some remaining agricultural enclosures not lost to more intensive farming practices.
- 4.5.49. The new onshore project substation site would benefit from some substantial existing hedgerows and woodland blocks within the local area which would assist in ameliorating landscape character harm. Necton Wood to the north and established planting around Lodge Farm to the south would provide a degree of screening and a sense of enclosure. The Proposed Development would entail the removal of the eastern hedgerow on the existing substation site and the removal of part of the northern and southern hedgerows. These hedgerows would be replaced post construction in accordance with the OLEMS.
- 4.5.50. The substation extension: The existing substation is framed by the A47 hedgerows on its northern boundary but otherwise sits in relatively open land. The Necton National Grid substation and Dudgeon substation are prominent within the localised area and the existing large-scale building and associated infrastructure is somewhat at odds with the rural landscape. The extension would substantially increase the existing footprint and would significantly add to the impression of a large-scale energy development in this locality.
- 4.5.51. Road widening associated with the A47 access junction would require the removal of existing roadside vegetation over a 300m length for a construction window of 24 months which would open up roadside views of the development along this major transport corridor.
- 4.5.52. In terms of both the new substation and the extension, during construction, the effects on landscape character would be exacerbated by the presence of compounds, running tracks, earthworks and other activities. The effects of construction would be felt in the medium term.
- 4.5.53. There are a number of factors to take into consideration in the assessment: the existing baseline already contains the Dudgeon substation and electricity pylons along the horizon, the landscape effects would fall within a smaller area of a larger whole when viewed in the

context of the wider LCA and as replacement planting became more established, the effects would be further ameliorated.

- 4.5.54. Following construction, longer-term effects on the landscape character of the respective LCAs would come about with the completion of the new substation and substation extension. Once completed and during operation, the effects of the substation, the substation extension and the other works would have reduced effects but still significant localised effects upon landscape character types. At Spicer's Corner there would be significant effects over a section running 300m along the A47 which would last for approximately 10 years until mitigation planting became established. After that period the effects would be moderate given the mitigation works and extent of the harm.

Assessment of substation and extension on visual amenity-Necton

- 4.5.55. The A47 corridor: The floor area of the existing substation would be more than doubled, making it and the associated infrastructure, more readily visible from existing viewpoints. In the winter months from the entrance/access from the A47 and from Spicer's Corner the substation and its extension would be more visible due to the reduced vegetation cover.
- 4.5.56. In the summer months, from the A47 main entrance to the substation site up to Spicer's Corner the existing substation is visible in glimpsed views along a stretch of this main arterial trunk road. The views are glimpsed due to the short stretch of the A47 and the extent of the openings through which the substation can be seen and due to the speeds at which vehicles are passing through. Further along the A47, closer to Top Farm, the views would be even more intermittent due to intervening hedgerows perpendicular to the A47 in the foreground. At points there are currently glimpses of the National Grid infrastructure and the metalwork is reflective in the sunlight and where visible, it catches the viewer's eye.
- 4.5.57. The effects on visual amenity would be more pronounced during the construction period due to the agglomeration of compounds, running tracks, HGV movements and general activity. This would be localised harm. In the context of the A47 being a main arterial route, the presence of existing infrastructure and the nature of the views, the ExA concludes that it would not constitute a significant effect on visual amenity in the longer-term during operation.
- 4.5.58. Necton village and Ivy Todd: Necton village lies to the south-west of the proposed substation and to the west of the substation extension. From many vantage points within Necton village the project would be screened by vegetation and by the undulating topography. Ivy Todd is a small hamlet to the south of the substation. From the gardens and properties on the northern periphery of the settlement, there would be some partial views of the upper parts of the substation works in the middle distance.

- 4.5.59. The most open views of the substation extension would be from the field edge along St Andrews Lane where the building would be seen over the hedge on the top of the horizon and against a backdrop of a long line of pylons which sit along the horizon.
- 4.5.60. The ExA concludes that significant effects associated with the operation of the onshore project substation would be experienced by walkers on Lodge Lane to the immediate south of the site, and by road-users on a short section of Ivy Todd Road to the south-west and a section of the A47 to the north. These effects would only occur within approximately 1.2km of the onshore project substation, making them localised. There would be no significant effects on the views of residents at Ivy Todd and Necton from within the respective villages.
- 4.5.61. Cumulative impact of substation and the substation extension: the ExA considers that cumulative visual impacts of the substation and the substation extension should not be assessed from static viewpoints but rather as one moves around the local area, experiencing a range of views or a sequence of views.
- 4.5.62. There would be a number of journeys/walks in the immediate locality of the Proposed Development where, at different points, both the new project substation and the substation extension would be glimpsed or come into view in succession¹⁴. As such, there would be a cumulative effect on visual amenity in that the viewer would be conscious of two large-scale energy plants in the locality. However, these views would be localised and there would not be open views of the totality of the project. Mitigation planting secured by R18 of the dDCO, over time would assist in ameliorating some of the effects.

Onshore Cable Route

- 4.5.63. Worst-case assumptions: the embedded mitigation scheme includes the use of underground cable systems for the onshore cable route between the landfall and electrical connection point. The buried cable would be routed some 60km between Happisburgh to the Necton substation, with construction compounds and haul roads and access tracks along its route. Table 29.8 records the worst-case assumptions for the onshore cable route (OCR). The onshore cable corridor is identified at [APP-198]
- 4.5.64. The impact of the OCR on landscape features and visual amenity would principally be due to the following elements of construction:
- 45m wide OCR for 4 trenches. The default construction method is open cut trenching with a maximum working width of 45m¹⁵ and some 60km long, constructed in phases. The OCR would include the trenches, running tracks and spoil heaps.

¹⁴ This point was made by Breckland Council in its LIR [REP1-125]

¹⁵ The worst-case assumption of a 100m wide cable route was adjusted to 45m following the adoption of HVDC technology.

- Fourteen mobilisation areas (MAs) would be required along the route for duct construction and pull through. Each MA would occupy an area of 100m by 100m or 150m by 100m if combined with trenchless drilling compounds. They would be fenced and surfaced and contain plant, materials and welfare facilities.
- Trenchless drilling compounds up to 100m by 50m. Running tracks would connect the trenchless drilling compounds and MAs to the road network.
- Gaps in hedgerows of 20m to 25m would be created at crossing points with hedgerows and land reinstated as far as possible post-construction.
- A temporary 6m wide running track would be in situ for a 2-year period and the cable route enclosed by stock fencing. There would be one permanent joint pit every 800m of cable route, totalling 150 pits. The worst-case assumption is a pit of 90m² and 2m deep.

4.5.65. At the end of the construction phase, land over the OCR, compounds and running tracks would be reinstated to agricultural use.

4.5.66. The above elements all relate to construction. During the operational phase link boxes some 1.5m by 1.5m would be located at 5km intervals along the cable route. The intention is that they would be buried at appropriate locations and have very little visual effects. A sectionalised approach would be taken, with the OCR divided into 150m sections which would be worked and then backfilled. Such an approach does not form part of the worst-case scenario assessment but, if implemented, it would significantly shorten the timeframes over which the ground would be exposed by open trenches.

Assessment on Landscape Character-OCR

4.5.67. The OCR sits within the Central North Norfolk and Mid Norfolk National Character Areas. The OCR passes through a number of landscape character areas designated by North Norfolk, Broadland and Breckland¹⁶. These character areas comprise cultivated landscapes made up largely of arable farmland criss-crossed by small settlements and roads. Agricultural activities and machinery as well as agricultural buildings are a predominant feature in these landscapes.

4.5.68. The OCR, incorporating the MAs, compounds and running tracks, would be at odds with the various character areas within which the works would be located. However, the relatively flat and enclosed landscape would serve to limit the extent to which the OCR and running track within it would be seen. The cable trenching would take 1 week for each 150m stretch in the first two years of construction. As such, only localised sections of the OCR would be exposed serving to limit the effects on landscape character. As these effects would largely be reversible, the ExA concludes that they would not be significant. In the context of a much

¹⁶ See figures 29.2 in ES Chapter 29 [APP-602]. See also the updated Landscape Character Assessment and Landscape Sensitivity Assessment submitted by NNDC at [REP3-015 to REP3-022].

larger LCA these temporary changes would not have a materially adverse effect.

Disturbance and loss of hedgerows and trees

- 4.5.69. Broadland DC expressed concerns about hedgerow removal and the effect on landscape character in its LIR [REP1-065]. ES Chapter 29, table 29.10 [APP-353] identifies the most susceptible hedgerows and hedge-trees at highway crossing points and assesses the impact as significant. A number of crossing points were identified as having significant effects¹⁷. In these locations there would be a detrimental impact upon both landscape character and visual amenity. Whilst the hedgerows could generally be replanted, this would take some time to mature and trees within hedgerows could not be replanted over cable easements.
- 4.5.70. One of the key locations in terms of susceptible trees within hedgerows is alongside Colby Road, north of Banningham in the NNDC area. Along the affected section of Colby Road mature trees line both sides of road forming a distinctive overhead canopy. The loss of these trees would result in a significant, detrimental impact to landscape character and visual amenity which would be localised. NNDC advocate that the location is added to the list of trenchless crossings to avoid the loss of these mature trees [REP7-080]. The magnitude of change in this locality and the loss of such a distinctive canopy is such that the ExA concludes that the location should be added to the list of trenchless crossings set out within the draft DCO, R16(17).

Designated landscapes

- 4.5.71. Salle Park is a designated landscape in Historic England's Register of Parks and Gardens (RPG). The designed landscape is largely enclosed by dense woodland which would mean that there was no or limited visibility of the nearest MA or of the OCR. From the gated entrance to Salle Hall there could be views of the OCR but these would be glimpsed and would be viewed in the context of a much wider landscape. The effects on both landscape character and visual amenity would be short term and reversible.
- 4.5.72. Blickling Hall is also a designated landscape in the RPG and the OCR would pass some 200m south of the parkland boundary. Importantly there would be no views of the project from the ornamental gardens and around the environs of Blickling Hall due to the enclosure afforded by mature trees and other landscaping. Any effects would be minor, short-term and reversible.

Conclusions on effect on landscape character along the OCR

- 4.5.73. Along the OCR there would be a number of locations at which there would be localised, harmful impacts to landscape character. However,

¹⁷ Blickling Road, N of Aylsham; Silvergate Lane, NW of Aylsham; Aylsham Road, W of Aylsham; Elsing Road, near River Wensum; B1145, N of Reepham; and B1145, W of Reepham.

each location would effectively represent a small part of a larger whole and as such the extent of the harm would be limited. More importantly the effects of these works on landscape character would be limited in time. The ExA finds that there would be no lasting harm to the various landscape character areas by virtue of the OCR works. The OCR would have no significant effect upon landscape character in terms of designated landscapes which include the Registered Parks and Garden at Blickling Hall or Salle Park.

Assessment on Visual Amenity-OCR

Hedgerows and Trees

- 4.5.74. All hedgerows have been assessed for their ecological value and historic landscape value, in accordance with the Hedgerow Regulations 1997. Important hedgerows are listed in Schedule 13 of the dDCO and the Important Hedgerows Plan [APP-023]. These matters were agreed with BDC in the SoCG at D9 [REP9-043].
- 4.5.75. Loss of hedgerows would have some adverse effects for some visual receptors such as local residents and travellers utilising highways and other routes along the OCR until such time as the mitigation planting became more established. Plans showing indicative tree removals and sensitive hedgerow removals are contained at [REP3-032 to REP3-034 inclusive]. Schedule 13 of the DCO secures the trees and hedgerows which would potentially need to be removed.
- 4.5.76. NNDC at D6 [REP6-034] set out concerns about trees lost as a result of development which were not to be replaced. The ExA has set out its views in relation to the loss of hedgerows and trees along the OCR in paragraphs 4.5.69 and 4.5.70 above.
- 4.5.77. In most instances the loss of hedgerows and trees along the route would be limited to the 20 to 25m breaks indicated and generally there would be some form of replacement or mitigation planting. There would be some moderate but localised harm to visual amenity.

Footpaths

- 4.5.78. Wensum Way is a 12km trail and recreational footpath which meanders alongside the river. The OCR would cross the Wensum Way on Elsing Road where a trenchless drilling compound would be located at the intersection. There would be a significantly detrimental visual effect along a 550m section of the path where the works would be visible during construction due to the removal of hedgerows and trees. Replacement planting would infill the gaps, but it is estimated that it would take up to 20 years for the trees to reach their current maturity levels. As such the harm would be moderate, localised and of medium-term duration.
- 4.5.79. Marriott's Way follows disused railway lines to connect Norfolk and Aylsham. The OCR passes close to and intersects the path to the west of Aylsham and the west of Reepham. Intervening vegetation between the path and the OCR would reduce the extent of views along a 400m stretch of Marriott's Way north of Warren Wood. Trenchless crossing techniques

would be used in the looped section of the footpath to the west of Reepham. Mature trees lining the path would further limit the visibility of the trenchless crossing works. The limited visual effects would be short-term and reversible.

- 4.5.80. Similarly, there would be limited effects upon visual receptors along Paston Way on the northern edge of North Walsham. However, views would be glimpsed due to mature tree cover surrounding the path and the magnitude of effect would be low. Taking all of the above into account the ExA concludes that Wensum Way would be subject to significant effects over localised sections and that other recreational routes would not have significant effects.

Along highway routes

- 4.5.81. Class A and B roads within the OCR include the B1159, the B1145 at North Walsham, the A149 all in North Norfolk. In the Broadlands District relevant roads would be the B1145 near Aylsham, B1145 near Cawston and Reepham and the A140 and B1149. Within Breckland the A1067, B1146 and A47 are within the general area of the OCR.
- 4.5.82. Some roads would be intersected by the OCR where there is the potential for significant visual effects. However, there are other roads which would be intersected but intervening boundary and other vegetation would limit views and visibility. The use of trenchless crossings on the A47, A140, A149, B1145 and Old Hall Road would help to reduce the visual impact of the OCR works.
- 4.5.83. Localised significant character effects are predicted for visual receptors along highway routes where mobilisation areas would be visible from the roadside. Along an 800m stretch of the B1146 the open nature on the eastern roadside and the proximity of the mobilisation area along the roadside would render the mobilisation area highly conspicuous to road users.
- 4.5.84. There would be significant effects within localised sections. The OCR would run roughly parallel to the A47 where a mobilisation area would be located on the north side of Dereham Road. There would be a significant visual effect along a 120m stretch due to gaps in the hedgerows and trees which line the road. The MA would be prominent in views from the junction and would present as an incongruous addition to the agricultural landscape. It would represent a significant adverse change, albeit along a localised section and for a limited period of 2 years.
- 4.5.85. The A47 is a main trunk road running east to west through Norfolk. The cable would cross the A47 single carriageway road between Wendling and Dereham. Whilst trenchless construction would be used two large mobilisation areas would be located on either side of the carriageway and would be partially visible to road users along a 200m stretch. The speeds of vehicles and the intermittent roadway vegetation would assist in limiting the effect on these receptors and the effects would in any event be time limited and largely reversible.

- 4.5.86. The localised effects on visual amenity along the A47 and Dereham Road are typical of the types of visual effects which would be experienced by users of the other sections of road along the OCR. The LVIA has assessed these as having significant effects in the sections listed in footnote 14. One of the longest sections of road affected would be an 800m section of the B1146 which would be affected by the presence of the OCR construction activities and a mobilisation area. Similarly, a 1.2km section of Lime Kiln Road would be affected because the OCR would run parallel to the road and there would be open views of the works from the highway. Again, these works would be time-limited and reversible.

Landfall

- 4.5.87. The development at landfall: Key elements of the development include the landfall location [REP6-005] immediately south of Happisburgh where all associated infrastructure would be located underground. As such the key potential impacts would be temporary and felt during construction. Horizontal direct drilling would be used to facilitate duct installation under the cliff to retain open access to the beach during landfall works. This means that the majority of the works would be offset and located inland from the cliffs.
- 4.5.88. The assumed worst-case scenario was two temporary works compounds some 60m by 50m each and a 6m access track which would be needed for between 14 to 20 weeks. The compounds would be secured by a 2.4m high fence. Two transition pits 15m by 10m would be constructed, one in relation to each compound. The 45m wide cable easement would also start to run inland with an associated temporary running track.

Landfall: Assessment on Landscape Character

- 4.5.89. The landfall location sits within the North East Norfolk and The Broads National Character Areas. Within the North Norfolk Landscape Character Areas (LCAs) it falls in the Bacton to Sea Palling area on the coastal plain. The rugged beauty of the cliffs in this part of the LCA is only visible from a relatively narrow coastal strip given the undulating landform running inland. From the coastal path and around the car park the lighthouse is a prominent and recognisable feature. In the area around the proposed compounds there has been significant reduction of small-scale pattern of enclosures, with larger agricultural fields and limited hedgerow enclosures.
- 4.5.90. The compound and associated works would represent an alien structure within the landscape character area at odds with the rolling fields and agricultural nature of this part of the character area. However, the ExA finds that the effects of the landfall compound on landscape character would be relatively modest given the extent of the compound within a much wider landscape character area. More importantly those limited effects would be temporary in nature. On removal of the compound the landscape character area would be uncompromised.

Landfall: Assessment on Visual Amenity

- 4.5.91. Residential streets on the southern edge of Happisburgh (Lighthouse Lane) and the northern edge of Eccles-on-Sea lie closest to the landfall location. From these viewpoints, those residents along the periphery of the village facing the compounds would witness a significant detrimental change to their immediate area. Due to the intervening landform and built environment, the development would not be readily visible from most other parts and roads in the rest of the village or from the smaller hamlet of Whimpwell Green.
- 4.5.92. Whilst there would be some views of the works for residents of Eccles-on-Sea from Doggett's Lane, these views would be at a greater distance and would be limited. Due to the nature of the views, the intervening distances, the temporary nature of the views and the likely reinstatement, the ExA concludes that harm to visual amenity of these receptors would not be significant.
- 4.5.93. The compound and equipment and associated works would be conspicuous from a length of the Norfolk Coastal Path running from the Happisburgh car park to a point further south-east towards Eccles-on-Sea. The coastal path is a long-distance footpath following the Norfolk coastline of high value. From vantage points along this coastal path, the works would have a significant detrimental effect as experienced by walkers and tourists. Whilst the ExA accepts the LVIA assertion that the attention of walkers would be directed seawards over the rugged coastline and out to sea, the presence of the works compound would be alien and unexpected in the landward views, at odds with the rural nature of the land framing the coastline.
- 4.5.94. The effects on visual amenity as experienced along the public right of way would be the most significant. However, they would only be felt during construction, they would be remediable and limited to a relatively short stretch of the coast route. The ExA concludes that the effect would be relatively short-lived and localised in nature. Reinstatement at the end of the construction period to agricultural land would ensure that the detrimental effects were largely reversed. However, there would be some residual and minor harm to landscape character and visual amenity after construction ends pending the replacement planting becoming established.

Other matters

- 4.5.95. The Norfolk Coast Area of Outstanding Natural Beauty (AONB) is located about 7km to the north-west of the landfall location. The OCR traverses the countryside and comes within some 1.7km of the closest point of the AONB. The ExA has set out above its findings in relation to landscape character. Those considerations are relevant here. In addition, the distances between the edge of the AONB and the landfall and OCR and the intervening built form and vegetation would result in very limited glimpses of the works from the AONB.

- 4.5.96. The Broads National Park lies about 4km south-west of landfall and the OCR travels within 1.2km of it. The primary statutory objective of its National Park designation is the conservation of the waterways. In any event there would be limited opportunity for inter-visibility between the works and the national park, given the intervening vegetation. Natural England have also confirmed that it is satisfied that there would be no adverse effects on the purposes of designation of protected landscapes, including the Norfolk Coast AONB and The Broads National Park.

Cumulative impacts with other projects

- 4.5.97. Section 29.8.1 of ES Chapter 29 sets out an assessment of the potential cumulative impacts of the OCR in combination with the Hornsea Project Three (the H3 project). There are potential areas along the OCR where cumulative impacts could occur.
- 4.5.98. Firstly, the OCR would cross with the proposed Hornsea Project Three cable route to the north of Reepham [REP6-005] in the vicinity of Marriott's Way a long-distance recreational route in the Broadland District. From a relatively short section of Marriott's Way both project OCRs would be in close proximity or (in the case of H3) traverse the pathway. Walkers along this short section of Marriott's Way would experience views of the works in close proximity. These views would be over a short section and limited in time to the length of the construction works. The ExA concludes that, whilst there would be significant effects over a very localised area, they would be short term and reversed on reinstatement.
- 4.5.99. Secondly, the main construction compound for H3 is proposed on part of the former airfield to the south west of the village of Oulton, in addition to the two construction compounds that Norfolk Vanguard are proposing in Oulton.
- 4.5.100. The H3 construction compound would be accessed via a long access route and offset from the Project Development compounds. Whilst they would be in relatively close proximity to each other, the Norfolk Vanguard compounds would be set back from a lightly trafficked rural lane. Taking the above into account as well as the limited duration of the construction works, the ExA concludes that there would be no materially harmful cumulative impacts on landscape character or visual amenity from these compounds.
- 4.5.101. The ExA has concluded that there would be limited and minor effects on landscape character and visual amenity of Salle Park due to glimpsed views from the entrance. The H3 Project would have a MA to the south of the south-west corner of Salle Park but the two projects, in combination, would not have any significant adverse effects due to the dense woodland enclosing the park.
- 4.5.102. Finally, whilst the Norfolk Boreas Offshore wind farm has been included in the Applicant's LVIA cumulative impact assessment, the ExA have not considered it in this part of the assessment due to the limited amount of details available. The ExA considers it would most appropriate for

cumulative impacts to be considered in any future examination into Norfolk Boreas.

Requirements within the DCO [REP9-007]

- 4.5.103. The final OLEM is at [REP9-014] and is secured by R18, R19 and R24 in the dDCO.
- 4.5.104. The issues regarding the length of a replacement planting condition are set out above (paragraph 4.4.59). NNDC advocated a 10-year replacement planting condition¹⁸ under R19(2) of the DCO. NNDC submitted results from two sample sites along the OCR using the Establishment Management Information System [REP3-055]. The analysed samples indicated that limited species would be suitable for the site conditions and yields would not be expected to be high. In addition, the Forestry Commission specify a standard 10-year replacement period for all new planting.
- 4.5.105. The Applicant points out that the replacement planting within North Norfolk District is related to replacement hedgerows only. Hedgerow planting will typically mature within 3-5 years and on this basis, the Applicant feels that a commitment to 5 years aftercare is appropriate. [REP4-016]. However, the evidence submitted relates to the Norfolk area generally and the slower growth rates experienced there. The ExA consider that where trees are proposed to be removed in the district, then the OLEMS should properly require replacement planting wherever possible.
- 4.5.106. The ExA concludes that the evidence submitted by NNDC is persuasive in terms of growth rates and that a 10-year replacement planting condition should be inserted in the DCO. Given the scale and lifespan of the project, it is considered necessary to ensure that the mitigation planting necessary is truly effective and properly secured in the soil and climate conditions particular to the OCR in Norfolk. The ExA recommends that R19(2) is amended to refer to a 10-year period.
- 4.5.107. NNDC concurred with Natural England that the OLEMS/EMP should include improvement of hedgerows and a mitigation plan until the affected hedgerow has fully recovered [REP8-107]. NNDC welcomed revisions to R18 which would afford local councils the ability to influence the choice of species for mitigation planting. NNDC also expressed its view that there should be no net overall loss of trees in circumstances where tree removal was necessary along the cable route and where replacement planting could not take place over the easement.
- 4.5.108. The ExA further recommends the amendments to R16(17) to add Colby Road (Church Road), North of Banningham to the list of trenchless crossings set out previously. Necton Parish Council at D7 [REP7-076] made a sensible suggestion as to a requirement that the finishes of the

¹⁸ REP3-055 and REP4-068 which contains the recommended changes to the DCO in the H3 examination.

equipment be approved. The ExA agrees and recommends a further revision to R16(9) of the preferred DCO to include a requirement for the materials in the electrical equipment comprised in Work No. 10A to be approved.

- 4.5.109. To address concerns of IPs, including those raised by NNDC at D7 the ExA included an amendment to R18 in its proposed changes to the DCO. The proposal was the inclusion of R 18 (d) requiring 'details of existing trees to be removed' and was accepted by all parties.

Conclusions on landscape matters

- 4.5.110. On the basis of the specified parameters for the construction of the project and the mitigation measures to be secured through requirements in the ExA's recommended DCO (Appendix D) the ExA has the following conclusions.
- 4.5.111. In terms of effects upon landscape character there would be significant localised effects around the substation works which would be ameliorated over time and which would relate to a small part of the overall landscape character area. In terms of effects upon visual amenity there would be localised short-term effects along the A47 of the construction works at the substation locations. During operation there would be significant localised effects over short sections of the A47 and two minor roads.
- 4.5.112. In terms of the OCR and landfall location there would be localised but short-term harm to landscape character which would not be significant in terms of the larger landscape character areas. Similarly, there would be significant effects to visual receptors along some roads and footpaths but these effects would be short-term and reversible.
- 4.5.113. Taking all of the above into account the ExA concludes that the Norfolk Vanguard proposal would accord with the policy requirements of NPS EN-1 and EN-3. The proposal would not cause material harm to key characteristics in accordance with NCC Core Strategy policies DM8 and EN2 and all other development plan policies covering the OCR and landfall locations.
- 4.5.114. The impacts of the development in landscape terms would be generally acceptable save for the localised harm to visual amenity in relation to the substation and associated works. In this respect the proposal would not be in full conformity with Breckland Core Strategy DP11 and DC15. Given the localised nature of the permanent harm the ExA ascribes limited weight to it in the overall planning balance.

4.6. HISTORIC ENVIRONMENT

Introduction

- 4.6.1. This section deals with the effects on the historic environment including onshore and offshore archaeology and cultural heritage.

Policy Considerations

- 4.6.2. NPS EN-1 states that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment. The impact on both designated and non-designated heritage assets should be considered.
- 4.6.3. Paragraph 5.8.8 of NPS EN-1 states that 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. Paragraph 5.8.9 goes on to say where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation.
- 4.6.4. In considering applications, paragraph 5.8.11 states that the decision maker should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset.
- 4.6.5. Paragraphs 5.8.14 and 5.8.15 of NPS EN-1 set out:

"5.8.14 There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional."*

"5.8.15 Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm."

Applicant's Case

Onshore

- 4.6.6. The assessment of potential effects of the Proposed Development on onshore archaeology and cultural heritage is considered in ES Chapter 28 [APP-352]. In addition, an Outline Written Scheme of Investigation (WSI) (onshore) was submitted with the application [APP-029] which was revised throughout the Examination with a final version submitted at D8 and renamed Outline WSI: Archaeology and Cultural Heritage (Onshore) [REP8-011] (clean version) and [REP8-012] (tracked changes).
- 4.6.7. Section 28.4 of ES Chapter 28 details the methodology used to determine the significance of the impacts, both direct and indirect, of the onshore works of the Proposed Development on heritage assets. Based on a worst-case scenario the assessment presents the heritage significance of any assets affected, the anticipated magnitude of effect upon those assets and their settings, the significance of any identified impacts and the level of any harm (or benefit) and loss of heritage significance. As well as the standardised and tailored EIA matrices, the outcomes of the matrix-based approach were qualified through expert judgement and additional descriptive comments.
- 4.6.8. The ES anticipates that, with the exception of works within landscape character elements of the Blickling Conservation Area (BCA), the onshore project area and onshore works would avoid direct physical impacts upon designated heritage assets.
- 4.6.9. Direct impacts would have the potential to occur to non-designated heritage assets both above and below ground. Where possible, the Applicant proposes to avoid non-designated heritage assets through route-refinement or micrositing of the cable route. Where this is not possible the impact would generally lead to significant environmental effects. However, through the application of a mitigation strategy, significant direct adverse impacts to known heritage assets post-mitigation are considered unlikely to occur, or to be satisfactorily reduced or offset.
- 4.6.10. Indirect impacts would also have the potential to occur during the construction phase. With the application of bespoke additional mitigation, where needed, indirect impact levels on below and above ground archaeological/built heritage remains during construction are anticipated to be reduced or offset and therefore non-significant in EIA terms. No indirect impacts on the setting of heritage assets are anticipated to be greater than a minor adverse level impact significance during construction (the majority of impacts have been identified as negligible adverse significance) and these would be of a short term, temporary nature.
- 4.6.11. Those assets which would be permanently affected by the onshore project substation and NG extension are listed in Table 28.22 of ES Chapter 28. Following the submission of the Application, it became apparent to the Applicant that the proposed project substation would be

visible from the northernmost area of the grounds of the Church of St Andrew, Bradenham, a Grade I Listed Building. This impact was addressed in Section 2.1 of the additional submission 'Application Documents Errata' [AS-010] which concluded that the very slight visibility would not constitute harm to the heritage significance of the church nor represent any associated loss of appreciation of the heritage assets significance. This would result in a minor adverse impact significance as a worst-case scenario, considered non-significant in EIA terms.

- 4.6.12. At D8, a Heritage Assessment for Cawston Conservation Area (CCA) was submitted at the request of the ExA [REP8-061]. This concluded that proposed highway mitigation measures through Cawston would result in a temporary change to the character and appearance of the CCA and that permanent measures would offer long term benefits. Harm was identified, albeit temporary and reversible, as a result of the increase in construction traffic using Cawston.
- 4.6.13. Whilst the impacts anticipated and assessed within ES Chapter 28 were generally of an adverse nature, the Applicant considers the application of proposed mitigation could contribute overall to a greater understanding of the onshore archaeological and cultural heritage resource which could be considered to represent a beneficial cumulative magnitude of effect.

Offshore

- 4.6.14. ES Chapter 17 [APP-341] considers the impact of the Proposed Development on offshore and intertidal archaeology and cultural heritage. The approach to the impact assessment is outlined in Section 17.4 and is consistent with that summarised above for onshore archaeology and cultural heritage.
- 4.6.15. A summary of the known and potential offshore and intertidal archaeological resource within the boundary of the project is presented in Section 17.6 and includes seabed prehistory, maritime archaeology, aviation archaeology, historic seascape character and buried archaeology within the intertidal zone below Mean High Water Springs (MHWS).
- 4.6.16. The approach to mitigation would be to avoid these features via Archaeological Exclusion Zones (AEZs) and micro-siting during detailed design to ensure that direct impacts would not occur. In order to account for unexpected archaeological finds, a formal protocol for archaeological discoveries would be implemented during construction. This mitigation has been embedded in the project design and would be secured through conditions set out in the DCO (and DML). The draft Outline WSI sets out the methodology for all proposed embedded mitigation.
- 4.6.17. ES Chapter 28 considers that, with the application of recommended measures, significant impacts to offshore and intertidal archaeology (including cumulative and transboundary impacts) would not occur.

Planning Issues

Onshore

- 4.6.18. In its LIR [REP1-065], BDC raised concerns about the level of heavy goods vehicles travelling through Cawston and the impact this would have on CCA and listed buildings along the High Street. This was a matter also raised by CPC and several residents both in writing and at the OFHs, in particular OFH3 [EV-033]. In a joint position statement submitted at D8, BDC confirmed that it was in general agreement with the findings of the CCA Heritage Assessment [REP8-061]. BDC welcomed the permanent widening of specific sections of footways in general and resurfacing of the main carriageway. However, it raised concerns with potential footway widening outside No 6 The Street which it considered could have the potential to increase the risk of the corner of the Grade II Listed Whitehouse Farm being hit by passing vehicles.
- 4.6.19. NNDC's LIR [REP1-099] considered that any impacts to heritage assets and their settings would be on the 'less than substantial' scale (although no reference was made to any particular asset) and the considerable public benefits associated with the Proposed Development would more than outweigh any harm to heritage assets within North Norfolk.
- 4.6.20. NCC in its LIR suggested revised wording to the outline WSI as well as the related requirement which was discussed throughout the Examination and agreed in the final SoCG [REP9-047]. BC did not refer to the historic environment within its LIR.
- 4.6.21. At ISH1 [EV-006 and EV-007] HistE confirmed that it concurred with the Applicant's conclusions in relation to the setting of the Grade I Listed St Andrew's Church. However, HistE considered the visibility of the onshore project substation from the grounds of the church would result in some residual harm to its setting, albeit this would amount to 'less than substantial harm'.
- 4.6.22. In response to Q14.18 of ExQ1, HistE stated that it considered that the onshore cable route would result in harm to the significance of Salle Park (Grade II Listed building and Grade II Listed Park and Gardens) and Blickling Hall (Grade I listed Hall, Grade II* Listed Park and Gardens and Blickling Conservation Area) during the construction phase but accepted that any impact would be limited to the construction period only and that any harm could be mitigated by ensuring the landscape is restored to its current or an enhanced condition [REP1-080].
- 4.6.23. All other matters raised by HistE in its RR [RR-183], which related primarily to wording within the WSI and In Principle Monitoring Plan (IPMP), were subsequently agreed between the parties and confirmed in the SoCG submitted at D8 [REP8-084].
- 4.6.24. The NT, who owns the freehold of the Blickling Estate, raised the issue of potential damage to sites of archaeological integrity within the estate requesting that it became a consultee on any unexpected finds [RR-202].

- 4.6.25. Happisburgh residents expressed concern about the impacts of works at landfall on the Grade II Listed Happisburgh Lighthouse and Cottages and the historical and anthropological importance of Happisburgh cliffs which are famous for Palaeolithic activity including the 'Happisburgh footprints' and 'Happisburgh hand axe' [e.g. RR-010, RR-249, RR-124]. The proximity of the proposed project substation to the Grade II Listed Bradenham Hall was also raised [RR-134] as well as concerns about unexplored archaeology at the site of the proposed onshore project substation [e.g. RR-010, RR-122, RR-155, RR-259, RR-226].

Offshore

- 4.6.26. Given the use of the long HDD technique at landfall, NCC considered that there would be no historic environment impact [REP1-100].
- 4.6.27. Initial concerns raised by HistE [REP1-081] in relation to wording within the offshore WSI and IPMP were subsequently agreed between the parties and confirmed in the SoCG submitted at D8 [REP8-084].

ExA Reasons

- 4.6.28. The assessment methodology, findings and approach to mitigation for onshore and offshore archaeology are all shown as agreed in the SoCG with both NCC [REP9-047] and Hist E. Similarly, the SoCG shows that, by the end of the Examination, both parties were also content that the wording of Requirements and Conditions within the dDCO for the mitigation of impacts to onshore and offshore archaeology were appropriate and adequate.
- 4.6.29. R23 of the dDCO [REP9-007] requires the submission for written approval of a WSI that accords with the Outline WSI. The results of these additional programmes of survey and evaluation post consent will inform the mitigation strategy to ensure that all potential impacts upon the historic onshore environment arising from the project are fully identified and appropriately and proportionately mitigated wherever possible.
- 4.6.30. The implementation of the WSI would lead to a comprehensive programme of post-consent archaeological survey work across the relevant parts of the wider NT Blickling Estate in consultation with the NT, their archaeologist and NCC. The NT's Archaeologist would also be notified if archaeological remains are encountered or suspected during works within the Blickling Estate and included in discussions on any next steps. Opportunities for public engagement and involvement (where appropriate) would also be discussed with the NT in developing the programme of post-consent archaeology survey and mitigation work which would be agreed and included in subsequent WSIs to be produced in the post-consent stages of the project.
- 4.6.31. Given the above, the ExA is satisfied that all matters relating to onshore and offshore archaeology have been satisfactorily resolved and that residual impacts are unlikely to be significant. The ExA **finds** that any impact would be adequately addressed and mitigated through the Outline WSI: Archaeology and Cultural Heritage (Onshore) [REP8-011] and the

Outline Written Scheme of Investigation (Offshore) [REP9-012] which are secured through R23 (onshore) and Condition 14(h) of the Generation DML and Condition 9(h) of the Transmission DML (offshore).

- 4.6.32. In terms of direct impacts on heritage assets, landscape elements of the BCA are the only identified designated heritage asset which would have direct interaction with the onshore project area. The significance of the BCA is derived from its strong rural character, including its historic landscape, with Blickling Hall and park it's centrepiece. Whilst the historic landscape would be affected, any impact would be limited to the construction period only (anticipated for 10 weeks in the worst-case scenario). Furthermore, proposed mitigation measures, which include sensitive management of cable installation works, thorough and strictly controlled backfilling and reinstatement of landscape character elements, would ensure the landscape is restored to at least its current condition. In light of the above, the ExA agrees with HistE that any harm would be mitigated/offset. Thus, the character and appearance of the BCA would be preserved. A landscaping management strategy (based on the OLEMs) would be secured by R18 of the dDCO, of which (2)(e) requires the inclusion of retained historic landscape features and proposals for restoration, where relevant.
- 4.6.33. Works during the construction phase would result in perceptible changes to the setting of a number of designated and non-designated heritage assets, including, but not limited to, Salle Park, Happisburgh Lighthouse and Cottages and Bradenham Hall. However, for the most part, this would be restricted to a limited period such that, once constructed, there would be no long-term effects on their setting. With the exception of CCA (discussed below), for the above reasons the ExA does not consider that this would constitute harm to the significance of these heritage assets. Therefore, their settings would be preserved.
- 4.6.34. There would be a significant increase in the volume of HGVs travelling through CCA for both the Proposed Development alone and in combination with H3. The significance of the CCA lies primarily in the special architectural and historic character of the area. The CCA Appraisal [REP8-061] states that the buildings are the dominant element in the Conservation Area and the basic aims of conservation must be to avoid unnecessary defacement or destruction of these buildings. The CCA Appraisal identifies traffic as detracting from the area:
- "... Since then the volume of traffic has increased: HGVs pound through the streets constantly causing a danger to pedestrians and to bone fide village traffic, producing noise and spattering newly painted buildings with dirt ... Buildings are also at risk from damage by traffic".*
- 4.6.35. The ExA concurs with the Applicant and BDC that footway widening and road resurfacing would have the potential to offer long term benefits to the CCA. However, it also agrees that the increase in HGV traffic through Cawston would cause damage to the character and appearance of the CCA. Whilst recognising that this harm would also be temporary and reversible, it would occur over a period of around two years. Longer term changes, even if temporary, can have a more serious impact on heritage

assets and the ExA considers that a detrimental impact over this timeframe would have a materially harmful impact on the character and appearance of CCA and an adverse impact on the ability of people to experience and appreciate the area and the significance of its associated heritage assets. The ExA quantifies this harm as less than substantial.

- 4.6.36. As the final design of the highway mitigation scheme would be undertaken post-consent and in agreement with NCC and BDC, secured through the TMP and R21, the ExA is satisfied that any increased risk of passing vehicles hitting the Grade II Whitehouse Farm could be avoided.
- 4.6.37. The Applicant also identified a minor adverse impact on the Grade I Listed St Andrews Church, Bradenham as the proposed substation would be visible from the grounds of the church. HistE considered that this impact would result in less than significant harm to its setting.
- 4.6.38. From its observations on site, the ExA considers that the special interest of the Church is largely derived from its age, architectural features, form, fabric and use. Views of the church are mainly localised given the surrounding landform and vegetation. The church is separate from the settlement and surrounded by agricultural fields. The isolated position within a pastoral setting makes an important contribution to its significance as do views out over this setting from the church grounds. The proposed substation would introduce an alien feature into this setting which would be seen in conjunction with the church from the lane to the north of the church. Although the substation would be at an appreciable distance, the ExA considers that this would be harmful to the pastoral setting of the Church. Given the intervening distance, this would amount to less than substantial harm.
- 4.6.39. The ExA is satisfied that, subject to mitigation, there would be no impact to the heritage setting and associated heritage significance for any offshore heritage assets.

Conclusion

- 4.6.40. NPS EN-1 paragraph 5.8.14 cites a presumption in favour of the conservation of designated heritage assets. When deciding an application which affects a listed building or its setting, Regulation 3(3)(1) of the Infrastructure Planning (Decisions) Regulations 2010 requires the ExA to have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses. Regulation 3(3)(2) requires the ExA to have regard to the desirability of preserving or enhancing the character or appearance of a conservation area.
- 4.6.41. Any impact on onshore and offshore archaeology would be adequately addressed and mitigated by R23 and Condition 14(h) of Schedules 9 and 10 and Condition 9(h) of Schedules 11 and 12 of the dDCO which secures the final WSIs which must accord with the Outline WSI: Archaeology and Cultural Heritage (Onshore) and the Outline Written Scheme of Investigation (Offshore).

- 4.6.42. The impact on BCA would be adequately addressed and mitigated through the landscape management strategy based on the OLEMS [REP9-080] which would be secured through R18.
- 4.6.43. There would be no impact to the setting and associated heritage significance of the majority of onshore and offshore heritage assets, including Salle Park, Happisburgh Lighthouse and Cottages and Bradenham Hall. There may be potential benefits in terms of the proposed mitigation contributing to a greater understanding of the onshore archaeological and cultural heritage resource and enhancements to CCA. However, these attract limited weight in the wider context of the scheme.
- 4.6.44. The Proposed Development would lead to less than substantial harm, thus failing to preserve the setting of the Grade I Listed St Andrews Church, Bradenham. In addition, there would be less than substantial harm to, thus failing to preserve, the character and appearance of the CCA. Paragraph 5.8.15 of NPS-EN1 states that any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss.
- 4.6.45. In weighing this harm against the public benefits referred to in paragraphs 4.2.13 to 4.2.15 above, the ExA concludes that the public benefits of the Proposed Development (including the NPSs strong policy support for renewable energy, economic benefits and renewable energy generation) would be significant and when set against the less than significant harm identified above, the public benefits would clearly outweigh the limited harm to historic assets that has been identified. The effect on the historic environment carries limited weight in the overall planning balance.

4.7. TRAFFIC AND TRANSPORT

Introduction

- 4.7.1. The issue of traffic and transport, and the ability of the local and strategic road networks to cope with the traffic generated by the Proposed Development, has been a significant matter throughout the Examination. A substantial amount of work by the Applicant and the County Council and others has been undertaken on an ongoing basis throughout the process. Many matters have been resolved but others remain unresolved as at the close of the Examination.
- 4.7.2. A complicating factor has been the issue of the cumulative impacts of the Proposed Development, the subject of this Examination, and the traffic and transport impacts associated with the Hornsea Three Project (the H3 Project). The H3 Project was proceeding through its own DCO

examination process concurrent with this Examination¹⁹. As such there are documents submitted into evidence within this Examination which were submitted into the H3 Project Examination and which deal with the cumulative traffic impacts of both schemes. Given that the H3 Project examination closed before the end of this Examination, documents and information regarding cumulative impacts were available to this ExA panel which may not have been before the H3 Project panel.

- 4.7.3. The Applicant and others were invited to submit such documents into evidence so as to keep the ExA informed as to developments within the concurrent examination on cumulative matters. Of course, the panel of Inspectors constituting this ExA is entirely independent of the H3 Project panel and the findings and conclusions within this Report are those of this ExA. Where there may be differences in conclusions on similar matters between the two Examining Authorities, that is most likely to be a product of different representations/evidence submitted to this ExA panel.

Policy Considerations

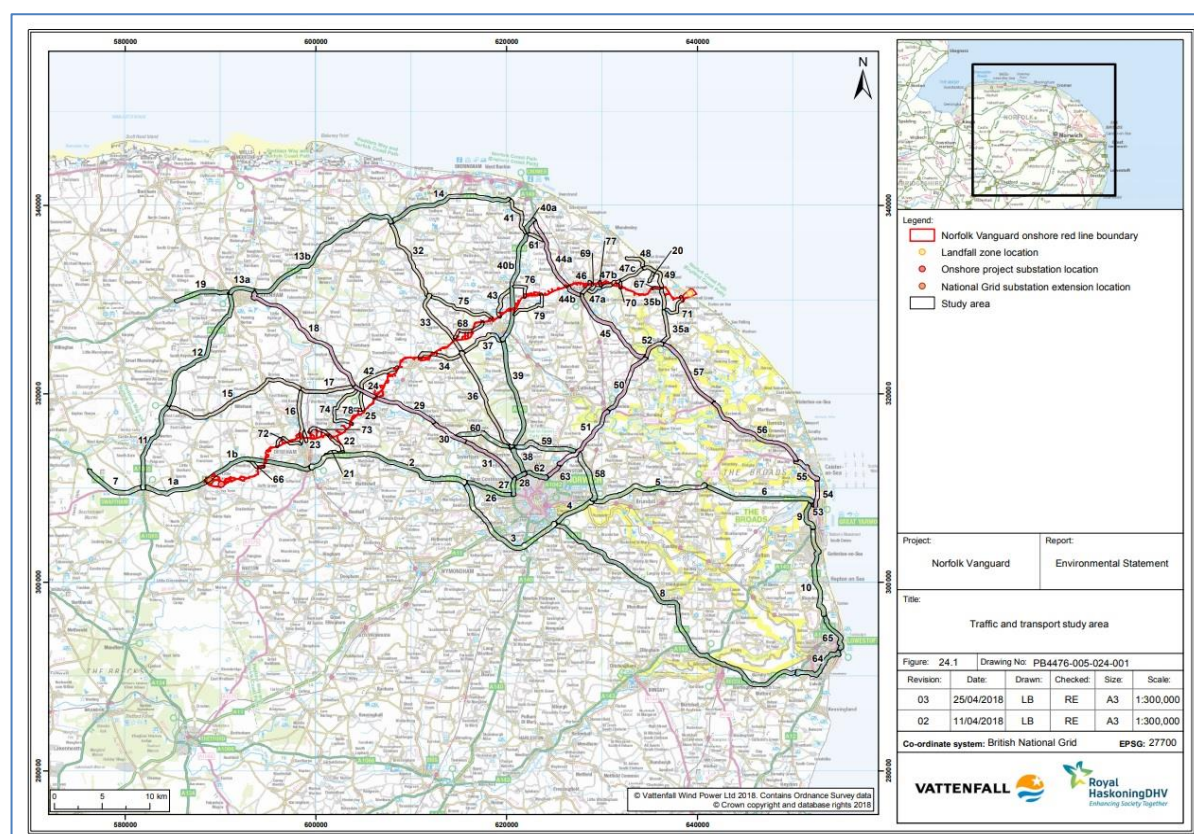
- 4.7.4. NPS EN-1 paragraph 5.13 stipulates that the decision-maker is required to ensure that the Applicant has sought to mitigate impacts on surrounding transport infrastructure and to consider the requirements necessary to mitigate such impacts.
- 4.7.5. In addition, NPS EN-1 states that "(I)f a project is likely to have significant transport implications, the applicant's ES should include a transport assessment using the NATA/WebTag methodology stipulated in Department for Transport (DfT) guidance, or any successor to such methodology".
- 4.7.6. The main traffic implications of the development would be felt across the administrative districts of Norfolk County Council (NCC), North Norfolk District Council (NNDC), Broadland District Council (BDC) and Breckland Council BC. A comprehensive list of relevant local policies can be found in ES Chapter 3. Key policies include DM10 from the NCC Core Strategy which directs that proposals generating a traffic increase should be accompanied by a Transport Statement demonstrating: suitable access, a suitable route to the strategic highway network.
- 4.7.7. National guidance is to be found in Planning Practice Guidance- Travel Plans, Transport Assessments and Statements (the Transport PPG) which sets out key principles to take into account in preparing the supporting documents to any transport assessments accompanying large proposals. The Applicant has confirmed that these key principles have informed the development of the ES.

¹⁹ The Hornsea Three Project Examination closed on 2 April 2019 and the Examining Authority issued a Recommendation Report (not yet publicly available) to the SoS on 2 July 2019.

Applicant's Case

- 4.7.8. Chapter 24 of the ES [APP-348] considers traffic and transport matters and includes a transport assessment. The assessment is predicated on the access strategy adopted and secured in the Outline Traffic Management Plan (OTMP), Outline Transport Plan (OTP) and the Outline Access Management Plan (OAMP) which are respectively at [REP8-013 to REP9-045], [REP8-048 to REP8-053] and [REP8-051 to REP8-053].
- 4.7.9. The study area included the onshore project substation and the extension to Necton National Grid substation and overhead line modifications, the onshore cable route including trenchless crossings, accesses etc and the landfall location. A total of 86 highway links were assessed within the study area as shown on Figure 3 [APP-575].

Figure 3: Highway Links



- 4.7.10. The Applicant has used the Guidelines for the Environmental Assessment of Road Traffic, 1993 (GEART) for specific methodologies. Traffic data was collected from a number of sources to estimate a baseline position. It is important to record that the traffic assessment applied a 20% contingency to all traffic estimates, as well as a rounding up to the nearest whole HGV movement to provide a worst-case scenario. All links were classified and the HGV construction traffic was assigned using an agreed methodology. Potential traffic impacts were identified in table 24.45 of Chapter 24 (ibid).

- 4.7.11. Applying the GEART principles to the study area for the Development Project meant that all highway links where a greater than 30% increase in traffic flows was identified were assessed, as well as other specifically sensitive areas. In the latter case, four major junctions known as the A47 Sensitive Junctions were included. Different environmental impacts were examined including severance, pedestrian amenity, road safety, driver delay and abnormal indivisible loads. Thereafter the assessment looked at cumulative impact assessments with regards to construction, operation and decommissioning phases. During the operational phase no significant traffic impacts were anticipated therefore assessment of this phase was screened out.
- 4.7.12. The methodology adopted for both the traffic assessment and the cumulative impact assessment have been agreed with HE and NCC. [SoCG at REP4-010]. At various points in the Examination HE raised questions about survey data and further survey data was provided to its satisfaction. In particular, HE required additional analyses in relation to the baseline traffic environments to inform the CCATN and the SACTN.

Planning Issues and ExA Reasons

Introduction

- 4.7.13. As mentioned above, traffic and transport issues played a large part in the Examination. In this section of the Report, because the planning issues as they developed, and were resolved, throughout the Examination process were multifarious, the ExA will set out the issues and also incorporate its findings within this section.
- 4.7.14. Throughout the course of the Examination specific additional information, data and evidence was submitted, by the Applicant and others, in response to the concerns raised and to clarify matters. The key documents are set out below:

Table 4.1: Highways Documents submitted during the Examination

Deadline	Document Name	Examination Library
Additional Submission	Technical Note Responding to NCC Request for Trenchless Crossings of the A1067 and B1149	[AS-047]
D4	Substation Access Clarification Technical Note (Applicant)	[REP4-036]
D4	A47 Access Options Figures (Applicant)	[REP4-037]
D4	SCG with Highways England	[REP4-010]
D5	Cumulative Impact Assessment-Traffic and Transport (Applicant)	[REP5-012]

Deadline	Document Name	Examination Library
D6	Figures showing the landfall HGV access route and the cable crossing point with Hornsea Three Project (Applicant)	[REP6-005]
D6	Unresolved Traffic Matters Joint Position Statement- Applicant and NCC	[REP6-006]
D6	Unresolved Traffic Matters Joint Position Statement- Applicant and Highways England	[REP6-009]
D6	NNDC Position Statement- HGV Waiting Areas and Cart Gap Wall	[REP6-012]
D6	List of works between Highways England and the Applicant as at 5 April 2019	[REP6-027]
D7	Unresolved Traffic Matters with Highways England Position Statement	[REP7-042]
D7	Details of Proposed Mitigation for Link 41	[REP7-043]
D7	NNDC- Little London Road and Happisburgh Position Statement	[REP7-048]
D7	Substation Access Clarification Technical Note- Highways England Agreement in Principle	[REP7-055]
D7	Applicant's Comments on Alternative Construction Traffic Routes at Cawston	[REP7-061]
D7	Highways England BN07 SACTN Review	[REP7-069]
D8	Unresolved Traffic Matters- Joint Position Statement with NCC	[REP8-060]
D8	Applicant's Position Statement on Reducing the Impacts of Construction Traffic in Oulton	[REP8-80]
D8	Statement of Common Ground- Applicant and Highways England	[REP8-083]
D8	Appendix 3: Applicant's Response to Further Questions 5.4 and 5.5	[REP8-077]
D9	Applicant and NCC- Unresolved Traffic Matters Position Statement	[REP9-032]
D9	Applicant's Comments on D8 Submissions- Link 34 Revised Construction Programme	[REP9-035]

Deadline	Document Name	Examination Library
D9	Applicant's Comments on D8 Submissions- B1149 Traffic Management Swept Path Analysis	[REP9-036]
D9	SoCG - Applicant and NCC	[REP9-047]
D9	NCC Letter to the Examination dated 7 June 2019	[REP9-060]

4.7.15. For ease of reference it is useful to set out the key acronyms used for traffic and transport matters in this part of the Report.

Table 4.2: Key Acronyms- Highways Matters

Acronym	Document/Reference
SABN	Substation Access Briefing Note
SACTN	Substation Access Clarification Technical Note
CCATN	A47 Cable Crossing Access (North-West of Scarning) Technical Note
H3	The Hornsea Project Three
TMP	Traffic Management Plan
TP	Travel Plan
AMP	Access Management Plan
DMRB	Design Manual for Roads and Bridges
HE	Highways England
HGV	Heavy Goods Vehicle
TC	Trenchless Crossing
MA	Mobilisation Area
CIA	Cumulative Impact Assessment

Background information

4.7.16. The highway network across the study areas is depicted in figure 24.4 [APP-578]. HGV routes are depicted in figure 24.9 [APP-584]. HE has responsibility for the A47 and A12 as part of the strategic highway network. The Principal Highway network, comprised of the A149, A140 and A1607, is managed by NCC as relevant highways authority.

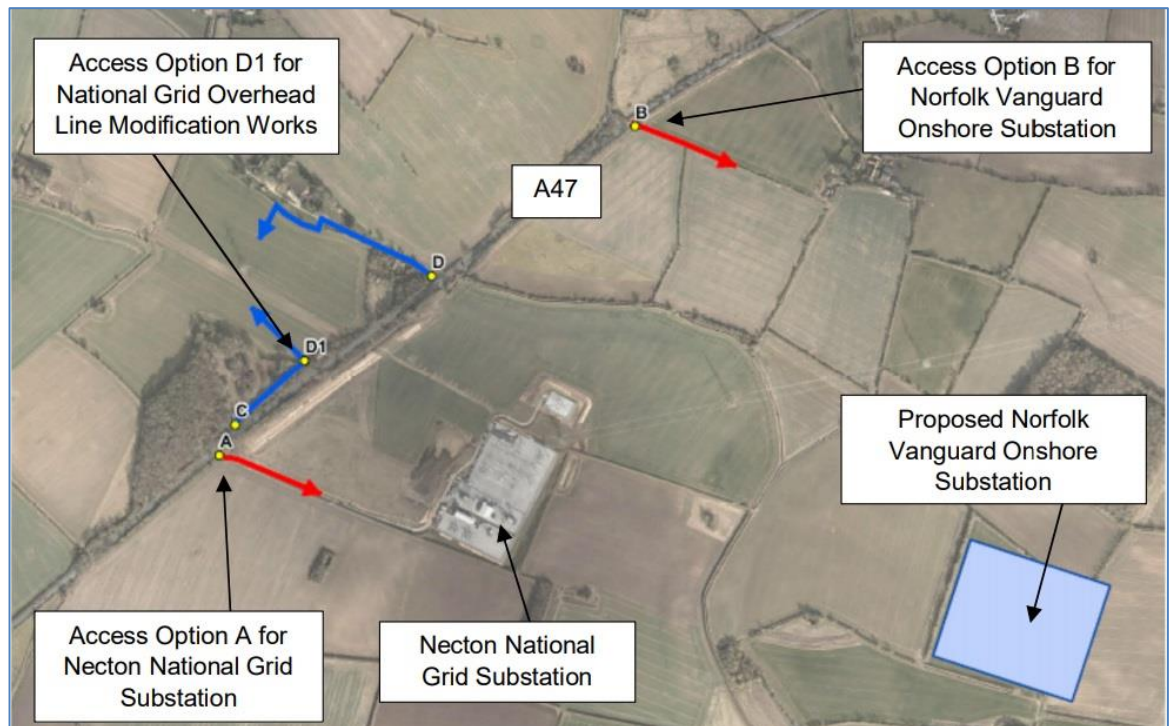
- 4.7.17. The areas of contention relate to the three main component parts of the project; namely the landfall location at Happisburgh, traffic links along the OCR and the substation access at Necton. Each will be examined below.

Substation Access

- 4.7.18. The Applicant's A47 Access Technical Note at [APP-276] scoped various options for three access points to serve the existing substation extension works, the new project substation and the overhead line modification works adjacent to the A47 Trunk Road at Necton, to the west of Dereham. R22 of the dDCO ensures that siting, design, layout and any access management measures must be approved by the relevant highway authority.
- 4.7.19. The Applicant's further document (SABN) set out the access arrangements required to serve the existing and proposed substations. It was developed in response to the recommendations made by, and requests for further information submitted on behalf of, HE in a series of technical notes²⁰. Concerns related to the ability of vehicles to enter and exit at the same time (access A) and the geometry of junctions (access D1) to ensure compliance with DMRB.
- 4.7.20. In addition to the above concerns, NCC in its LIR [REP1-100], expressed concerns with regards to the proposed access arrangements and suggested that, as a minimum, a full right turn lane be provided from the A47(T).
- 4.7.21. Some of these concerns were addressed in the Applicant's Substation Access Clarification Technical Note (SACTN) submitted at D4 [REP4-036]. Three access points were taken forward and are depicted below. Access A to provide access to the works required to extend the substation. Access B is to provide access to the new onshore substation and mobilisation area 1 and access D1 is to service the overhead line modification works. Full details were provided, including detailed layout plans and swept path analysis, as well as traffic forecasts and flows.

²⁰ AECOM BN03 Appended to SoCG with Highways England [REP1-042] and BN04 and BN06 appended to the SABN

Figure 4: Substation Access Options



- 4.7.22. The SACTN set out a left in/left out strategy for the access serving the National Grid substation extension site which was then subject to review by HE.
- 4.7.23. Access B would be a ghost island priority junction, in use for at least 100 weeks, of which 24 weeks would be at peak level use of some 180 light vehicles per day and 150 HGVs per day. In the peak hours some 90 light vehicles would be exiting and some 16 HGVs would be exiting in both directions. Visibility to the right is essential for vehicles whether turning right or left onto the main carriageway.
- 4.7.24. At D7 HE provided its response to the SACTN in its Substation Access Clarification Note (BN07) [REP7-055]. HE was content that the layouts had taken on board all of the previous issues raised, with the exception of the right-hand visibility splay for access point B on the turning out of this access. Visibility can only be achieved at a point 2.4m back from the give way, contrary to the DMRB standards. Compliance with the design standard would require the removal of a large proportion of established hedgerows and vegetation. In the circumstances HE accepted that this constituted the 'exceptionally difficult circumstances' required to justify a relaxation to 2.4m.
- 4.7.25. The ExA had some concerns about the reduction in standards and posed a further written question to HE about the basis on which they accepted the relaxation²¹. The ExA notes that the layouts are subject to agreement in principle by HE and would also be subject to the carrying out of Stage

²¹ FQ5.6 issued on 22 May 2019

1 and Stage 2 Road Safety Audits. On this basis the ExA is satisfied that, in principle, a satisfactory egress from access point B could be secured.

- 4.7.26. Two of the accesses, A and D1, are reliant upon the implementation of a left-in, left-out only operation which effectively would entail a U-turn at traffic roundabouts to the east and west of the substation along the A47 before vehicles return to the access point to make their left-turn in.
- 4.7.27. At the end of ISH4 the ExA requested details of the implications of the additional traffic diverted onto the links to the east and west of the substation accesses. This was the HGVs and employee vehicles which, unable to make a right turn in on either approach, would have to carry on to the roundabouts to the east and west of the substation in order to turn around and travel back before returning to make their left-turn in.
- 4.7.28. The results for the AM and PM peaks in both directions, with regards to two scenarios, are summarised in tables 6.2 and 6.3 of [REP4-036]. The worst-case scenarios were 35 additional vehicles carrying out the diversion manoeuvre up to the McDonalds roundabout in the AM peak. At D6, NCC confirmed that, on the basis of the projected traffic movements, it did not require any further assessment of the impact on the local highways network [REP6-006]. Given the numbers of vehicles which already pass through this junction, the ExA is satisfied that there would be no material effects over and above the existing baseline position.
- 4.7.29. Another issue raised by HE related to the ability of HGVs to enter and leave access point D1 simultaneously. The SACTN proposed a traffic management scheme whereby incoming HGVs from the west would be held at a layby and called in when confirmation was received that no HGVs were about to leave the site. On that basis HE indicated its agreement in principle to the updated layouts, traffic management arrangements and traffic flows.
- 4.7.30. A further issue was raised at ISH4 in that concerns were expressed by local residents that HGVs would utilise the soon to be built service station along the A47 to execute U-turns instead of travelling along the diversionary route. However, the ExA is satisfied that the OAMP secured by R21 of the dDCO would provide an appropriate mechanism for enforcement of the diversionary manoeuvres.
- 4.7.31. Final technical approval of the proposed accesses would be secured post-consent through the submission of a detailed AMP. Having regard to all of the above the ExA concludes that the three access options promoted are, in principle, satisfactory in highway safety terms, subject to the provisions of R21 and R22 and on the basis of the OAMP.

Link 34 -B1145 Cawston village

Background and ES assessment

- 4.7.32. The B1145 is a single carriageway road which provides a link from Kings Lynn to Mundesley on the Norfolk coast. It is located in the Broadland District and runs through a number of small towns including Reepham,

Cawston and Aylsham. A section of this road comprises link 34 in the ES. Whilst the B1145 is classified as a main distributor road in the NCC route hierarchy, NCC point out that the hierarchy is relative to Norfolk which comprises many rural roads linking villages. The traffic count of April 2017 recorded an existing daily traffic flow of 2,648 vehicles through link 34, of which some 26 were HGVs.

4.7.33. The transport assessment estimated that the Proposed Development would generate construction traffic with a primary peak figure of 168 daily HGV movements for one week (Peak 1), a secondary peak of 152 daily HGV movements for one week (Peak 2), and a third peak of 144 daily HGV movements for two weeks (Peak 3) through link 34. The Applicant's typical average HGV movements across the 24-week construction period was 90 daily HGV movements, with one HGV movement representing a single leg of each delivery such that the numbers quoted represent the maximum two-way movements on a Link in a single day.

4.7.34. Table 24.21 ES 24 records the existing and proposed daily traffic flows as follows:

Link	Description	Background 2022 Flows		2022 Construction Vehicle movements		Percentage Increase	
		All vehicles	HGVs	All vehicles	HGVs	All vehicles	HGVs
34	B1145 – west of Cawston	2,905	29	394	240	13.5%	839.6%

4.7.35. Table 24.27 of ES Chapter 24 sets out an assessment of the effects of construction traffic on pedestrian amenity. In the case of link 34 it is acknowledged that receptors currently experience 1 HGV every 20 minutes and that this would increase to 1 HGV every 2 minutes 14 seconds during construction. The impact was assessed as moderate adverse, based upon a medium magnitude effect upon a link assessed as having medium sensitivity.

4.7.36. The assessment identified the need for enhanced traffic management measures along link 34²². These were contained within the OTMP and the OAMP submitted with the application and comprised a commitment to assess the manoeuvrability of the types of vehicles that would utilise the B1145 and to provide appropriate mitigation. At D2 the Applicant further confirmed that it was continuing to work closely with Orsted to consider cumulative impacts with the H3 project [REP2-07].

²² Table 24.33 ES24

Objections and issues

- 4.7.37. Cawston Parish Council and many local residents made representations both in writing and orally. Broadland DC in its first written representation expressed its concerns about the cumulative impacts of the H3 Project and the Proposed Development [RR-175]. Those concerns were reiterated in its LIR at [REP1-065]:
- "The proposed route of heavy goods construction traffic serving part of the cable corridor will use the B1145 and pass through the centre of the village of Cawston along Aylsham Road and High Street, which is a two way road that is narrow in places with no parking restrictions along its length and a significant number of vehicles park on the highway, especially along High Street. The western part of Cawston is a Conservation Area and a number of properties along High Street are listed residential and commercial properties which are located in close proximity to the road, some are Grade II* listed".*
- 4.7.38. The above concerns were repeated many times by local residents, both in written representations and at open floor hearings. Polly Brockis at the OFH on 25 April 2019 raised a number of matters, and spoke for many when she said: *"The proposal will make Cawston a HGV corridor, it is currently a semi-rural village built around an old road or historic properties within a conservation area".*
- 4.7.39. In response to FWQ11.31 [PD-008] Broadland DC advocated that the OTMP should identify those locations affected by traffic close to schools and seek to avoid school drop off and collection times. However, BDC confirmed that on transport matters it would defer to the expertise of NCC as Highways Authority SoCG [1-036]. In its LIR, NCC did not specifically identify Cawston and link 34 as matters of concern but did comment that detailed discussions and negotiations were ongoing relating to local highway matters [REP1-100].
- 4.7.40. Concerns were also raised regarding the pinch point on the Marriott's Way Road Bridge at the western end of Cawston. Residents pointed out that there was evidence of vehicles hitting the structure, as well as subsidence and an increase in HGV traffic traversing the bridge could increase the risk of collision thereby risking the structural stability of the bridge [REP70-092, REP7-104].
- 4.7.41. At D8, the Applicant stated that it had reviewed the location with Cawston Parish Council and that the bridge strikes appear to be due to poor HGV alignment over the bridge and inadequate forward visibility due to vegetation. According to the Applicant, NCC has a resurfacing and reconstruction scheme scheduled for summer 2019 in the vicinity of the bridge which gives an opportunity to address the problem.
- 4.7.42. The Applicant has been in discussions with NCC and shared 'tracking' simulations and the NCC scheme will now include widening on the eastern approach to the bridge span and a re-alignment of the carriageway. These measures, together with some localised tree pruning should ensure that large vehicles can better line up to traverse the bridge

and have adequate visibility to slow down/stop to allow large vehicles. NCC did not raise any issue in this regard.

- 4.7.43. Late in the Examination, Cawston Parish Council also drew attention to a fatal road accident close to the bridge. However, given the limited information before us, the ExA are unable to draw any conclusions as to the cause of the accident.

Progress through the Examination

- 4.7.44. At D4, NCC indicated that it was in discussions with the Applicant to discuss mitigation measures for Cawston and that, without appropriate mitigation measures, the development would have a significant adverse impact upon the satisfactory functioning of the local highway network [REP4-067]. At that point plans and documents depicting the mitigation measures were not available.
- 4.7.45. At D5 a Cumulative Impact Report (CIA) [REP5-012] was submitted which details the Applicant's peaks in HGV movements through link 34, as well as the cumulative position, with the H3 Project, through link 34. This report detailed the requirement for mitigation of potentially significant pedestrian amenity impacts associated with the combined peak construction traffic flows. The measures identified included enhanced pedestrian facilities, managed parking and road safety measures.
- 4.7.46. Alongside the ongoing discussions between the Applicant and NCC, there were ongoing discussions between the H3 Project promoters and NCC. As at D6 the Applicant was in receipt of the H3 Project preferred mitigation scheme plans. At D6, NCC advised that it had received a stage 1 Road Safety Audit in relation to the H3 plans and that there were still points which the auditors required addressing. At that stage NCC indicated that it believed that a suitable access strategy could be produced which mitigated impact but that such a scheme required further work [REP6-006].
- 4.7.47. Cawston Parish Council at various points put forward suggestions as to an alternative routing of the HGVs via a haul road to obviate the need for HGVs to pass through the village. The proposal identified a portion of the onshore cable route between mobilisation area 6 and the B1149 to the east of Cawston. The Parish Council suggested using the running track along this part of the route for construction traffic. The ExA asked the Applicant to explore this possibility with the Parish Council. The Applicant did so and concluded that the alternative suggestion was not feasible for a number of logistical, environmental and other reasons in [REP7-061 and REP7-041].
- 4.7.48. In the cumulative scenario with the H3 Project, the Applicant committed not to exceed 144 daily movements during Peak 3. This would be done by reallocating peak activities and it was captured within an update to the OTMP at D7. At D7 the Applicant contended that its peak HGV activity related to the trenchless crossings of the H3 Project and the Marriott's Way and suggested that it would liaise with the H3 Project developers

post-consent, with a view to staggering peak activities for these stages of work. The default position would be the 144 cap on HGV movements in peak 3.

- 4.7.49. It is noted that the H3 Project assessed its impact using a maximum figure of 127 HGV movements across a full 3-year period, compared to the Applicant's profiled HGV movements over an approximate 1-year period to complete duct installation and trenchless crossings in cable sections 9/9a and 10, in which some weeks have very low HGV activity. The H3 Project figures therefore represent a worst-case scenario throughout the whole construction period whereas the Application traffic figures are likely to be more representative since they have been subject to more detailed profiling.
- 4.7.50. The final position statement of NCC submitted into the H3 examination²³ indicates that the applicant in that examination had made a commitment to explore the opportunity of making greater use of Heydon Road which would reduce the traffic through Cawston. In its D7 post hearing submission to this Examination [REP7-079] NCC confirmed that a road safety audit has also been undertaken in relation to the HGV traffic through Cawston but that the assessment had not been submitted into the H3 Project examination. At D7 Cawston Parish Council pointed out that there had been five versions of a highway mitigation scheme submitted into the H3 Project examination, but that the matter remained unresolved. The position of NCC remained that a workable scheme could be developed.
- 4.7.51. The H3 Project mitigation scheme is appended to the NCC representation [REP7-079]. It depicts a new 20mph speed limit and gateway feature on the outskirts of the western end of the village and the same on the eastern end of the village in advance of the school access. A short stretch of footway in the vicinity of the school is to be upgraded and specific intervention scheme on the High Street at the heart of the village. These measures include relocating the bus stop and widening sections of footpath along the High Street to a minimum of 1.2m.
- 4.7.52. The mitigation scheme involves the retention of twelve parking spaces on the northern side of the High Street outside properties 12 to 18. The retention of these spaces and the narrowness of the High Street would mean that effectively HGVs travelling east would have to travel on the westbound lane for the length of the High Street. As such, single way priority working signage would be introduced at either end of the High Street.
- 4.7.53. The stage 1 road safety audit (RSA) identified problems with the reduction in carriageway width due to widening of the footway creating problems in that if one car was parked outside the indicated bays, it may present an obstruction. The RSA noted that the Booton Road junction was heavily parked and on-street parking could prevent a HGV manoeuvring successfully, resulting in an obstruction. It also identified

²³ Attached to the post-hearing submission of NCC at D7.

that parking near the junction could potentially reduce visibility for drivers resulting in failure to give way type collisions. Finally, the RSA identified an increased risk to pedestrians of being struck by passing large vehicles because of the narrow footways along the High Street.

- 4.7.54. The response of NCC to the RSA is appended to [REP7-079]. NCC shared the concerns of its auditors. Whilst NCC supports the idea of wider footways, the tracked runs through the High Street reveal that the geometry is very tight and NCC believe that it was likely that 'car sideswipes' or kerb strikes would occur. The option of removing the pedestrian improvements was suggested. Full details of road markings and signage and the location of the bus stop were to be agreed.
- 4.7.55. On 21 May 2019, in its Rule 17 request [PD-018], the ExA sought confirmation in relation to the combined traffic flows through Cawston. The CIA recorded daily baseline flows of 3,477 (all vehicles) and 127 HGV movements, as at 2022. The maximum cumulative traffic of both projects would increase these flows by 271 HGV movements (based on a flat demand profile of 127 HGVs for H3 and a maximum peak capped at 144 HGVs for Norfolk Vanguard). The ExA sought confirmation that the cumulative HGV flow would equate to 33.2 HGVs each hour passing through the village or the equivalent of one HGV approximately every 2 minutes.
- 4.7.56. In its response [REP8-077] the Applicant confirmed that the above extrapolation was correct but that it had committed to a further reduction in the HGV cap for Norfolk Vanguard (NV) traffic of 112 movements per day. This would result in a one-week peak of NV daily HGV movements of 112, then for 22 weeks of the construction period NV daily HGV movements would be capped at 95 with a further reduction to 44 daily HGV movements for the remaining 13 weeks of the construction period. All of these measures are captured within revision 3 of the OTMP at [REP8-013].
- 4.7.57. NCC (email 30 May 2019) noted the revised arrangements and indicated that it still believed that there was "a reasonable expectation that a mitigation scheme can be produced to overcome the technical highway issues. **However, until we receive a valid stage 1 Road Safety Audit, currently there is no agreed mitigation scheme to overcome the identified issues for Cawston.**"

ExA reasoning

- 4.7.58. As indicated to all parties throughout the Examination, the ExA considers it necessary to assess the traffic implications of the application project on Cawston in two scenarios. Firstly, consideration of the Norfolk Vanguard project in combination with the additional H3 Project traffic and secondly, in isolation without the additional H3 Project traffic. This is because the ExA is conscious that, as at the date of submission of this Report and recommendation to the SoS, the fate of the H3 Project is unknown but an assumption has to be made that it will proceed. In the event that the DCO in relation to the H3 Project is not made, the ExA considers it appropriate to provide a view on the situation.

- 4.7.59. The latter scenario can be dealt with quickly. In a scenario in which the H3 Project does not proceed and, based upon the latest revised mitigation measures in the OTMP, the ExA concludes that the traffic impacts in relation to Cawston would be acceptable subject to implementation of all of the aforementioned measures.
- 4.7.60. In a scenario whereby there is a made DCO for the H3 Project (with the recommended caps on HGV numbers), the matter becomes more complicated by virtue of the cumulative assessment and the increased HGV traffic through Cawston. Using the latest suggested mitigation scheme there would be a consequential reduction in cumulative HGV movements through Cawston to 239 movements for both the NV project (112 movements) and the H3 project (127 movements). This would represent the WCS for the one-week period with the 112 cap for NV.
- 4.7.61. The Highways Mitigation Scheme further restricts HGV movements for 2.5 hours during school pick up and drop off times during term time. This further reduces the 12-hour period over which the daily HGV movements can be distributed. The Applicant has calculated that, with timing restrictions, the combined NV and H3 HGV movements would be some 25.2 HGVs per hour. The baseline daily HGV movements must also be added into the equation²⁴ which would take the HGV flow rate to 35.8 HGVs per hour over the 9.5 hours when the two projects would be operating. The above restrictions equate to one HGV passing through Cawston approximately every 1.7 minutes over a 12-hour working day²⁵.
- 4.7.62. The analysis in the preceding paragraph applies to the one-week period where the 127 cap is applied. However, the figures are not significantly better for the 22-week period in which the proposed 95 cap on NV HGVs is applied. The cumulative HGV total in these 22 weeks would be 222 HGVs and a background/baseline of 127 HGVs. Applying the same analysis the combined NV and H3 HGV movements would be some 23.4 HGVs per hour. When the baseline flow is added in, the amount of HGVs would be 34 per hour which still equates to one HGV passing through Cawston approximately every 1.7 minutes²⁶ over a 12-hour working day.
- 4.7.63. The above calculations assume an even distribution of HGV movements when in reality this would not happen. Whilst the Applicant would have control over its own HGV movements, it would have no control over those arising from the H3 Project or the baseline HGV traffic.
- 4.7.64. Unopposed, it would take one HGV some 46 seconds to travel from one end of the High Street to the other from Church Close to Norwich Road.

²⁴ Note that the ExA has apportioned the baseline HGV daily flows of 127 over a 12-hour period given that there is no evidence of timing restrictions. 127 over 12 hours is 10.6 HGVs per hour.

²⁵ There are various ways of expressing this figure. The Applicant correctly notes that the total H3 and NV cumulative flow would be 25.2 HGV per hour= one HGV each 2.4 minutes. When baseline flows of 10.6 HGVs are added in, the rate of HGVs is around one every 1.7 minutes.

²⁶ The figures are the same due to rounding.

Even allowing for an even distribution, there would be a one-minute hiatus before another HGV traversed the village. The Applicant's response to further question 5.5 [REP8-077] is enlightening. The Highways Mitigation Scheme is dependent upon three waiting areas along the High Street. The traverse time increases to 65 seconds if an HGV is stopped once and 104 seconds if an HGV is stopped twice. This would further decrease the gaps in time between HGVs traversing the village.

- 4.7.65. The Applicant's answer acknowledges that waiting times have the potential to further increase if opposing vehicles are in platoons. Given that, for a significant portion of the length of the High Street, the HGVs would travel on one side of the road only, the scope for delays and blockages increases. For example, one refuse lorry collecting refuse along the High Street would result in delays. The likelihood and scope for delays and blockages is significant given the constant flow of HGV vehicles and the numbers involved.
- 4.7.66. The ExA is highly sceptical that the Highway Mitigation Scheme as it currently stands would satisfactorily mitigate the combined effects of the NV and H3 Projects so as not to cause material harm to highway safety. The reasons for this are several.
- 4.7.67. There is an over-reliance on drivers adhering to the proposed new parking restrictions which would reduce the number of on-street parking bays. On each of its site visits the ExA was aware of the presence of on-street parking along the High Street. Whilst these visits represent a snapshot in time, a significant number of the older dwellings front onto the High Street and do not have off-road parking. As the RSA highlights the reduced carriageway width and existing parking may present an obstruction for larger vehicles. The swept path analysis reveals that HGVs would have to carefully negotiate manoeuvres onto the opposing carriageway at either ends of the High Street before embarking upon a journey along the High Street, on what would effectively be a single carriageway route once the on-street parking on the north side was taken up.
- 4.7.68. Travelling eastbound and arriving at the triangular junction with Chapel Street, HGVs would have to revert to the north side of the road in advance of the 4 car parking spaces on the south side. The journey along the High Street would require careful manoeuvring along a narrow carriageway and around parked vehicles, potentially in the face of oncoming traffic and with pedestrians walking along the narrow footways. Any obstructions or delays could potentially increase the temptation to reverse or make more risky highway manoeuvres to the detriment of driver and pedestrian safety.
- 4.7.69. The RSA also highlighted the existing narrow footways which increase the risk to pedestrians of being struck by passing large vehicles. Along both sides of the High Street the footway is narrow, and some houses and railings sit directly at the back of the footway. The Applicant proposed to overcome this by widening sections of the footway along the High Street. Whilst this may go some way to alleviating the risks to pedestrians, it

would further narrow the carriageway making the already tight carriageway manoeuvres even tighter.

- 4.7.70. The ExA concludes that when all of the above factors are considered together, the proposed Highway Mitigation Scheme would not satisfactorily mitigate the cumulative effects of both projects. The combination of a narrow carriageway, the narrow footways, parked vehicles and the number and frequency of the cumulative HGV traffic would materially increase the likelihood of delays, blockages and inappropriate highway manoeuvres to the detriment of pedestrian and driver safety.
- 4.7.71. In its final representation NCC indicated that until they had received a valid stage 1 Road Safety Audit, there was currently no agreed mitigation scheme to overcome the identified issues for Cawston. They did confirm that they believed that there was a reasonable expectation that such a scheme could come forward. The Applicant has also indicated that *"NCC have noted that the scheme requires several amendments but have stressed that a total "re-think" of the scheme is not required"*. [REP8-013]. The joint position statement at D9 [REP9-032] sets out the respective positions of NCC and the Applicant with regard to the highway mitigation measures in Cawston.
- 4.7.72. The ExA accepts that there is a reasonable expectation that an appropriate mitigation scheme could come forward to address or alleviate the cumulative traffic impacts in Cawston. However, for the reasons outlined the concerns of the ExA are such that it disagrees with NCC and confirms that material revisions to the mitigation scheme are required, including the further reduction in HGV numbers. The ExA concludes that the current mitigation measures contained within the latest OTMP would be insufficient to address those concerns. Accordingly, in the event that SoS is minded to make the DCO the ExA would recommend that the SoS requires the Applicant to secure a revised mitigation scheme which considers each project in combination and the overall scheme context.

Heydon Road/The Street, Oulton (link 68)

- 4.7.73. During the Stage 2 works Heydon Road, identified as link 68 in the ES, would provide access to mobilisation area 7 (MA7), located further east along Heydon Road. Heydon Road is a minor road off The Street which in turn connects to the B1149. MA7 is intended to support the construction works in proximity to Oulton and is not intended as a main works compound. During the Stage 3 cable pull works, link 68 would provide access to points AC84, AC85 and AC88. This is one of the links which would be potentially affected by the cumulative impact of the Proposed Development and that of the H3 Project whose main compound is proposed at the disused Oulton airfield.
- 4.7.74. During a 16-week period for duct installation in 2022, the proposal would generate peak traffic demand of 96 daily HGV movements. During the cable pull through, in 2024, there would be 20 weeks when peak traffic

demand would be 64 daily HGV movements²⁷. The Applicant anticipates that, during the cable pull phase, materials would be delivered directly to the joint locations or via the Cable Logistics Area prior to delivery to the joint locations.

- 4.7.75. At the outset, in its LIR [REP1-100], NCC identified one of its key highway issues as being the cumulative traffic impacts of the Project Development using The Street as an access to MA7 at that same time as HGVs for the H3 Project would be using the former Oulton Airfield. It raised a holding objection in relation to this matter. In raising these concerns, NCC, the local Parish Council and local residents, pointed out that a proposed biomass plant intending to use The Street had been refused permission on appeal²⁸ in 2014 due to unacceptable traffic generation.
- 4.7.76. In the biomass plant appeal the Inspector found that the proposal would have generated approximately 34 deliveries per day with a maximum hourly flow unlikely to exceed 8 trips over a 10-hour to 14-hour day. For the reasons set out the Inspector concluded that the measures would not sufficiently ameliorate the consequences of the permanent increase in traffic movements.
- 4.7.77. By D3 the Applicant's proposal was that the H3 Project would implement the necessary mitigation measures and would remove them on concluding its' construction works. It was anticipated that the HGV movements associated with the Proposed Development would occur after installation of the mitigation measures and conclude prior to their removal. At that point, NCC [REP3-053] raised concerns about the timing and any delay to the H3 Project construction period. This issue was resolved by D4 when the Applicant committed to adopting the same package of measures to achieve the same outcomes [REP4-067]. The OTMP confirms that the first of the two projects to proceed to construction would deliver the full scheme of mitigation and the second project would be responsible for removing the measures once both project's construction phases are complete.
- 4.7.78. At D6 OPC continued to press its concerns about the accuracy of the baseline data used in the H3 Project submission [REP6-035]. Its point is that there are inadequacies in the H3 Project baseline data and that this data has been used by the Applicants in this Examination to extrapolate the cumulative position. Currently the baseline data provided in the CIA is the only data available. Moreover, NCC as highways authority has not raised concerns about the methodology for assessment of the cumulative impacts of the two projects.
- 4.7.79. The package of mitigation measures is based on the peak traffic demand and summarised in table 1.23 of the CIA document [REP5-012] and it is captured within the submitted OTMP and secured through R21 of the dDCO. This represented NCC's preferred mitigation scheme and is a

²⁷ Appendix 24.6 at [APP-261]

²⁸ PINS Appeal ref – APP/K2610/A/14/2212257 appended to NCC at [REP3-053]

comprehensive set of measures including improvements to the existing junction between The Street and the B1149, up to 8 passing places, widening of The Street in places, temporary lowering of the speed limit and temporary signage as well as a means of priority work for southbound vehicles. The Applicant's final position is summarised in the Applicant's submission at D8 [REP8-80]. The final position of OPC is summarised in [REP8-108].

4.7.80. The Street is a rural lane with sporadic development on either side connecting the village of Itteringham to the north with the B1149. It is generally lined by roadside hedgerows and does not have footpaths. Two cars can pass each other for most of the length of The Street. However, a car and an HGV would have difficulties, hence the need for the regular passing places as part of the mitigation measures. There is also a commitment to the trimming of roadside vegetation and trees, as well as a temporary reduction in the speed limit down to 30mph and temporary signage to ensure driver awareness.

4.7.81. Having regard to the nature of the rural road and all of the submitted evidence the ExA is satisfied that the mitigation measures would be adequate to control the additional HGV movements associated with both the Development Proposal alone and in combination with the Hornsea Project Three for the temporary periods when construction and other activities would create peak flows of HGVs. The measures are properly secured in the final iteration of the OTMP and secured by R21 of the dDCO.

Link 32- B1149 Edgefield

4.7.82. At D5 the Applicant submitted the CIA to consider the combined effects of the construction traffic of the Proposed Development and the H3 Project. At D6 NCC expressed its concerns about the cumulative traffic (some 293 daily HGV movements) along link 32 during the morning peak and indicated that a restriction should be placed on the morning peak flows between 0730hours and 0900hours [REP6-006].

4.7.83. By D7 mitigation had been agreed between the Applicant and NCC that the Norfolk Vanguard HGVs would not use Link 32 between 07.30am – 09.00am to avoid the school drop off period. The Applicant has made amendments to the OTMP to secure this. The ExA concludes that this is a satisfactory approach.

Link 36- B1149 Holt Road, Horsford

4.7.84. Following the CIA, NCC also raised concerns about the numbers of HGV movements projected to pass through Horsford village [REP6-006]. Due to the existing profile of morning traffic leaving the village and seeking to join the A1270 Norwich Northern Distributor Route, and due to the number of committed residential developments along the route, NCC advocated the HGV route be amended to divert construction traffic away from this link and on to a C class road, the C245 Shortthorn Road.

- 4.7.85. At D7 there remained an issue relating to the diversion of traffic away from the village of Horsford along link 36 (B1149) in the cumulative scenario with the H3 Project. The Applicant's proposed diversionary route was welcomed by NCC who stated that they wanted all of the Proposed Development's traffic to use the route in any eventuality. At ISH6 the Applicant's position remained that link 36 could cope with the traffic generated by the Proposed Development alone. Discussions continued and the matter was finally resolved at D8 when the alternative route to bypass Horsford village was agreed and the measures are secured in the OTMP. [REP8-060] The ExA concludes that this a satisfactory approach.

Link 41- B1436 Felbrigg

- 4.7.86. The updated CIA at D5 indicated that link 41 had the potential to experience significant cumulative impacts. Mitigation was proposed in the form of either: coordinating traffic demand with the H3 Project to avoid overlapping peaks or; a reduced peak daily demand, (achieved through a minor programme extension) of 338 HGVs for the Proposed Development giving a maximum combined cumulative HGV daily demand (with H3 Project) of 487. NCC requested a cap on daily HGV peak traffic flows during the holiday season (defined as the six-week school summer holidays). This was captured in the OTMP and was resolved. [REP7-043 and REP8-060] Again the ExA is content that these matters are adequately secured and that they would satisfactorily address traffic implications.

Happisburgh and Link 69

- 4.7.87. Happisburgh is a charming coastal settlement. It is an obvious tourist attraction given its rugged coastline and lighthouse. Roads off the main highway network are small rural roads. The Happisburgh Parish Council played an active part in the Examination process raising a number of concerns.
- 4.7.88. Link 69²⁹ comprises Little London Road from the B1145 Lyngate Road junction to an access point 210m east. It is a narrow land with no footway, lined with established hedgerows and serving a handful of private residences. The ES transport assessment confirmed that the route would be unsuitable for conventional tipper trucks (20 tonnes) and that the HGV payloads would have to be split into smaller 10-tonne vehicles at mobilisation area 10.
- 4.7.89. Residents remained concerned throughout the Examination that Happisburgh could not accommodate the HGV traffic and expressed concerns about pedestrian safety on the housing estate on Happisburgh Common. Link 69: Little London Road was of particular concern.
- 4.7.90. The use of 10-tonne vehicles has the effect of doubling the number of HGV movements to 240 movements at peak times from a baseline of 22 existing HGV movements. This estimate relates to a worst-case scenario, where construction of all infrastructure components are undertaken

²⁹ Depicted on Figure 24.1 above and at [APP-575]

concurrently and assigned to link 69. The construction programme is sufficient to allow sequential construction of the 3 main components contributing to this scenario. This would result in a 9-week period with a peak of 96 movements and a 4-week period of 144 movements. NNDC confirmed its support for this approach in [REP8-107].

- 4.7.91. At D7 the Applicant submitted a Position Statement [REP7-048] clarifying the traffic movements forecast for Little London Road which would also serve mobilisation area 10 and two trenchless crossing areas (TC14 and TC15). The indicative peak construction durations for these components was 9 weeks for the mobilisation area and two weeks for each of the trenchless crossing locations with HGV movements being capped at 48 movements.
- 4.7.92. By D9 the Applicant and Happisburgh Parish Council had successfully come to agreement on all of the concerns raised by the Parish Council, subject to various measures being secured in the OTMP and by requirements. [REP9-048] contains a full summary of the issues and the agreements reached.
- 4.7.93. A Traffic Management Strategy is proposed for Little London Road because it does not allow for full two-way HGV movements along the entire link. Mobile traffic management would be used with a pilot vehicle used to temporarily stop oncoming traffic. Then the 10-tonne payload construction vehicles would travel in convoys of 3 vehicles onto link 69. Due to the limited distances and the number of times a day this would happen there would be limited disruption to local residents³⁰. The ExA concludes that this would be an acceptable approach.
- 4.7.94. Suggested mitigation measures to reduce traffic numbers included an extension to the construction programme, relocating the reception areas for the trenchless crossing and sequencing of the construction activities. [REP7-048]. These measures are contained within the OTMP [REP8-013] and secured by R21 and R22 of the dDCO.
- 4.7.95. The ExA finds that the mitigation measures, coupled with a cap on overall daily construction vehicle movements, would significantly reduce the projected forecast movements. Whilst the corollary of this would be an extension of the construction programme over 22 weeks, it would result in a significant reduction in terms of the adverse effects on the residential properties and their inhabitants.
- 4.7.96. The OTMP secures access routes which would not pass through Happisburgh village and the appointment of a local community liaison officer to maintain communication between the local community and the developer during construction. Other concerns related to the effects of 24 hour working. However, the Clarification Note on Landfall 24-hour Vehicle Requirements was requested by the ExA [AS-031] and confirms that HGV

³⁰ Driver delay of up to 56 seconds. Ibid, table 5.3 1 platoon arrival movement and 1 departure movement per hour.

movements would be limited to the period 0700hours to 1900hours even in the event of 24 hour working at the landfall location.

- 4.7.97. Concerns that the beach road car park at Happisburgh were addressed by the inclusion of commitment by the Applicant not to use the car park and that all parking and storage requirements will be located within the temporary landfall compound. These measures are contained within the COCP and secured through R20 of the dDCO.

Link 75: Blickling Road

- 4.7.98. Link 75 is the road connecting Blickling and Saxthorpe and is, in part, classified as a tourist route due to it passing the Blickling Estate, a National Trust attraction. The link would serve one side of a trenchless crossing zone and during the construction period the link would experience 1 HGV movement every 4 minutes³¹.
- 4.7.99. Both Oulton Parish Council and Aylsham Town Council expressed concerns about the OCR crossing the A140 and Blickling Road and the use of Blickling Road for construction traffic. [REP3-057 and REP6-035]. The Parish Council in particular, expressed concerns about 'the pinch points, narrow sections of roadway, right-angled bends and weak bridge' which, they contend make it a highly unsuitable stretch of rural road to accommodate an additional 72 HGV movements daily.
- 4.7.100. The Applicant had identified link 75 in the first draft of the OTMP as requiring mobile traffic management or pilot vehicles as well as road widening and passing places. Given the limited duration of the effects and the total maximum flows in the peak hours, the ExA concludes that the proposed mitigation measures would satisfactorily address the effects of the additional HGV movements during the construction period.

A47 Sensitive Junctions (Highways England)

- 4.7.101. During the assessment, and as part of its consultation exercise with NCC and HE, four junctions were identified as being potentially sensitive to changes in traffic. They are listed in Table 24.11 ES Chapter 24 [APP-348].

³¹ Table 24.27 ES Chapter 24 [APP-348]

Table 4.3: A47 Sensitive Junctions

Junction notation	Location	Junction description	Junction type
Junction 1	Great Yarmouth	Junction of the A47 and Gapton Hall 'Gapton Roundabout'	Four arm roundabout with partial signal control
Junction 2	Great Yarmouth	Junction of the A47 and the A149 'Vauxhall Roundabout'	Four arm roundabout
Junction 3	Great Yarmouth	Junction of the B1141 and the A149 'Fuller's Hill Roundabout'	Four arm roundabout
Junction 4	Acle	Junction of the A47 and A1064	Four arm roundabout

- 4.7.102. Junction 3 falls under the jurisdiction of NCC, whilst the other three junctions form part of the Strategic Road Network along the A47 and A12 and are the responsibility of HE. HE assessed junction 3 in any event given that it is located just off the Strategic Road Network and has the potential to generate a queue back to junction 2. The project's peak hour traffic demand was then assigned to each of the four junctions to assess the impacts as at 2022.
- 4.7.103. By D4 HE had provided its response to the issues identified in the ES at these junctions [REP4-010]. AECOM, the consultants for HE, reviewed the effects on major junctions on the A47 and set out the position in Technical Note BN05³². Up to D7 three junctions had been of concern: junctions (1), (2) and (4). At D7 HE indicated that it would consider controls within the OTMP to mitigate the effects of the development traffic and discussions continued.
- 4.7.104. Other points were raised by HE regarding the method of assessment in terms of the lack of a base line comparison and the provision of only one assessment year. This data was subsequently provided to the satisfaction of HE.
- 4.7.105. HE made two critical recommendations. Firstly, that the impact of construction traffic on junctions (1) and (2) should be controlled through the OTMP by minimising the number of additional construction vehicles travelling through the junctions during the peak periods. This could be done via the imposition of an hours of working restriction. The second recommendation related to junction (4) where HE confirmed that consideration should be given to a variable message sign aimed at alerting drivers on the westbound approach of long queues.
- 4.7.106. In response, the Applicant's experts countered that the increase in traffic would be very low relative to overall flows, it would be temporary, the contractor could decide to avoid moving materials into and out of the port during peak times and in Great Yarmouth traffic congestion does not always coincide with peak hours. After considering matters, HE agreed and withdrew the request in relation to recommendation 1.

³² Technical Note BN05 appended to [REP6-009]

Recommendation 2 was accepted such that, by D8, all matters were agreed with HE -SoCG [REP8-083]. The mitigation measures would be contained within the OTMP and secured by R21.

- 4.7.107. The ExA has looked at the traffic flows through these junctions and the estimated increases which would be brought about by the Proposed Development's construction traffic. The junctions are on main arterial routes and are approaching, or at capacity, which makes them sensitive to any increase. Having regard to the levels of increase estimated, the potential increase in waiting times, the temporary nature of the additional traffic and the difficulties in predicting congestion peaks in Great Yarmouth, the ExA concludes that the approach in relation to each of the sensitive junctions is sensible and proportionate. Subject to the mitigation measures, the construction traffic would not cause unacceptable delays to traffic flows or harm to highway safety.

A47 Cable Crossing access at Scarning

- 4.7.108. The OCR would cross the A47 at Scarning and, given the strategic importance of this trunk road, an A47 cable crossing access strategy was produced which is dependent on trenchless crossing of the A47 secured within the OTMP. The SoCG with HE at D4 [REP4-010] identifies the issues which were outstanding at that point. These included concerns that the A47 junctions at Scarning would be used by vehicles accessing the A47 cable crossing work sites via access points AC160 and AC161.
- 4.7.109. By D7 the Applicant had issued a technical note, CCATN, and submitted it to HE for their consideration. The note dealt with DMRB compliance, detailed junction layout plans, swept path analysis and other data requested by HE. Concept drawings were also submitted for the consideration of HE. BN08 from HE is the response to the CCATN and it confirms agreement in principle to the measures set out as confirmed in [REP8-083]. Having regard to the above, and subject to the provisions of R21 and R22, as well as the OTMP [REP8-013], the ExA concludes that these arrangements would be acceptable.

Trenchless Crossings of the A1067 and B1149

- 4.7.110. Disputes arose in relation to the actual need for such crossings at various locations and in relation to the wording of R16 which, as drafted, was a closed list. The Applicant maintained its position that it should remain a closed list and that there was no need for any additional trenchless crossings. NCC did not agree to a closed list and advocated that where a cable duct needed to cross the width of the carriageway, then trenchless crossing methods offered benefits over open trench excavation. The benefits included minimising traffic disruption and reduced levels of traffic management and the removal of the need for reinstatement of the carriageway surface. [REP6-006]
- 4.7.111. A1067: NCC contended that there was a need for trenchless crossing of the A1067 Fakenham Road in Sparham and the B1149 Holt Road, north of Cawston. The Applicant was concerned about other impacts associated with trenchless crossing, including: the potential requirement for

additional land outside the Order limits; the potential for additional traffic peaks; the need for new accesses off the road network; and noise impacts. Notwithstanding those concerns, it commissioned further surveys and studies at D7 in relation to the A1067. By D8 the Applicant had committed to the trenchless crossing of the A1067 and the matter was resolved with the inclusion of the A1067 in the list in R16. [REP8-060]

- 4.7.112. B1149: the concerns of NCC in connection with the B1149 related to the combination of Norfolk Vanguard and the H3 Project construction traffic making the traffic management measures unfeasible. A Technical Note- Trenchless Crossing of the A1067 and B1149 was produced [AS-047]. Appendix F to that note depicts the one-way traffic management system for the B1149. It depicts a tapered pink section of land (the pink land) adjacent to the carriageway onto which vehicles would be diverted due to the closure of one carriageway lane.
- 4.7.113. At D7 the Applicant contended³³ that a trenchless crossing of the B1149 was not required to mitigate traffic impacts which could otherwise be suitably dealt with by traffic management measures. This was due to forecast cumulative traffic figures falling below the total number of vehicles at which single lane traffic would lead to network disruption. The Applicant also pointed out that a new trenchless crossing may require land outside the Order limits but suggested that it would be possible to include a specific trigger for the requirement for a trenchless crossing within R16. The trigger would operate to require a trenchless crossing in the event that there was a specific finding that reinstatement of the highway was not possible following open cut trenching.
- 4.7.114. The issues were ventilated at ISH6 when NCC explained that its concern related to highway safety and the ability of HGV abnormal loads to navigate onto the taper made up of the land adjoining the carriageway. NCC requested further details of a sufficient swept path for vehicles using this localised widening of the B1149. [REP8-060]. Additionally, NCC pointed out that if additional land was required in addition to the 'pink land' then the Applicant would need to demonstrate that they either had control of that land or that it formed part of the public highway.
- 4.7.115. On the 6 June 2019 NCC also required further information on safe working distances for deep excavations. The swept path analysis [REP9-036] depicted 0.5m safe working distances whereas NCC advocated that safe working distances for deep excavations should be 1.2m. The dispute remained unresolved as at D9. The parties' respective positions are set out in the SoCG [REP9-047], the D9 Position Statement on unresolved traffic matters [REP9-032] and the letter from NCC at [REP9-060].
- 4.7.116. The safety zone is intended to be a buffer between the passing vehicles and the open trench excavation. As the B1149 is a national speed limit road a 1.2m safety zone is recommended. NCC acknowledges that the speed limit could be reduced to a temporary 30mph restriction but

³³ Oral submissions at ISH6 see [REP7-041].

asserts that because the excavated trench would exceed a depth of 1.2m, the safety zone of 1.2m should not be relaxed. The final roadwork design would form part of the OTMP secured under R21.

- 4.7.117. On the basis of the drawings, given the tight geometry of the path onto the pink land, the nature of the traffic passing through and the depth of the excavations the ExA firmly concludes that the 1.2m safety zone is essential to provide sufficient working space to shore up the trench. As such there must be no relaxation of the 1.2m safety zone in these particular circumstances.
- 4.7.118. By D9 a SoCG dated 6 June 2019 between the Applicant and NCC was submitted into the Examination [REP9-047]. It documents the dispute between the parties, with NCC maintaining its position that the Applicant's proposed method of working is not safe and is therefore unacceptable on health and safety grounds. NCC issued a stark warning '*In the circumstances NCC must insist that trenchless crossing is used, and **NCC accept no liability should an unsafe method of working be approved by PINS – including any subsequent action for manslaughter.***' [p.25 SoCG REP9-047]
- 4.7.119. The ExA has noted the warning but also notes that R21 would serve to ensure that no stage of the onshore transmission works would commence until a TMP has been submitted to, and approved by, the relevant planning authority in accordance with the highway authority. The requirements provide however that the final TMP must be in accordance with the OTMP. More particularly R16(17) provides that trenchless crossings must be used for the purposes of passing under the places/roads listed. The counter consideration is that if trenchless crossing of the B1149 is not specifically included in the closed list in the requirements, there may be an assumption that it is not necessary and that traffic management measures are acceptable in principle.
- 4.7.120. In the Position Statement [REP9-032] the Applicant contends that the safe working distance of 1.2m could be accommodated by widening the pink land further to the west within the Order limits and with a corresponding reduction in the working area from 20m to 15m. The Applicant further points out that the roadworks required for abnormal loads would be required for approximately one week and that it would not be possible to undertake a trenchless crossing at this location without additional land outside the current Order limits.
- 4.7.121. The Applicant asserts that "*As Norfolk County Council highlight in their position at the 30.5.2019, land within the highway boundary, outside of the Order limits, would also be available to extend the tapers of the road widening if required, depending on the final design of the roadworks.*" [p.3 of REP9-032]. This statement was subsequently contested by NCC in their letter of 7 June 2019 [REP9-060] who reiterated their earlier comments that if additional land is required outside the pink land then the Applicant needs to demonstrate that they have control of that land or that it forms part of the public highway.

- 4.7.122. The ExA notes that NCC accepts that the pink land could be widened further to the west which would increase the width of the stip. However, NCC has confirmed that 'the problem lies to the north and south of the pink land'. The ExA understands this to mean that the length of the pink strip could not be extended and therefore a pinch-point would still be created at both ends of the strip. These are the points at which the vehicle would leave the single lane and manoeuvre onto and off the pink land at either end of the lane closure.
- 4.7.123. The length of the Abnormal Indivisible Load³⁴ (AIL) is a maximum of 22.800m and width of 3.850m. The limitation on the use of the lane closure method is essentially the width of the OCR order limits, which limits the length of road over which the AIL can swing out and then swing back in to join the main carriageway and proceed on its way. Given the tight geometry involved, the rigid nature of such loads and the aforementioned limitations the ExA concludes that the concerns of NCC are well-founded and recommends that the B1149 is included in the list of trenchless crossings in R16.
- 4.7.124. There is one other consideration. The ExA is conscious that by the time that the SoS considers her decision in this matter, she is likely to have already made a decision on the H3 Project application for a DCO. Given that the AILs are only associated with the H3 Project and the current Proposed Development does not require the movement of AILs, in the event that the H3 DCO is not made, the need to utilise a trenchless crossing of the B1149 would be superfluous. The above recommendation is therefore predicated on the basis that the H3 Project DCO is made. Whilst the ExA appreciates that the AILs are only associated with the H3 Project, such vehicle movements would be part of the traffic using the B1149.

Other issues

- 4.7.125. NCC maintained its position in relation to the effects on link 36 and requested that the HGV route be amended to avoid HGV traffic passing through Horsford village along the B1149. This is a large village with a road connecting to the A1270 Norwich Northern Distributor Road and a significant number of residential developments taking place. NCC suggested two acceptable alternative routes.
- 4.7.126. By D8 HE had agreed the approach to mitigation in the SoCG at [REP8-083]. This relies upon the commitment to produce a final TMP, TP and AMP based on the outline documents submitted with the dDCO and secured through R21. At D8 HE indicated that it was not possible to assess the impacts of abnormal loads on the strategic road network until such time as the final port destination was known. Once the routings of such loads were known, approval would be required by HE, and HE expressed itself satisfied with this matter.

³⁴ Drawing number TP-PB4476-DR035, Title Traffic Management Typical AIL Cable Drum Delivery Swept Path Analysis [REP9-036]

Requirements

- 4.7.127. At D3 NCC was concerned that R16 was written such that only the A47, A140 and A149 would be crossed using trenchless crossing methods. NCC considered that the list needed to be expanded to bring it in line with the OTMP which contained a commitment to review the matter of trenchless crossings on some roads where further work was to be undertaken. At that point NCC advocated that R16 be amended to make it clear the list of trenchless crossings is not a "closed list" but rather needs to be read in conjunction with the OTMP. Accordingly, it recommended an additional item be added to the list under R16(17) as follows: *(t) roads so indicated within the traffic management plan.*
- 4.7.128. The ExA has made recommendations about the inclusion of the two additional trenchless crossings in the list. It does not see any need to extend the list on the evidence available. The above suggestion was not carried forward into the recommended DCO.
- 4.7.129. The ExA has given further consideration to R21(2) which provides that: (2) The plans approved under paragraph (1) must be implemented upon commencement of the relevant stage of the onshore transmission works.
- 4.7.130. This is designed to ensure that mitigation measures designed to mitigate the effects of construction traffic are in place at an appropriate time. The ExA considers that, given the nature of some of the transport mitigation measures envisaged, R21 should be amended to make sure that the plans are in place prior to commencement of the relevant stage. As such the ExA recommends that the word 'upon' in R21(2) is replaced with the words 'prior to'.
- 4.7.131. Throughout the Examination process refinements were made to the Requirements, in response to concerns by IPs or in response to points made by the ExA. These include R22: highways accesses which was amended to require details of reinstatement measures to be submitted where relevant. (D7 change)

Conclusions

- 4.7.132. The construction phase of the Proposed Development would inevitably give rise to additional traffic and, in particular, HGV traffic. Some of this construction traffic would in places need to traverse narrow, rural lanes. Mitigation measures include the use of temporary haul roads, traffic management and the avoidance of school opening and closing times where applicable.
- 4.7.133. The Applicant has therefore sought to mitigate the impact of the Proposed Development in terms of its traffic and transport effects. In relation to these matters the adverse effects on the highway network, including pedestrian safety, as a result of onshore construction operations would generally be adequately controlled through the proposed measures to the satisfaction of both NCC, in its role as highway authority, and HE.

- 4.7.134. Matters are complicated by virtue of the simultaneous progression of the H3 Project. Given that the H3 Project is currently before the SoS for decision the starting point is an assumption that it will get consent and the cumulative effects on the highway network must be considered. In terms of the cumulative impacts with the H3 Project, the ExA has come to a different conclusion to NCC in relation to the appropriateness of the proposed mitigation scheme for link 34 through Cawston village.
- 4.7.135. The ExA has concluded that the current scheme in relation to link 34 would be insufficient to adequately mitigate traffic impacts in the event that the NV project and H3 Project proceed in tandem. However, the ExA has further concluded that there is a reasonable expectation that a mitigation scheme for link 34 could be devised.
- 4.7.136. A general highways mitigation scheme is secured by virtue of requirement 21, subject to a recommended amendment from the ExA requiring a further mitigation scheme to be submitted in relation to link 34, in the event that the H3 project commences development. The SoS may wish to give further consideration to this matter.
- 4.7.137. Consequently, in all scenarios whilst there would be undoubtedly be an impact on the local highway network, particularly during the construction stage, it is the ExA's view that such impacts would be acceptable and, subject to the recommended DCO provisions. As such the Proposed Development would accord with the provisions of NPS-EN1 and NPS-EN3 and all relevant development plan and national policies in relation to this matter.

4.8. SOCIO ECONOMIC IMPACTS

Introduction

- 4.8.1. The construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels. This section deals with these potential impacts of the Proposed Development which comprise: employment and training opportunities, community benefits and impacts on tourism.

Policy Considerations

- 4.8.2. NPS-EN1 states that applicants should make an assessment of socio-economic impacts as part of the ES. Relevant matters that should be included in the assessment (paragraph 5.12.3) are:
- the creation of jobs and training opportunities;
 - the provision of additional local services;
 - effects on tourism; the impact of workers; and
 - cumulative effects.
- 4.8.3. NPS-EN1 also states that applicants should describe the existing socio-economic conditions in the area around the proposed development and explain how the development's socio-economic impacts correlate with local planning policies (paragraph 5.12.4). Socio-economic impacts might

be linked to other impacts, such as the visual impact of a development which might also impact upon tourism and local businesses (paragraph 5.12.5).

- 4.8.4. Account should be taken of the potential socio-economic impacts of new energy infrastructure identified by the applicant and from other sources considered relevant and important to its decision (paragraph 5.12.6). Limited weight is given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in EN-1) (paragraph 5.12.7).
- 4.8.5. Policy EC1 of the EIEOMP encourages development that provides economic productivity benefits and Policy EC2 supports proposals that create employment benefits in localities close to the marine plan areas.
- 4.8.6. Policy TR1 requires that proposals demonstrate that they would not adversely impact tourism or recreational activities and, if there would be such impacts, how they would be minimised or mitigated. Otherwise the developer should set out the case for proceeding with the proposal if it would not be possible to minimise or mitigate adverse impacts. Policy TR3 supports proposals that deliver tourism or recreation related benefits in communities adjacent to the East Marine Plan areas.
- 4.8.7. The regional economic strategy for the East of England through its Goals (Goals 1, 2 and 8) aims to:
- increase participation in the labour market, especially for disadvantaged communities and increase vocational options for young people;
 - achieve business growth comparable to a leading global region, supplying regional businesses with high quality, accessible and integrated business support, training and development;
 - to create a centre for sources of renewable energy with a nationally significant growth and expertise in associated businesses including environmental goods and services businesses.
- 4.8.8. A key challenge identified in the New Anglia Strategic Economic Plan Paragraph 5.3 is the ageing, low skilled and low paid resident workforce, leading to many available high value jobs going to an imported workforce. The Plan aims to increase higher and graduate level skills in the workforce.
- 4.8.9. The Broadland, Norwich and South Norfolk Joint Core Strategy (2014) includes within its aims over the period 2008-2026:
- to secure 27,000 new jobs of all types and levels for all the workforce, whilst increasing the proportion of higher value, knowledge economy jobs;
 - to expand opportunities for vocational, further and higher education and encourage links between training/education provision and relevant business concentrations, including colocation; and
 - support to communities including community development workers and fair access to new and improved community infrastructure.

Applicant's Case

- 4.8.10. The Applicant's case is set out in ES Chapter 31, Socio-economics [APP-355]. Also relevant are: Consultation Report Appendix 9.6 Socio-economic and Tourism Outgoing Documents [APP-069]; ES Figure 30.1 - Coastal tourism and recreation assets [APP-629]; ES Figure 30.2 - Tourism and recreation assets in the vicinity of onshore infrastructure [APP-630].
- 4.8.11. A summary of the impact assessment for socio-economics is presented in Table 31.38 and Table 31.39 of [APP-355]. The impact methodology is set out in section 31.4 [APP-355] which in brief assesses:
- Economic impacts – in terms of job creation by the Project (direct) and associated jobs created due to people enabling the project but not directly delivering it (indirect), and
 - Social impacts - assessed as to the direct impacts on community infrastructure.
- 4.8.12. Impacts are derived from assessments in the following ES Chapters: Chapter 30 Tourism and Recreation, Chapter 20 Water Resources and Flood Risk, Chapter 24 Traffic and Transport, Chapter 25 Noise and Vibration, and Chapter 26 Air Quality. Impacts on the local populations that make up these communities are assessed in Chapter 27 Human Health.

Employment and training opportunities

- 4.8.13. The Applicant set out in [APP-355] a review of policy, strategy, and business analysis that showed the offshore wind industry in East Anglia was growing quickly, with the Applicant seen as a significant contributor to this growth. The review indicated that the Project might create up to 1,063 full time equivalent (FTE) jobs during construction and up to 294 FTE jobs during operation. The East Anglia jobs market would be able to supply this demand and this is assessed by the Applicant as a potential minor benefit. When considered cumulatively with other projects, there was the potential for major long-term benefits to the region due to increased employment across the supply chain serving the offshore wind industry.
- 4.8.14. Levels of skills and education would need to be improved if the benefits of this potential employment were to be realised across more of the population. Additional benefits described by the Applicant indicate that the Project would attempt to bridge the gap between the skills required and those available locally, for example by engaging with local supply chains and educational facilities to enhance local procurement and develop a local employment pipeline.
- 4.8.15. The OCR would be constructed through 2022 and 2023 with peak employment of between 250 and 420 people during the summer months of these years. Indicative employee requirements at different parts of the onshore cable route are shown in Table 31.19 [APP-355].

- 4.8.16. Appendix 19.2 of [REP-031], Norfolk Vanguard and Norfolk Boreas Supply Chain Workshop December 5th 2018 built on earlier inclusive discussions between the Applicant and local stakeholders including local government, education providers and business organisations.
- 4.8.17. The Applicant, NCC Economic Development team, Norfolk Chamber of Commerce, the East of England Energy Group and others exchanged information about the Project's onshore work packages to be offered for tender, and of the procurement process, and explored how local companies could be supported by local government, local business organisations, Tier 1 companies and the Applicant to capitalise on opportunities arising from the offshore wind industry.

Communities and community benefits

- 4.8.18. The location of communities and the infrastructure providing services to them was reviewed and it was found [APP-355] (paragraph 219) that there would be no direct impact to community infrastructure. Indirect impacts would be insignificant and managed through the proposed mitigation measures. When considered cumulatively with other projects in the region, there might be minor temporary adverse impacts on communities due to project sequencing. These minor impacts should be weighed against the potential for major long-term benefits to the region due to increased employment across the supply chain serving the offshore wind industry.
- 4.8.19. The Applicant was clear in its response to several RRs that called for a community fund to be established to address the perceived adverse impacts from the implementation of the Project to local communities. It provided a detailed response to this matter, submitted at D1 [REP1-007] in response to our FWQ 19.8 [PD-012]. The Applicant noted that only mitigation which addresses impacts directly associated with the Project should be considered in the planning and DCO process; wider community benefits should not be taken into account. The Applicant was and would continue to address these wider benefits, however this would be undertaken separately, outside the DCO process.

Impacts on tourism

- 4.8.20. The Applicant's case regarding the potential effects of the Proposed Development on tourism in the area is found in ES Chapter 30, Tourism and Recreation [APP-354]. Table 30.30 summarises the likely tourism and recreation effects associated with the proposed project during its construction and operation and maintenance phases.
- 4.8.21. The Applicant identifies moderate adverse impacts on tourism in the short term to local tourist assets in the vicinity of the landfall works during the construction period due to the noise, traffic and general construction activities in a quiet rural area. The effects would be localised and the Applicant would seek to mitigate these in collaboration with directly affected stakeholders and the relevant planning authorities to ensure all potential impacts would be at an acceptable level.

- 4.8.22. The Applicant commissioned a study submitted as Appendix 19.3 – Biggar Economics Study [REP1-032], to find empirical evidence of a relationship between the development of onshore wind farms and the tourism sector in Scotland. It found that there was no relationship between the growth in the number of wind turbines and the level of tourism employment at local authority level.
- 4.8.23. Assuming that impacts from a wind farm development would likely be felt strongest in the immediate vicinity of the development, the study analysed levels of employment in the sustainable tourism sector in the immediate vicinity of onshore wind farm developments but did not find any evidence of these areas being adversely affected. The study is said to show that wind farms do not cause a decrease in tourism employment at a local or a national level.
- 4.8.24. The potential impacts on holiday let businesses were the subject of several RR's made during the Examination. The Applicant in [REP3-006] D3 Submission - Written summary of the Applicant's Oral Case at the OFH referred to four holiday let businesses some 1km from the proposed onshore project substation in the general direction of Necton. The businesses were assessed in ES Chapter 30 [APP-354] as low sensitivity receptors since they were not a tourist attraction in and of itself and the assessment was undertaken on the basis of that sensitivity.

Planning Issues

- 4.8.25. In the SoCG between the Applicant and NCC submitted at D4 [REP4-015] it was noted that the Applicant is seeking to collaborate with stakeholders to support, complement and enhance where appropriate, local skills development programmes. NCC felt that there should to be a Requirement in the DCO covering the need for a Skills and Employment Strategy which would be consistent with advice in paragraph 55 of the NPPF.
- 4.8.26. In response to NNC's request the Applicant included a new Requirement 33 in respect of a Skills and Employment Strategy (Schedule of Changes 16 April 2019 [REP7-038]). The Applicant has submitted the outline Skills and Employment Strategy at Deadline 7 [REP7-028]. Prior to submission of the Skills and Employment Strategy for approval in accordance with Requirement 33(1), the Applicant must consult NNDC, Broadland DC, Breckland DC, NCC and the New Anglia Local Enterprise Partnership on its content.
- 4.8.27. NNDC proposed a new requirement in the dDCO to address the potential for a perceived impact on tourism from the Project, through the Applicant contributing to various organisations responsible for promoting tourism in North Norfolk with the express purpose of generating tourist footfall and spend [REP7-080, REP9-061].
- 4.8.28. The Written Summary of the Applicant's oral case at ISH 6 (D7)[REP7-039] confirmed that there was a fundamental disagreement between the Applicant and NNDC as to whether the proposed development would give

rise to tourism impacts which required mitigation. At ISH 6 the ExA requested NNDC to supply evidence that would justify the inclusion of a Requirement in the dDCO, specifically in terms of planning policy support as well as a justification based on evidence of harm that would be caused to tourism due to impacts associated with the construction and operation of the Proposed Development.

- 4.8.29. In the D8 Submission - Position Statement: NNDC Requested Requirement to Address Perceived Tourism Impacts [REP8-071], the Applicant challenged the evidence provided by NNDC at D7 concerning the tourism impact of negative perceptions in relation to particular areas on the basis that it would have been preferable to address the perception impact from the construction of the Dudgeon Offshore Wind Farm (onshore construction 2016/2016) and the Sheringham Shoal Offshore Wind Farm. The Applicant also made submissions concerning the lawfulness of the proposed tourism requirement.
- 4.8.30. At D9 NNDC submitted [REP9-061] that the use of "perceived tourism impact" is a misnomer – it was not the tourism impact that was "perceived". The impact arose from negative perceptions. A better description would be "Actual Tourism Impact of Negative Perceptions". NNDC criticised the Applicant's lack of expertise in assessing tourism impact, stating that the statistics at paragraph 17 of the Position Statement [REP8-071] were district-wide statistics, and did not show anything about tourism impact where Dudgeon and Sheringham Shoal made landfall and construction took place. NNDC argued that the statistics did not undermine its evidence on these coastal erosion perception impacts, which was based on micro-level impact at particular places when perception of those areas changed.
- 4.8.31. NNDC accepted that the overall district-wide levels of tourism were contingent on a wide number of factors, including the weather and the exchange rate [REP9-061].
- 4.8.32. The Applicant contests the lawfulness of the proposed requirement in that it is not necessary or directly related to the proposed development, and it will not be fairly and reasonably related in kind and scale to the development because there is no "mechanism", either in policy or currently agreed with the Applicant, to assess the requisite level of financial contribution.

ExA Reasons

- 4.8.33. As to the reasonableness and enforceability of the wording of the proposed Requirement for a tourism impact strategy, we note the Applicant's position at D7 [REP7-040] that it does not meet the tests set out Regulation 122 of the Community Infrastructure Levy Regulations 2010, PPG, paragraph 55 NPPF or NPS EN-1. For the avoidance of doubt we consider that the CIL regulations do not apply to the PA2008. However we appreciate that the proposed Requirement is not precise as to a number of matters such as the level of compensation required and it would be difficult for claimants to prove that compensation was required

as a direct result of the development. However, we would not discount the possibility that difficulties in drafting might be overcome in other scenarios.

- 4.8.34. An aim of NNDC's Core Strategy is to maximise the economic, environmental and social benefits of tourism and encourage all year-round tourist attractions and activities. Policy SS5 states that "proposals should demonstrate that they will not have a significant detrimental effect on the environment" but it is questionable in our view whether that is to be read as a policy that regulates development that negatively impacts tourism. If NNDC had concerns as to perceived tourism impacts from development, a Supplementary Planning Document or similar policy might have been adopted that set out such concerns, including a clear evidence-based mechanism for calculating and apportioning such contributions.
- 4.8.35. NNDC sought to establish "Actual Tourism Impact of Negative Perceptions" in D7 and D9 submissions [REP7-080, REP9-06]. We accept that the perceived impacts would be a real cause of concern to local businesses and the visitors on which they depend. Indeed, the generalised concerns have already been made clear to the ExA through RR's, OFHs and submissions from interested persons. However, the actual impacts would not be fully known until the scheme is implemented.
- 4.8.36. The impacts from the perception of a scheme of this magnitude may be temporary but are capable of lasting for several years. However NNDC could only point to comparators which do not seem to us directly relevant to the Proposed Development, such as coastal erosion between Weybourne and Cart Gap. This had obvious and direct physical consequences such as the loss of homes and businesses, but there was no real evidence that the predictions of erosion and publicity given to this phenomenon caused much greater socio-economic impacts as suggested (Appendix A, [REP7-080]).
- 4.8.37. We appreciate that uncertainty about future impacts, or the perception of them, could sway the choice of visitors and businesses away from the area thought to be affected. However NNDC itself accepted [REP9-061] that district-wide levels of tourism are contingent on a wide number of factors, including the weather and the exchange rate. It brought forward no evidence of specific harm to tourism that would result from the Proposed Development and the comparable evidence as to perceived impacts was not compelling. We consider that a Requirement in the dDCO to provide for eventual compensation for an indeterminate loss would be a speculative exercise.
- 4.8.38. Overall NNDC's evidence is based on comparative examples of unrelated development where even the perceived, as opposed to actual impacts are hard to quantify. We find that the proposed Requirement is not justified given the lack of evidence that the presence of the Proposed Development, which has been designed with embedded mitigation to avoid tourist features such as beach, coastal path and coastal villages,

and minimise construction impacts, would lead to an actual or perceived impact on tourism.

Conclusion

- 4.8.39. The ExA welcomes the Applicant's commitment to a Skills and Employment Strategy which would support skills development and enhance employment opportunities for local people in the vicinity of the Project area, and to prepare a Supply Chain Plan. We agree that the Project, if consented, would present the Applicant with a strategic opportunity to inspire and develop a local workforce that could be employed directly by it or its supply chain. The early investment in education and skills, if planned effectively, would be capable of supporting Norfolk and the East of England in its drive to raise aspirations and to achieve sustainable economic growth.
- 4.8.40. For the reasons above stated we conclude that the establishment of a general community benefit fund as proposed would not fall within the parameters that could be considered as a requirement in a DCO as matters stand. As regards the proposal for a tourism impact strategy and the proposed requirement, whilst we acknowledge that it might be possible to quantify particular impacts which would include loss from perceived impacts on tourist related activities, we are not satisfied, for the reasons given, that in this instance NNDC has made out a strong enough case for its inclusion within the dDCO.

4.9. CONTAMINATION AND GROUND CONDITIONS

Introduction

- 4.9.1. This section addresses contamination and ground conditions. The potential impacts on soil quality in the context of agriculture or biodiversity are addressed in Section 4.15 and Section 4.16. There is also a close association between this consideration and the water resources and flood risk at section 4.11. Matters relating to coastal erosion and cliff stability at landfall are addressed in Section 4.10.

Policy Considerations

- 4.9.2. For developments on previously developed land, Paragraph 5.10.8 of NPS EN-1 states that applicants should ensure they have considered risk posed by contaminated land. Contamination of greenfield sites is not specifically addressed.
- 4.9.3. Part 2A of the Environmental Protection Act (1990), as amended, provides a legislative context for the assessment of contaminated land. Contaminated land for the purpose of Part 2A is defined as "*any land which appears to the Local Authority in whose area it is situated to be in such condition, by reasons of substances in, on or under the land that:*
- *significant harm is being caused or there is a significant possibility of such harm being caused; or*

- *significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused.*”

- 4.9.4. The NPPF in paragraph 170 explains that planning decisions should prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, pollution or land instability. Paragraph 179 states that when a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner. Paragraph 178 requires planning decisions to ensure that the site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. It also states that adequate site investigation information, prepared by a competent person, should be presented.
- 4.9.5. Paragraph 5.10.9 of NPS EN-1 states that applicant should safeguard any mineral resources on the proposed site as far as possible. Paragraph 5.10.22 goes on to say that where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the decision maker should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources. The national minerals policy in Minerals Policy Statement 1: Planning and Minerals (MPS1) is also of relevance. This aims to secure adequate and steady supplies of the minerals needed by society and the economy.

Applicant's Case

- 4.9.6. ES Chapter 19 [APP-343] considers the potential environmental impact of the Proposed Development with regard to contamination and ground conditions. The impact assessment methodology is set out in Section 19.4. The assessment focuses on the potential presence of contamination and pollutant linkages to sensitive receptors, future site users, geology and groundwater. A preliminary risk assessment is contained within ES Appendix 19.1 [APP-224] and a waste assessment report within ES Appendix 19.2 [APP-225].
- 4.9.7. The majority of the onshore project area is located in agricultural land where significant contamination is not expected. A review of historical information (see sections 19.6.1.4 and 16.6.2.5 of ES Chapter 19) suggests that the potential for significant contamination to be present within the study area is low. The potential impacts identified for ground conditions and contamination are outlined in Table 19.20 of ES Chapter 19.
- 4.9.8. In order to minimise the impact to human health during construction, a Site and Excavated Waste Management Plan would be secured. This would ensure that any waste arising is closely monitored, and that waste prevention, re-use or recycling opportunities are maximised. This would be secured in the final CoCP by R20. In addition, the CoCP would include a written scheme (based on the Model procedures for the management of land contamination, CLR11) for the management of contamination of any land and groundwater, including procedures to follow in the event of

encountering unexpected contamination and will include proposals to deal with any waste soils excavated during the works.

- 4.9.9. The CoCP would also provide details of the industry best practice measures that would be undertaken to reduce potential construction impacts onshore. The selection of inert rather than oil insulated cables would greatly reduce contamination risk. The sectionalised excavation of workings would also reduce the risk of mobilising existing contamination.
- 4.9.10. The Applicant anticipates that after adopting mitigation measures to mitigate impacts on Source Protection Zones (SPZs) 1 and 2, including ensuring cable excavations would be designed to minimise groundwater disturbance and the use of best available techniques, the residual effect would be non-significant in EIA terms. For works in SPZ1 and SPZ2 areas, the aquifer sensitivity is considered to be high and therefore measures are proposed including ground investigations and a hydrological risk assessment to be undertaken at each trenchless crossing site.
- 4.9.11. The onshore project area crosses numerous MSAs and installation of cables within these areas would prevent future extraction of sand and gravels. Mitigation would be contained within a Materials Management Plan (MMP) which would be developed post-consent and to which the contractor would have to comply. Following this it is predicted that the effect would be non-significant in EIA terms. The MMP is secured by the Outline CoCP as required by R20.
- 4.9.12. There are no designated sites of geological or geomorphological importance in close proximity to the landfall, onshore cable route, onshore project substation or National Grid substation extension. One designated geological site, the Happisburgh Cliffs SSSI is located approximately 570m from the landfall location where the beach is subject to considerable erosion and the cliffs are very unstable in places. However, the ES concludes that due to the intervening distance, there is no mechanism for direct impact.
- 4.9.13. Provided embedded (Table 19.14 of ES Chapter 19) and additional mitigation measures (paragraphs 19.7.5 to 19.7.7 of ES Chapter 19) are in place, the project is predicted to have only minor adverse impacts in relation to ground conditions and contamination. No potential effects have been identified for the operational phase and cumulative impacts with other relevant projects are assessed as being no greater than minor.

Planning Issues

- 4.9.14. The risk of potential contamination arising from a Royal Danish Airforce plane crash in 1996 was a cause of great concern for many residents in Necton as well as NPC, see [RR-004, RR-011, RR-049, RR-066, RR-128] amongst many others. The crash occurred near Necton, impacting between Ivy Todd Road and Necton Wood, the debris of which, according to NPC, covered 3 fields, directly on the area of the proposed substation and cable corridor. The review of historical information within the ES did

not identify the crash site. This was a matter raised throughout the Examination both in WR and orally at the OFHs with NPC and Necton Substation Action Group submitting a report authored by local residents Alice Spain, Jenny Smedley, Tony Smedley and Colin King, together with a suite of detailed documents which had been attained from various bodies dating back to the crash [REP1-094 and AS-029].

- 4.9.15. Of particular concern was the risk of contamination from radioactive substances, hydrazine, oil, aviation fuel and carbon fibre and inadequate clearing of the site following the crash. E.A.R Spain also referred to a potential cancer cluster which had not yet been investigated by Public Health England (PHE) [RR-043]. NPC wrote:

"F-16 crash site was recovered in 1996/1997 with a view to restoring it for arable use only ... the worst-case scenario must be adopted – which is that contamination may remain in the soil at a deep level, and any disturbance could create an environmental disaster, especially with regard to private water supplies" [RR-113].

- 4.9.16. In response to a question by the ExA [PD-008], the EA confirmed that, having regard to the information submitted into the Examination, it had not yet been established whether the land was contaminated with radiation. It went on to explain that the extent of any investigation of radioactive contaminated land very much depended on the information contained in the evidence. It reported that local authorities do have a duty to inspect land under Part 2A of the Environmental Protection Act 1990 where there are reasonable grounds for inspecting [REP1-072].

- 4.9.17. With regard to other potential contaminants at the plane crash site, the EA noted that recovery and remediation works were undertaken which included the removal of wreckage parts as well as excavation of contaminated soils. RAF records show the EA concluded that there was little risk to the aquifer or nearby stream. Based on this the nature of any impact and associated conventional (i.e. non-radioactive) contamination was likely to have been localised and any potential risks to controlled waters appear to have been addressed and mitigated. As such the EA stated that it would not expect additional site investigation prior to the commencement of the development but that a robust discovery strategy should be in place during the works in case unsuspected contamination was encountered [REP1-072].

- 4.9.18. The crash site lies within the district of Breckland. BC did not raise any concerns relating to contaminated land in its LIR. However, following questions put to the Council, it confirmed that, having regard to the submitted documents by NPC, it did not consider that it had firm evidence to increase the risk rating of the site to that which would require investigation under the provisions of Part 2A of the Environmental Protection Act 1990 [REP3-039]. BC was satisfied that the Applicant's commitment to produce a Contaminated Land and Groundwater Plan within the Outline CoCP post consent was adequate to deal with potential contamination at the site.

- 4.9.19. Further matters raised by the EA in its RR [RR-117] included mobilising existing contamination during excavation, further detailed assessments of the potential for petroleum hydrocarbon pollution within the landfill working area at Happisburgh, potential contamination at the brickworks north east of North Walsham and an infilled clay and shale pit at Necton, sensitivity of unlicensed water supplies, methodology and impact on groundwater quality at trenchless crossings and impacts on shallow wells. These matters were tested during the Examination and shown as agreed in the SoCG with the EA [REP9-044].
- 4.9.20. NCC, in its capacity as the Minerals and Waste Planning Authority, states in its LIR [REP1-100] that ES Chapter 19 correctly assess the magnitude, sensitivity and significance of the effect of the Proposed Development on MSAs and that the further mitigation suggested in the ES is considered likely to be effective.
- 4.9.21. Frances Rossington [REP7-105] and Vic Purdy [REP7-104] raised concerns about subsidence undermining the roadway on the B1145 where it enters Cawston village from the east as a result of an increase in HGVs using the road. The road at this point sits well above a property known as Aspen Vale due to the land previously being utilised for clay extraction.

ExA Reasons

- 4.9.22. The assessment methodology, assessment findings and approach to mitigation for contaminated land and ground conditions are matters shown as agreed in the SoCG with BC, BDC, NNDC and the EA [REP8-082, REP8-088, REP9-043, REP9-044].
- 4.9.23. It is acknowledged that the site of the military plane crash has the potential for historic contamination. From the submitted evidence, it does appear, that at the time a clean-up of the site was undertaken and a potential risk of radioactive material was highlighted by a body named the IPC, who according to the EA was an ex MoD department within the RAF (see Doc G and P of [REP1-094]). However, there is no evidence before the ExA that further environmental monitoring, which was also recommended by the RAF (see Doc E of [REP1-094]), has been undertaken. These are all matters which are understandably a cause of concern for local residents.
- 4.9.24. Notwithstanding, a written scheme to deal with contamination would be produced post-consent as part of the final CoCP secured by R20(2)(d) of the dDCO. The scheme would include site investigations at sites known to have a potential contamination risk, to include, amongst others, the plane crash site, as well as setting out control measures for the discovery of (currently unknown) potential contamination. The scheme would set out protocols for dealing with any contamination as required. The written scheme would be based on the Model Procedures for the Management of Land Contamination (CLR11) which requires a risk assessment and site investigations. The Applicant, in its response to ExQ1 stated that where relevant, the written scheme would take into account procedures set out

in CLR13 and CLR14: The Radioactively Contaminated Land Exposure Methodology (DEFRA 2011) [REP1-007].

- 4.9.25. The written scheme would be submitted to and approved by the relevant planning authority, in consultation with the EA, before any stage of the project commences. Whilst CLR13 and CLR14 are not referred to in the Outline CoCP, the ExA is satisfied that, as the local planning authority in consultation with the EA have control over the scheme, these will be taken into account where necessary given both parties are aware of the potential contamination of the crash site. Furthermore, there is no substantive evidence of a link between the crash site and a potential cancer cluster and PHE did not submit any comments into the Examination.
- 4.9.26. Consequently, the ExA is satisfied that the Outline CoCP, secured by R20, represents an appropriate control measure for the discovery and remediation of potential contamination, including radioactive substances if found, as well as those specific locations identified by the EA above.
- 4.9.27. All groundwater receptors have been assigned high sensitivity and as set out in the SoCG, the EA agrees that proposed mitigation measures would ensure that any change in shallow aquifer and groundwater flow should be localised and insignificant. In addition, consulting with landowners on private water supplies during pre-construction would ensure the proper assessment and protection of shallow wells in proximity to the works.
- 4.9.28. The approach to mitigating potential impacts on SPZs at trenchless crossings, including undertaking pre-construction ground investigations and hydrogeological risk assessments is considered by the ExA to ensure non-significant impacts. These matters are agreed with the EA.
- 4.9.29. The EA and NCC agree within the SoCG [REP9-044 and REP9-047] that the MMP would sufficiently mitigate potential impacts to the MSAs. The MMP would form part of the final CoCP, secured through R20.
- 4.9.30. Whilst noting concerns of a potential subsidence risk to the B1145, the Applicant has committed to a highway condition survey being undertaken prior to the start of and after completion of construction. Any damage to the existing road network as a consequence of the construction activities would be made good to the reasonable satisfaction of NCC. This is detailed within the OTMP and secured in R21 of the dDCO.
- 4.9.31. Overall, the ExA finds that any adverse impact associated with contamination or ground conditions would be adequately and appropriately mitigated by the wording of R20 and R21 within the dDCO and supporting certified documents.

Conclusion

- 4.9.32. The ExA concludes that there would be no significant adverse effects associated with land contamination and ground conditions subject to mitigation measures.

- 4.9.33. Ground conditions and contamination are matters that have been satisfactorily explored in the application and during the Examination. Therefore, the ExA considers that the Proposed Development would accord with NPS-EN1 and the NPPF in this regard.

4.10. COASTAL CHANGE

Introduction

- 4.10.1. This section considers the impact both to and from coastal erosion including the impact on cliff stability at the landfall.

Policy Considerations

- 4.10.2. Section 5.5 of NPS EN-1 addresses coastal change. Paragraph 5.5.1 states that the Government's aim is to ensure that our coastal communities continue to prosper and adapt to coastal change. This means planning should:
- ensure that policies and decisions in coastal areas are based on an understanding of coastal change over time;
 - prevent new development from being put at risk from coastal change by (i) avoiding inappropriate development in areas that are vulnerable to coastal change or any development that adds to the impacts of physical changes to the coast, and (ii) directing development away from areas vulnerable to coastal change;
 - ensure that the risk to development which is, exceptionally, necessary in coastal change areas because it requires a coastal location and provides substantial economic and social benefits to communities, is managed over its planned lifetime; and
 - ensure that plans are in place to secure the long-term sustainability of coastal areas.
- 4.10.3. The decision-maker should be satisfied that the proposed development will be resilient to coastal erosion and deposition, taking into account climate change, during its operational life and any decommissioning stage.

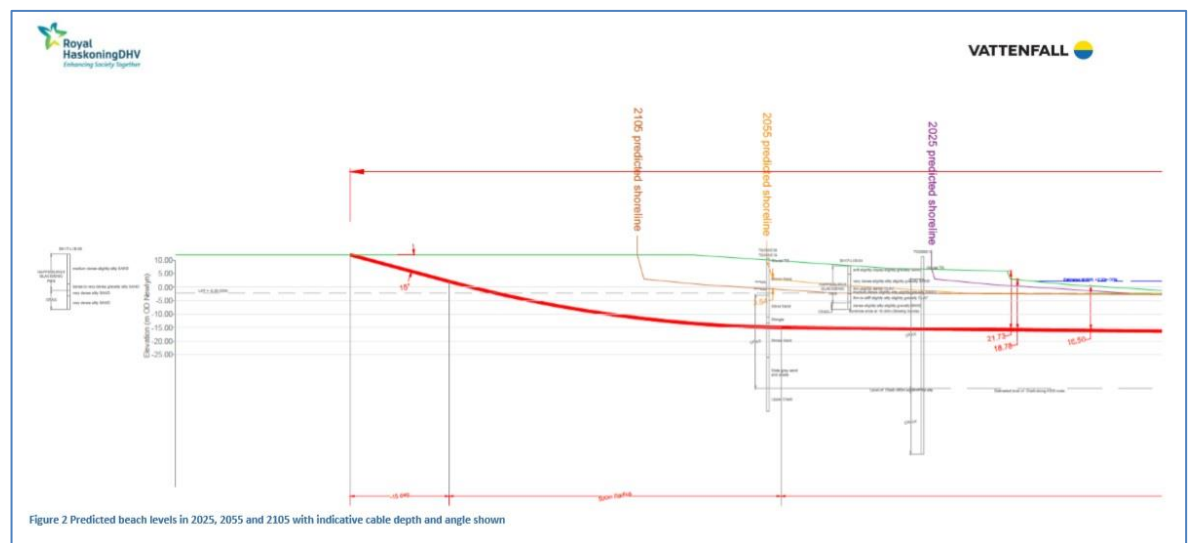
Applicant's Case

- 4.10.4. ES Chapter 4 [APP-328], ES Chapter 8 [APP-332] and ES Appendix 4.3 Coastal Erosion Study [APP-195] are all relevant to the consideration of this section. A Landfall Information Sheet, which contained further information on coastal erosion and methods of installation, was submitted as an additional submission at D1 [REP1-003]. In addition, at D3, the Applicant submitted a document titled 'Consideration of EN-1 Climate Change Policy in the Application' to provide an explanation of how the key elements of coastal erosion and climate change are considered as part of the design and assessment, particularly with regard to landfall [REP3-010].
- 4.10.5. The landfall would be located south of Happisburgh where the coastline is fronted by unprotected cliffs which are eroding at a rate of up to

10m/year in response to the failure of existing defences. It is anticipated that the future erosion rate of the coast at Happisburgh South will be affected by the predicted higher rates of sea level rise than historically recorded. Higher baseline water levels would result in a greater occurrence of waves impacting the toes of the cliffs, increasing their susceptibility to erosion.

- 4.10.6. The Applicant contends that any impacts of climate change on coastal erosion have been taken into account in the embedded mitigation for the project including selection and design of the long HDD technique, cable burial depth and position of the onshore transition pit, which will avoid works on the eroding cliffs. The onshore landfall works would be positioned far enough back from the cliffs, and offshore works would be below -5.5m Lowest Astronomical Tide (LAT), so as to not interact with the coast.
- 4.10.7. The Applicant does not consider that the UK Climate Projections 2018 (UKCP18), which were published after the submission of the application, alter the conclusions drawn in Chapter 4 and Chapter 8 of the ES due to the conservative approach taken to the landfall site selection and design.
- 4.10.8. Figure 5 below, taken from the Landfall Information Sheet [REP1-003], illustrates the predicted shoreline position and beach levels at Happisburgh South in 2025, 2055 and 2105 based on the NNDC Shoreline Management Plan (SMP) alongside an indicative landfall drill profile. It demonstrates that the export cables would remain buried beyond the predicted erosion levels up to 2105 and due to the proposed burial depth, the Applicant is confident that they will remain buried despite potential vertical erosion fluctuations.

Figure 5: Predicted beach levels in 2025, 2055 and 2105 with indicative cable depth and angle shown



Planning Issues

- 4.10.9. Coastal erosion at landfall, including the stability of the cliffs, the location of landfall and the exposure of cables were matters raised in numerous

representations [e.g. RR-014, RR-048, RR-124, RR-010] as well as by Natural England (NE) [REP1-088], Happisburgh Parish Council (HPC) [RR-129] and NNDC [RR-258], in which NNDC expressed:

"This area of North Norfolk in particular has seen significant loss of cliff in recent years due to the effect of coastal processes with an increased risk to life and property including numerous buildings of heritage interest. It will therefore be important for the examination panel to give appropriate consideration to the potential for the project to be affected by and/or contribute to coastal change and to consider any public benefits that can be derived either as part of formal mitigation or as part of any wider community benefits to manage those adverse impacts in accordance with the adopted Shoreline Management Plan (SMP 6)."

- 4.10.10. In its LIR [REP1-100], NCC asked that sufficient safeguards and mitigation measures were put in place where the offshore cable route makes landfall to the south of Happisburgh in order to ensure the onshore infrastructure does not exacerbate existing coastal erosion in the area.
- 4.10.11. During the Examination NNDC put forward a suggestion of re-using materials to infill behind the Cart Gap Sea wall which has suffered from cliff scour resulting in a significant void between the cliff and defence. During discussion at ISH4, NNDC suggested that this could be secured through the DCO. At the request of the ExA, a position statement was submitted at D6 [REP6-012] which sets out that the Applicant is open to discussing the feasibility of providing clean spoil to NNDC to infill behind the Cart Gap sea wall post consent. Given that these works are not necessary to address coastal erosion and that a wide range of factors would need to be considered in taking this forward, both parties have agreed that this would be explored outside of the DCO process [REP6-012].
- 4.10.12. At the OFH1, Cllr Berry, on behalf of HPC, raised concerns that the SMP, which had been used in the calculations for landfall works, was already out of date. He said that in the first 5 years erosion rates at Happisburgh were already five times those which were predicted in the SMP and that the cliff edge was already beyond the predicted 25-year line [EV-005]. Documentation pertaining to this concern was subsequently submitted by HPC at D1 and D6 [REP1-078 and REP6-026].
- 4.10.13. In its RR [RR-106], NE suggested that although cliff recession had been taken into detailed consideration, a more precautionary approach should be developed at Happisburgh due to historically rapid erosion and future unpredictability of cliff recession. In response, the Applicant submitted a clarification note (Appendix 1 of the D1 SoCG) [REP1-049] which resolved NE's concerns and in the final SoCG NE agreed that the design of the landfall works would adopt a suitably conservative approach to ensure cables would not become exposed as a result of erosion [REP9-046].

ExA Reasons

- 4.10.14. The landfall is located in an area where the coastline is subject to considerable coastal erosion. The ExA acknowledges that cliff recession is unpredictable and there is uncertainty as to the extent of future erosion rates. However, a highly conservative approach would be taken to the design of landfall works to mitigate against coastal erosion processes, including according to the most recent climate change projections (UKCP18), over the lifetime of the project. The HDD entry point would be set back from the existing cliff line by at least 125m to allow for the forecast coastal processes in the SMP. To allow for further flexibility in the siting of landfall post consent, and using the most up to date forecasts, the landfall compound zone extends a further 200m inland.
- 4.10.15. The use of the long HDD method is fully supported by NNDC [REP8-088]. Its use would prevent the requirement for surface excavations on the beach or at the existing cliff face which could act as weak points during storm events. The drill profile is proposed to be sufficiently far back from the cliff face and deep enough below the beach to ensure the ducts would not become exposed during the operational lifetime of the wind farm as a result of coastal processes and would not impact on the stability of the cliff or beach as a result of vibration or fracturing. A Landfall Method Statement (LMS), to be approved by NNDC in consultation with NE, would be secured by R17 of the dDCO [REP9-007].
- 4.10.16. Furthermore, noting HPC's concerns that erosion is occurring at a faster rate than predicted, R17 secures mitigation in the event that the rate and extent of cliff retreat indicate that the landfall ducts could become exposed during operation. The LMS would include measures for ongoing inspection and reporting of results to NNDC during the operation of the Proposed Development as well as remedial measures in the event that inspections indicate ducts could become exposed.
- 4.10.17. The embedded mitigation has been designed to ensure the continued integrity of the geological materials and the burial depth of the cables would mean that they would have no impact on coastal erosion during both construction and operation. Coastal erosion would continue as a natural phenomenon driven by waves and subaerial processes, unaffected by the Proposed Development.
- 4.10.18. Given the above, the ExA is satisfied that the design of the Proposed Development, including embedded mitigation, would be resilient to coastal erosion and deposition and would not contribute to coastal change in the area, taking into account climate change. The LMS would be secured through R17 which would also require monitoring of erosion as well as remedial measures in the event monitoring indicate the ducts could become exposed.

Conclusion

- 4.10.19. The Applicant has provided an assessment of coastal change over time, taking into account climate change, which has informed the design of the

Proposed Development, particularly at the landfall location. The proposed design and mitigation would prevent the Proposed Development from being put at risk from coastal change and any risks would be managed over the lifetime of the project. There is no evidence to suggest that the Proposed Development would contribute to coastal change in the area.

- 4.10.20. For the above reasons, the ExA concludes that the Proposed Development accords with Section 5.5 of NPS-EN1 and would not give rise to significant effects on coastal change.

4.11. FLOOD RISK AND WATER RESOURCES

Introduction

- 4.11.1. This section addresses the potential impact of the Proposed Development on flood risk (site drainage, conveyance and surface water flooding) and water resources (the physical, biological or chemical character of surface waters or groundwater). There is a close association between this section and contamination and ground conditions which considers the impact on groundwater.

Policy Considerations

- 4.11.2. NPS EN-1 Section 5.15 sets out that where a project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES or equivalent.
- 4.11.3. The decision-maker will generally need to give impacts on the water environment more weight where a project would have adverse effects on the achievement of the environmental objectives established under the WFD. Where such adverse impacts are likely to arise, they should be mitigated through attaching appropriate requirements to any development consent.
- 4.11.4. In terms of drainage and pollution control, NPS EN-1 notes at paragraph 4.10.2 that the planning and pollution control systems are separate but complementary. Paragraph 4.10.3 states that the decision-maker should focus on whether the development, itself, is an acceptable use of land, and on the impacts of that use, rather than the control of processes, emissions and discharges themselves.
- 4.11.5. Section 5.7 of NPS EN-1 relates to flood risk. Paragraph 5.7.3 states that the aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding. Preference should be given to locating projects in Flood Zone 1 in England (paragraph 5.1.3). In terms of construction work, paragraph 5.7.10 states that the decision maker will need to be satisfied that the proposed drainage system complies with any National Standards and that the DCO makes provision for the adoption and maintenance of Sustainable Drainage Systems (SuDS).

- 4.11.6. Paragraph 5.7.13 states that to satisfactorily manage flood risk, arrangements are required to manage surface water and the impact of the natural water cycle on people and property. Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system (paragraph 5.7.20) and should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project (paragraph 5.7.21).

Applicant's Case

- 4.11.7. ES Chapter 20 [APP-344] considers the impact of the Proposed Development on water resources and flood risk. The assessment methodology is set out in Section 20.4 and considers potential impacts upon receptors including direct disturbance of surface water bodies, increased flood risk, soils entering watercourses, and accidental spills of fuels, oils and lubricants during construction.
- 4.11.8. ES Appendix 20.1 [APP-226] contains a Flood Risk Assessment (FRA) and Appendix 20.2 [APP-227] contains a WFD Compliance Assessment.
- 4.11.9. The landfall location is within Flood Zone 1 and at low risk of flooding from fluvial or tidal sources. The FRA concludes that it is also sufficiently inland that the managed coastal retreat proposed for this area will not affect the flood risk from the sea. The onshore cable route will primarily traverse Flood Zone 1, with some locations in Flood Zones 2 and 3 where suitable risk assessments would be undertaken and mitigation would ensure flood risk is not increased. Once operational, a residual risk of flooding from ground water would be mitigated through the use of suitable waterproofing of the cable duct.
- 4.11.10. The proposed onshore substation and NG extension would be located in Flood Zone 1 and therefore at low risk of flooding. The introduction of the proposed above ground infrastructure has been assessed and a suite of mitigation measures incorporated into the design to mitigate any potential risk. This includes capturing surface water as it reaches the onshore project substation and discharging it in a controlled manner so that it mimics the run-off rate for greenfield land, creation of water storage areas and the creation of increased water storage at the existing NG substation. With the incorporation of mitigation measures, the risk of flooding associated with the introduction of the proposed onshore substation and NG extension is assessed as negligible.
- 4.11.11. The study area for the ES was categorised by the three main surface water catchments: the River Bure catchment, the River Wensum catchment and the River Wissey catchment. The River Bure and River Wensum, designated as a Special Area of Conservation (SAC) and SSSI, as well as several of their tributaries would be crossed by the proposed cable route.
- 4.11.12. Construction mitigation, including trenchless crossing techniques for several sensitive watercourses, sediment management, construction drainage and best practice measures would be implemented as set out in

the CoCP secured by R20. Whilst there would remain potentially significant effects related to disturbance of some surface water bodies and soils potentially entering watercourses, overall, these would be short term, limited to the duct installation period and typically reversible once activities were completed.

- 4.11.13. The WFD Compliance Assessment shows that following mitigation there would be no non-temporary impacts on the status of any river, coastal or groundwater bodies that are sufficient to result in deterioration in the status of these water bodies. The Proposed Development is therefore WFD compliant. Possible enhancements could locally improve the hydro-morphology of the river water bodies crossed by the development and cumulatively could potentially contribute towards an improvement in water body status.

Planning Issues

- 4.11.14. NCC, as the Lead Local Flood Authority (LLFA), welcomed the incorporation of SuDS where permanent above ground infrastructure would be located to mitigate against additional impermeable surfaces creating an additional risk of flooding [RR-123]. Other initial concerns in relation to the design of the proposed onshore substation and the wording of Requirements that were raised by the LLFA were tested throughout the Examination and discussed between the parties who reached agreement on all matters by the end of the Examination as shown in the final SoCG [REP9-047].
- 4.11.15. The EA, in its RR [RR-117], welcomed and supported the commitment to HVDC technology and the use of HDD to cross six main rivers and sensitive sites. The EA requested that it became a consultee for the final CoCP secured through dDCO R20. Initial concerns raised by the EA in its RR included assessment risk and monitoring of bentonite or other drilling fluids at trenchless crossings and the storage of spoil in the functional flood plain.
- 4.11.16. Flood risk during the construction and operational phase was a matter raised by concerned residents and landowners for all of the onshore works, as was the detail included in the submitted FRA. An existing flooding issue of the area around Ivy Todd, Chapel Road and West End was raised by NPC and local residents both in writing and at Hearings during the Examination [e.g. RR-028, RR-015, RR-066, RR-029]. In this regard, the destruction of field drains and the construction of the proposed substation leading to an exacerbation of flooding in this area was a concern. NPC wrote in its RR [RR-113]:

"Flood Risk: Proposed site capped by thick layer of impervious clay. Run-off taken by a small tributary (Wissey) that historically and regularly floods the road and nearby properties and blocks the 4" culvert."

ExA Reasons

- 4.11.17. The assessment methodology, findings and approach to mitigation for flood risk are all confirmed as agreed by both NCC and the EA in the

respective SoCG [REP-044 and REP-047]. The EA has been added as a consultee for the final CoCP secured by R20 of the dDCO. The unsigned SoCG submitted by NPC at D1 [REP1-091] states that NPC did not feel that flood risk had been suitably considered to prevent an increase in flooding caused by a huge industrial size complex on the very edge of the village.

- 4.11.18. A Construction Surface Water and Drainage Plan (SWDP) to manage surface water during construction is detailed within the Outline CoCP [REP9-010]. A SWDP would form part of the final CoCP for each stage of the works and is secured through R20 of the dDCO.
- 4.11.19. An Operational Drainage Plan (ODP), which must accord with the principles of the Outline ODP [REP8-054], is secured by R32 of the dDCO [REP9-007]. This has now been updated to include specific reference to the proposed substation. The Outline ODP states that the drainage strategy will be developed according to the principles of the SuDS discharge hierarchy. The ODP would have sufficient storage / attenuation volume to ensure that, during the 1 in 100-year rainfall event, plus 20% for climate change, there would be no increase in surface water runoff from the site. A maintenance and management plan would also form part of the final ODP detailing the activities required and providing details of who will adopt and maintain all of the surface water drainage features for the lifetime of the development.
- 4.11.20. Whilst the ExA does not dispute an existing flooding issue may exist around Ivy Todd Road, West End and Chapel Road close to the proposed substation, we consider that the proposed surface water drainage systems would ensure that the volumes and peak flow rates of surface water leaving the site would be no greater than the rates as existing. Given the above, the ExA is satisfied that the Proposed Development would not exacerbate the current situation. It would not be reasonable to require the Applicant to carry out improvement works to the culvert given that it would not be necessary to make the Proposed Development acceptable in planning terms.
- 4.11.21. The location of land drains would be confirmed post-consent during the detailed design process and would include any drainage associated with the existing NG substation. Existing land drains along the onshore cable route and on the onshore project substation would be reinstated following construction. The Applicant has committed within the Outline CoCP, with which the final CoCP must accord, not to store soil within the functional floodplain.
- 4.11.22. In light of the above, the ExA is satisfied that all matters relating to flood risk during both the construction and operational phases have been resolved and the approach to mitigation to manage flood risk would be appropriately and adequately secured by DCO R20 and R32 and associated certified documents.
- 4.11.23. Detailed Construction Method Statements would be included as part of the final CoCP for each stage of the works and would provide details of

the associated pollution control plans, including the detailed design of each HDD location as well as measures for managing breakout of associated drilling fluid. The ExA agrees with the Applicant and EA that the selection of inert solid plastic rather than oil insulated cables will greatly reduce the contamination risk. In addition, the risk of mobilising existing contamination will be further reduced by the proposed sectionalised of workings.

- 4.11.24. The Applicant has committed to develop a scheme and programme for each watercourse crossing, diversion and reinstatement, which will include site specific details regarding sediment management and pollution prevention measures. The scheme would be submitted to and approved by the relevant planning authority, in consultation with NCC and the EA as secured through dDCO R25.
- 4.11.25. Taking the above into account, the ExA is satisfied that all matters relating to water resources have been addressed and effects are unlikely to be significant. The ExA finds that any impact would be appropriately and adequately addressed by the CoCP secured through dDCO R20 and by R25 for watercourse crossings.

Conclusion

- 4.11.26. The ExA concludes that the requirements of NPS EN-1 have been met in relation to the assessment of flood risk and water resources and that these are not matters which weigh against the Order being made.

4.12. NOISE AND VIBRATION

Introduction

- 4.12.1. This section addresses the onshore noise and vibration effects of the Proposed Development during construction and operation.
- 4.12.2. The inter-related potential impacts of noise and vibration on onshore and offshore ecology are considered, where relevant, in Section 4.16 and Chapter 5.
- 4.12.3. Offshore airborne noise during construction, operation and decommissioning was scoped out given the distance of the Proposed Development from shore.

Policy Considerations

- 4.12.4. NPS EN-1, paragraph 5.11.1 states that excessive noise can have wide-ranging impacts on the quality of human life. The Government's policy on noise is set out in the Noise Policy Statement for England which promotes good health and good quality of life through effective noise management. Similar considerations apply to vibration, which can also cause damage to buildings. The relevant statutory requirements and relevant sections of the Noise Policy Statement for England, NPPF and PPG on noise should be met in both the construction and operational phase of the Proposed

Development. Any reference to 'noise' below applies equally to assessment impacts of vibration in accordance with NPS-EN1.

- 4.12.5. Paragraph 5.11.8 of NPS EN-1 states that the project should demonstrate good design through the selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noises emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmissions. It goes on to say that development consent should not be granted unless the proposal avoids significant adverse impacts on health and quality of life from noise and that other adverse impacts on health and quality of life from noise are mitigated and minimised.
- 4.12.6. Paragraph 2.9.6 of NPS-EN5 refers to audible noise effects arising from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors. Paragraph 2.9.10 states that the decision maker should ensure that the relevant assessment methodologies have been used in the evidence presented to them and that the appropriate mitigation options have been considered and adopted. Where the applicant can demonstrate that appropriate mitigation measures will be put in place it should be possible for the decision maker to give limited weight to residual noise impacts.
- 4.12.7. Noise and vibration, as generic impacts, are not specifically considered within NPS EN-3.

Applicant's Case

- 4.12.8. ES Chapter 25 [APP-349] considers the impact of onshore noise and vibration. To inform the assessment, a baseline noise survey [APP-294] was undertaken to quantify the existing noise environment in the vicinity of proposed onshore assets and construction corridors. Noise modelling was undertaken to inform several subsequent assessments in order to determine any potential impacts relating to the construction and operation of the project at agreed receptors, the results of which are presented in Appendix 25.2 and 25.3 [APP-295 and APP-296]. A worst-case approach has been incorporated within the calculation methodologies, modelling and assumptions in order to provide a conservative estimation of any potentially adverse effects of noise and vibration and to ensure the correct level of mitigation measures are taken forward to the detailed design phase.
- 4.12.9. The Applicant's assessment of construction noise identifies that there are potential significant adverse impacts under the worst-case scenario. However, with the incorporation of standard mitigation measures, predicted levels are below the BS 5228 derived thresholds for the majority of receptors (Table 25.33). For those receptors where predicted impacts would be minor to major adverse, enhanced mitigation measures, details of which are contained within section 25.8.7 and Table 25.33, would reduce any impact to negligible.

- 4.12.10. An assessment of 24-hour working was provided within the ES for the landfall only. A subsequent assessment of continuous working hours was submitted at D8 [REP8-070] for operations such as concrete pouring, drilling, cable pulling and trenchless crossing technique. With the incorporation of enhanced mitigation at some receptors, the predicted residual impact for evening, weekend and night time working was assessed as negligible.
- 4.12.11. The ES anticipates that project generated construction traffic noise would have at most a temporary and reversible moderate adverse impact on two road links (Link 21 and 25) with most links experiencing no or a negligible impact.
- 4.12.12. A number of supplementary noise/vibration assessments were submitted throughout the Examination to determine the impact of cumulative road traffic noise, taking into account figures produced during the H3 Examination, and the implementation of proposed mitigation measures on Link 68 and 34. The Cumulative Impact Assessment (CIA) [REP5-012] submitted at D5 identified that cumulative construction road traffic noise would result in, at most, temporary and reversible moderate adverse impacts along Link 68 (The Street, Oulton) and Link 34 (Cawston) and no greater than minor adverse impacts at any of the shared road links. During the Examination, mitigation schemes to reduce the impact of construction noise and vibration for both Link 68 and 34 were submitted for consideration.
- 4.12.13. Mitigation measures for Link 68 would include a cap on the number of daily HGV movements, a temporary speed restriction, re-grading the road surface in proximity to The Old Railway Gatehouse, incorporation of passing places and priority warning signs. The Applicant considers that these measures would reduce traffic related noise impacts to negligible in the cumulative scenario. Following questioning during ISH6, the Applicant submitted a further Position Statement to include an assessment of idling and accelerating vehicles close to The Old Railway Gatehouse (REP7-047). This anticipates an impact of minor adverse significance in both the cumulative and project alone scenario, representing a non-significant impact in EIA terms.
- 4.12.14. Mitigation measures to reduce the impact of noise and vibration for Link 34 would include a cap on the maximum number of daily HGV movements, temporary speed restrictions and road resurfacing. Following the submission of updated cumulative noise and vibration assessments, including idling and accelerating vehicles submitted at D8 [REP8-074], the Applicant considers the calculated noise increase would represent a residual impact of minor adverse significance.
- 4.12.15. The results of the modelling would inform the detailed design of the onshore project substation post consent which would identify suitable mitigation measures to deliver the required noise reduction ensuring that noise emissions would not exceed the permitted noise levels of the existing Necton substation. The Applicant also contends that cumulative noise impacts with Norfolk Boreas would be mitigated to this level

(although this would be a matter to be considered in the Norfolk Boreas Examination). The Applicant considers that there are proven mitigation measures available that can be combined to create a design that will meet the required low noise emissions. Table 25.37 of ES Chapter 25 details the performance requirement for an example of suitable mitigation which would result in compliance with the permitted noise levels. Table 25.38 details the results of the mitigated modelling exercise which shows that, with the application of additional noise mitigation measures, the onshore project substation would fall within the noise limit and would also result in no impact at identified receptor locations in accordance with BS4142:2014 derived impact magnitudes.

- 4.12.16. Adverse impacts from vibration could arise from piling and HGV movements. Piling would only be required as a worst case, depending on ground conditions, for construction of the onshore project substation, the installation of the new towers adjacent to the NG substation extension and potentially at landfall and trenchless crossing zones. The ES considers that given the setback of receptors from these works, vibration levels would not be perceptible resulting in no impact.
- 4.12.17. Other sources of vibration such as HGV movements on uneven haul routes may be perceptible at receptor locations in the vicinity of the onshore cable route and at the landfall. HGV activity within the proposed development site would rarely be at the site boundary for any extended period, and given the proximity of receptors to adjacent roads, along with the expected running track, noise management controls and restricted vehicle speeds, this activity would not be expected to generate vibration effects at receptor locations in the vicinity of the project.
- 4.12.18. The CIA submitted at D5 identified no significant residual impacts associated with construction traffic related vibration along Link 68 and 34. This was subsequently reiterated in an updated Position Statement submitted at D6 which took into account vibration monitoring data collected by H3 for Link 34 [REP06-011].
- 4.12.19. Following questions put to the Applicant by the ExA at ISH7 in relation to the precise nature of works undertaken at MA, the Applicant has amended R26 of the dDCO so that no crushing or screening works can take place at any of the MA without the prior written consent of the relevant planning authority.

Planning Issues

- 4.12.20. The impact of noise and vibration arising from the Proposed Development, both during the construction phase and operational phase, was raised as a matter of concern for many residents, Parish Councils, BDC and NNDC both in writing and orally throughout the Examination. The main issues arising in each of the three Districts are discussed below.

Broadland District

- 4.12.21. Within Broadland District, the impact of construction traffic along The Street, Oulton and the B1145 through Cawston was a matter tested in detail throughout the Examination.
- 4.12.22. The cumulative impact of noise and vibration arising from construction traffic for the Proposed Development and H3 on The Street, Oulton was raised early in the Examination by BDC in its LIR [REP1-065], particularly the impact on the living conditions of the occupiers of a property known as The Old Railway Gatehouse. In this regard, the ExA's attention was drawn to an appeal decision³⁵ for a renewable energy facility which was dismissed partly on the grounds that noise from associated vehicles would have an unacceptable impact on the living conditions of the occupiers of this property [REP2-008]. At ISH6 [EV-28 to EV-30], BDC's Environmental Health Officer expressed concern over the methodology for calculating road traffic noise. OPC was also active throughout the Examination in expressing its concerns on this matter, contributing to ISHs, OFHs and providing written representations throughout [REP1-107, REP2-041, REP3-057, REP4-069, REP5-020, REP6-035, REP7-082, REP8-080, REP8-108 and REP9-062].
- 4.12.23. Similarly, the impact of noise and vibration arising from construction traffic travelling through Cawston was raised by BDC, CPC and local residents and was discussed in great detail at OFH3 [EV-33]. Principally, concerns related to the noise and disturbance arising from the increase in HGV traffic through the village and the consequential impact on living conditions with some residents stating that this would impinge on their human rights and the peaceful enjoyment of their homes.
- 4.12.24. Residents also feared that vibration from an increase in HGV movements could have repercussions on the structural stability of buildings/walls along the B1145, particularly those close to the roadside, some of which are listed. See for example [REP7-104, REP7-088 and REP7-092]. Whilst some vibration and noise tests were conducted, residents questioned the outcomes, number of properties surveyed, the position of monitors and the timing given it was out of season for tourist and farming movements.
- 4.12.25. At the end of the Examination, CPC remained concerned that noise mitigation measures were reliant on a highway intervention scheme which had not yet been agreed and the way in which noise impacts had been assessed:

"This approach to impacts runs throughout their submissions; to paraphrase Dickens' Mr Micawber, "result 2.8 = happiness, 3.0 = misery".

It is seen in all their replies on noise, air quality and vibration. Real people do not experience these issues in this stepped way. We suggest that these desk-based theoretical assessments using averaging and

³⁵ APP/K2610/A/14/2212257

smoothing and adjusting variables to achieve the desired result will bear no comparison to the actual experience of residents on the street."

North Norfolk District

- 4.12.26. NNDC was content that the proposed construction hours reflected those normally imposed by the Council. However, it requested that more information was provided within the OCoCP for the activities which would take place during daily start up and shut down. NNDC also raised concerns on the noise implications of delivery vehicles waiting in the local area if arriving early/late to site [EV-006 and 007 and REP3-055]
- 4.12.27. The impacts of construction noise on the living conditions of the residents of Little London and Happisburgh was a cause of concern throughout the Examination [see REP3-055, REP4-068 and REP6-034]. Following the submission of a Position Statement at D7 [REP7-047] on this subject matter, NNDC generally welcomed the Applicant's proposed mitigation to reduce impacts but its preference would entail the longer construction programme of 25 weeks to help reduce the impact further and allow for compressed hours for deliveries. The Council also requested an imposed speed limit for platoons through Little London.
- 4.12.28. At the end of the Examination, NNDC remained concerned that 24-hour working at landfall could result in sleep disturbance for sensitive receptors. Again, its preference would be the longer construction programme at this location so that non-standard construction working hours could be avoided. Where traffic movements would be essential for continuous working, NNDC requested that the Applicant clarify these details as well as details of mitigation measures.

Breckland District

- 4.12.29. The impacts of construction noise at the proposed substation site was an issue raised by many Necton residents who referred to negative impacts experienced when the existing substation was built:

"The noise of construction from the Dudgeon substation was very loud and extremely annoying for residents for a long time. Vanguard is a bigger project so will be an intrusion for a longer period of time, particularly with Boreas following on" [RR-061].

- 4.12.30. Residents also expressed concerns over operational noise and noise during maintenance periods:

"Dudgeon/Statoil who built our current substation, have remained within the operational noise constraints applied by Breckland. However, at 4.5 times the size of Dudgeon, it is impossible to imagine that Vanguard and Boreas can do the same, especially as the noise made by Dudgeon has taken up some of the permitted noise" [RR-004].

ExA Reasons

- 4.12.31. The assessment methodology and findings for noise and vibration are shown as agreed in the SoCG with all District Councils [REP9-043, REP8-

088 and REP8-082]. Despite initial concerns on data used for road traffic noise, BDC now agree that the CTRN, augmented by the additional guidance in the Highway Agency's DMRB, is the only readily available method of assessment of road traffic noise available for use. The ExA has no reason to disagree.

- 4.12.32. Construction working hours would be controlled by R26 of the dDCO which would allow onshore transmission works to take place 0700-1900 Monday to Friday and 0700-1300 on Saturdays. Any work outside of these hours, save for emergency works, would require the approval of the relevant local planning authority.
- 4.12.33. The existing wording of R26(4) only requires the timing and duration of works outside non-standard hours to be submitted for approval. In this regard, the ExA agrees with NNDC that full details of works, including traffic movements and mitigation, should be submitted in order to minimise adverse impacts on sensitive receptors arising from noise and disturbance and recommends an amendment to the DCO to this effect (see Table 9.2).
- 4.12.34. Details of activities which would take place during daily start up and shut down have now been included in the Outline CoCP [REP9-010]. This confirms that it would not include HGV movements in and out of MAs.
- 4.12.35. Following testing during the Examination of proposed protocols for delivery vehicles, the Applicant has now set this out in full within the OTMP [REP8-013]. This includes informing suppliers of the working hours and booking slots, turning HGVs away if they arrive outside their allocated time slot, reserving daily slots for unplanned deliveries and basing contracts on adhering to these conditions. In addition, the OTMP now includes a commitment by the Applicant to advise drivers of approved lorry parks, motorway services or other designated parking areas to assist drivers if they are running late/early.
- 4.12.36. A traffic management strategy for Little London is included within the OTMP which includes capping HGV movements to a maximum of 68 per day. Whilst a speed limit for the platoon is not included, the ExA accepts the Applicant's assertion that two or three vehicles moving as a platoon following a pilot vehicle will naturally be driven at a slow speed. The Applicant has also committed to undertake community engagement in the development of the TMP post consent to identify periods that are particularly sensitive to HGV movements where programming could further mitigate this impact. The local planning authority, in consultation with the highway authority, would approve the final TMP for each stage of the works. This is secured through R21 of the dDCO.
- 4.12.37. For potential 24 hour working at Happisburgh, the ES identifies that, with enhanced mitigation in the form of noise barriers, noise levels would be brought down to not significant in EIA terms. A Construction Noise and Vibration Management Plan (CNVMP) would be included in the final CoCP as required under R20(2)(e). The CNVMP would apply throughout that stage of construction and would detail standard and enhanced mitigation

measures where appropriate. The CNVMP for each stage of the construction works would require the approval of the relevant planning authority.

- 4.12.38. The proposed scheme for Link 68 to mitigate significant adverse impacts for the occupiers of The Old Railway Gatehouse is shown as agreed by BDC in the SoCG. The Applicant has also committed to completing further physical alterations to The Old Railway Gatehouse itself - although this would be agreed with the owner outside of the DCO process given these measures are not required to make the development acceptable in noise terms.
- 4.12.39. The Link 68 scheme would serve to mitigate the effects of either NV alone or combined with H3. Whichever project progresses to construction first will introduce the measures and the second project would remove the mitigation at the end of construction. This is detailed within the OTMP and secured by R21. This would be approved by BDC as the local planning authority for Oulton.
- 4.12.40. In terms of the measures proposed for Link 34, BDC's position at the end of the Examination was that the reduction in HGV movements, combined with the proposed traffic mitigation proposals would be likely to avoid significant effects in respect of noise and vibration [REP9-043]. Whilst noting the Parish Council's concerns about the feasibility of this scheme and taking into account the concerns raised in Section 4.12.25 above, there is a reasonable prospect that those measures which would aid in alleviating noise and vibration impacts, i.e. road resurfacing, speed restrictions and a cap on HGV numbers would remain as those elements are not controversial. The suite of measures is included in the OTMP which would require the approval of BDC.
- 4.12.41. The noise rating level of the proposed substation would be controlled and monitored by R27 of the dDCO. This limits the noise rating level of the proposed substation to that of the existing substation at Necton. BC agrees, in its SoCG, that proposed mitigation would ensure that the noise rating level would not exceed the maximum level imposed by R27 and that the wording of R20 and R27 is appropriate and adequate for the mitigation of impacts associated with noise and vibration.
- 4.12.42. Whilst taking account of concerns that these levels can be achieved, R27 also requires a scheme for monitoring compliance with the noise rating levels to demonstrate that the noise levels have been achieved after both initial commencement of operations and six months after the proposed substation is at full operational capacity. The ExA considers that the results of the monitoring should be submitted to the relevant planning authority and in the event that emissions exceed the stated level, the ExA considers that the monitoring scheme should also include details of any remedial works and a programme of implementation and recommends a change to the DCO accordingly (see Table 9.2).
- 4.12.43. ES Chapter 5 details that maintenance at the onshore project substation is estimated to be an average of one visit per week and would be during

normal working hours unless in the event of an emergency. The Applicant considers that noise levels would be no greater than operational noise and any requirement for a generator to be active during maintenance has been incorporated within the worst-case scenario assessment. In order to ensure that noise limits during maintenance periods are secured, the ExA recommends that this is included within the wording of R27 (see Table 9.2).

- 4.12.44. The ExA acknowledges that the detrimental impact of noise and vibration during all onshore construction works, as well as during the operational phase, is a real concern for local residents. The ExA has carefully considered the numerous representations made in writing and orally during the Examination and has had regard to the concerns of the Parish Councils who have made valuable inputs into the Examination on this matter.
- 4.12.45. Nonetheless, on the basis of the information before it, the ExA is satisfied that the Applicant has adopted an appropriate and proportionate approach to assessing the noise and vibration impacts of the Proposed Development. The SoCGs with the District Councils all agree that the measures set out in R20 (CoCP), R26 (construction hours), R21 (TMP) and R27 (operational noise) would provide an effective way to minimise adverse impacts arising from noise and vibration. The ExA is satisfied that the Requirements meet the test of enforceability. Furthermore, should noise and vibration lead to complaints, a Communications Plan would be captured in the final CoCP which would include a complaints procedure. In this regard the ExA agrees with NNDC that this should include full communication with the relevant local authority, to be agreed post consent.
- 4.12.46. Taking the above into account, and in the absence of any substantive evidence to the contrary, the ExA finds subject to the proposed mitigation measures that there would be no significant adverse impacts on health and quality of life from noise or vibration, either during the construction or operational phase. The ExA is further satisfied that there is an adequate enforcement mechanism in the DCO.
- 4.12.47. On balance, whilst there would be minor adverse impacts on some receptors during the construction phase, these would be temporary, reversible and appropriately mitigated and minimised. For these reasons, the ExA gives limited weight to residual noise and vibration impacts and concludes that any impact from noise and vibration would be managed in a manner that fully complies with NPS-EN1 and NPS EN-5.

Conclusion

- 4.12.48. The ExA concludes that the Applicant has adopted an appropriate and proportionate approach to assessing the noise and vibration characteristics of the Proposed Development in accordance with Section 5.11.4 of NPS EN-1.

- 4.12.49. Measures to control construction noise and vibration would be achieved through the CNVMP as part of the final CoCP and secured through R20 of the dDCO. Bespoke mitigation schemes for Link 34 and 68 would be agreed through the final TMP secured by R21.
- 4.12.50. R26 also supports noise and vibration control by stipulating the consented working hours. Any essential activities taking place outside of these hours would require the approval of the local planning authority. In order to ensure any non-standard construction hours do not have a detrimental impact on residential amenity, the ExA recommends the wording of R26(4) is amended so that full details the works, including but not limited to, type of activity, timing and duration, vehicles types and movements and any proposed mitigation are submitted for approval by the relevant planning authority prior to those works commencing.
- 4.12.51. Operational noise would be adequately and appropriately mitigated and secured by R27. In the event that emissions exceed the stated level, the ExA considers that the monitoring scheme secured by R27 should also include details of any remedial works and a programme of implementation and recommends a change to the DCO accordingly.
- 4.12.52. Whilst the Proposed Development would result in minor adverse impacts to some receptors during construction, these impacts would be appropriately mitigated and minimised in accordance with section 5.11.9 of NPS EN-1 and therefore attract limited weight in the overall planning balance.

4.13. AIR QUALITY

Introduction

- 4.13.1. This section addresses the impact of the Proposed Development on air quality, from the construction and decommissioning of the onshore elements. The potential air quality impacts arising from the offshore elements and operational phase were scoped out due to the likely negligible increases of air pollutants on site and the distance from any shore-based receptors.

Policy Considerations

- 4.13.2. Section 5.2 of NPS EN-1 states that infrastructure development can have adverse effects on air quality and the construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside.
- 4.13.3. Where the project is likely to have adverse effects on air quality, paragraph 5.2.6 of NPS EN-1 states that the applicant should undertake an assessment of the proposed project as part of the ES.
- 4.13.4. According to paragraph 5.2.9 of NPS EN-1, the decision maker should generally give air quality considerations substantial weight where a project would lead to a deterioration in air quality in an area or leads to a

new area where air quality breaches any national air quality limits. However, air quality considerations will also be important where substantial changes in air quality levels are expected, even if this does not lead to any breaches of national air quality limits.

- 4.13.5. In all cases paragraph 5.2.10 of NPS EN-1 stipulates that the decision-maker must take account of relevant statutory air quality limits. Where a project is likely to lead to a breach of such limits, the applicant should work with the relevant authorities to secure appropriate mitigation measures to allow the proposal to proceed. In the event that a project will lead to non-compliance with a statutory limit, the decision-maker should refuse consent. The decision-maker should consider whether mitigation measures are needed both for operational and construction emissions over and above any that may form part of the project application.

Applicant's Case

- 4.13.6. Chapter 26 of the ES [APP-350] sets out the applicant's case with respect to air quality. ES Appendix 26.1 – Air Quality Construction Dust Assessment [APP-297], Appendix 26.2 – Air Quality Traffic Data [APP-298] and Appendix 26.3 – Air Quality Background Pollutant Concentrations [APP-299] are also of relevance.
- 4.13.7. A desk-based assessment was carried out using air quality monitoring data collected by Local Authorities within the study area, as well as pollution maps provided by DEFRA to establish existing pollution levels. The assessment considered the potential impacts and associated mitigation for the construction, operation and decommissioning of the project on air quality.
- 4.13.8. Potential impacts associated with the construction and decommissioning of the project would arise from dust emissions and vehicle exhaust emissions. A suite of best-practice mitigation measures has been identified which are commensurate with the level of dust risk of the construction activities. These would form part of an Air Quality Management Plan (AQMP) within the final CoCP, secured by R20 of the dDCO and would include, amongst other things, a person responsible for air quality matters, daily onsite and offsite inspections where there are nearby receptors and regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of the site boundary. If non-conformity with any of the mitigation measures is identified it would be recorded and appropriate remedial action would be taken.
- 4.13.9. The Swaffham Air Quality Management Area (AQMA) is located 1km south of the of the A47 which forms part of the affected road network during the construction phase. As traffic will not pass through the AQMA itself, the Applicant anticipates that, given the distance, there would not be any significant increases in pollutant concentrations within the AQMA.
- 4.13.10. With the implementation of mitigation measures the ES concludes that impacts on air quality associated with construction phase dust and road

traffic emissions would not result in significant effects at human and ecological receptors. Similarly, cumulative impacts during construction, operation and decommissioning are not considered to be significant. A summary of the potential residual effects identified in relation to air quality is provided in Table 26.36 of ES Chapter 26.

- 4.13.11. In response to a written question [PD-008] put to the Applicant by the ExA in relation to the proceedings brought against the Government by Client Earth (detailed in Chapter 3 above), the Applicant confirmed that none of the seven local authorities, across which the impact on construction traffic emissions was assessed, were included in the 45 local authorities where the Judgement required further assessment [REP1-007]. The Applicant stated that DEFRA-modelled concentrations for 2015 show that the seven local authority areas are already compliant with the EU Limit Values, with annual mean NO₂ concentrations no greater than 30µg/m⁻³, or 75% of the Objective. It did not consider that the project would affect the ability of the Eastern Zone³⁶ to achieve compliance with the EU Limit Values, or to extend the time in which they can be achieved.
- 4.13.12. At D5, a CIA for traffic related air quality which took account of information submitted into the H3 examination was submitted by the Applicant [Appendix H of REP5-012]. This concluded that there would be a negligible effect on all receptors bar one which would experience a slight adverse effect. Predicted pollutant concentrations would be below the relevant Air Quality Objectives (AQOs) at all considered receptors and cumulative traffic flows were not predicted to cause a breach of any of the AQOs at any identified sensitive receptors.
- 4.13.13. At ISH6, the ExA requested a position statement from the Applicant setting out the position in relation to an air quality assessment at The Old Railway Gatehouse on Link 68, given that this had not been identified as a specific receptor in the CIA submitted at D5. This was submitted at D7 [REP7-049]. The Applicant's assessment concluded the predicted concentrations for NO₂, PM₁₀ and PM_{2.5} for the combined cumulative traffic, plus other polluting activities, would all be well below the Objectives both with and without the two projects (the proposed Development and H3). The inclusion of the cumulative traffic plus other polluting activities would not result in a change in concentrations any greater than 4.3% of the relevant AQOs and the cumulative air quality impact was considered to be negligible in all cases.

Planning Issues

- 4.13.14. The impact of dust and road traffic emissions during the construction phase were matters raised by several IPs during the Examination, including CPC and OPC.
- 4.13.15. Air quality in itself was not raised as a specific issue in any of the LIRs. Nonetheless, both BDC and OPC raised concerns during the Examination

³⁶ The Eastern non-agglomeration zone within the 'Air Quality Plan for tackling roadside nitrogen doxed concentrations in Eastern (UK0029)' July 2017

that the air quality assessment for Link 68 submitted at D7 did not take into account local sources of pollution including nearby turkey sheds and pig rearing units [REP8-108]. BDC also commented on the potential for ammonia to combine with substances in the air to produce PM_{2.5}. By the end of the Examination, BDC and OPC remained concerned, although BDC did accept in its SoCG that the additional traffic would be likely to have a negligible effect on air quality. [REP9-047]

- 4.13.16. Cawston residents also raised concerns about the increase in pollution through the village as a result of the increase in HGV traffic. [Rep7-092]. In its D8 submission, CPC drew the attention of the ExA to the Government's National Atmospheric Emissions Inventory (NAEI) which it stated indicates Cawston is classified as 'amber' for each of NO₂, PM_{2.5} and PM₁₀ [REP8-097]. The Applicant responded to this at D9 [REP9-042] stating that the NAEI estimates annual pollutant emissions only and categorises all major roads in the amber category.

ExA Reasons

- 4.13.17. The assessment methodology and approach to mitigation are shown as agreed in the SoCGs with BDC, BC and NNC [REP8-082, REP9-043 and REP9-047]. Whilst BDC remained concerned that the submitted air quality assessment did not take full account of the existing baseline air quality, it acknowledged that the anticipated additional traffic associated with the project and H3 would be likely to have a negligible impact on air quality.
- 4.13.18. The construction phase would inevitably give rise to fugitive dust emissions. However, the ExA is satisfied that the AQMP would adequately and appropriately mitigate this impact. The AQMP would be developed as part of the final CoCP which would require the approval of the relevant planning authority for each stage of the construction works. This is secured by R20 of the dDCO.
- 4.13.19. The ES and subsequent air quality assessments submitted into the Examination did not identify any adverse impacts leading to non-compliance with EU Limit Values or to extend the time in which they can be achieved. Predicted pollutant concentrations from the Proposed Development alone and cumulatively with other projects would be below the relevant AQOs at all considered receptors. The ES also identified that it is not anticipated that there would be any significant pollutant increases in pollutant concentrations within the Swaffham AQMA, about which BC did not disagree.
- 4.13.20. CPC correctly identified that Cawston High Street is identified as 'amber' for NO₂, PM_{2.5} and PM₁₀ within the NAEI. The NAEI estimates annual pollutant emissions and the Applicant responded to this point at D9 stating that the NAEI categorises all major roads in the amber category. Furthermore, an air quality impact assessment goes further and takes into account pollutant concentrations taking into account dispersion conditions and Government AQOs. The assessment methodology and approach to mitigation are all agreed by the District Councils and there is

very little substantive evidence to the contrary for the ExA to conclude otherwise.

- 4.13.21. The ExA has noted the concerns of BDC and OPC with respect to the air quality assessment and existing baseline air quality for Link 68. The Applicant has confirmed that the assessment submitted at D7 took into account the biomass boilers as well as the potential for ammonia as a source of pollution. The Applicant accepted that the nearby poultry farm would represent an additional source of particulate matter but that these operations would form part of the existing baseline air quality which was included in the assessment.
- 4.13.22. The Applicant's assessment is based on the contribution that the project may have in relation to the AQOs set by DEFRA. This shows that there would be an imperceptible change in the increase of particulate matter concentration as a result of the project. Despite its concerns, BDC did accept in the final SoCG that the contribution that the project would have in relation to air quality would be likely to have a negligible effect. In the absence of any substantive evidence to the contrary, the ExA has no reason to conclude otherwise.
- 4.13.23. In light of the above, the ExA is satisfied that air quality matters have been appropriately assessed. In the absence of any evidence to the contrary, the ExA accepts that AQOs would not be breached, and predicted pollutant concentrations would be below the AQOs at all considered receptors. Adequate and appropriate mitigation arising from dust would be secured by the AQMP as part of the final CoCP for each phase of the works. This would be secured by R20 of the dDCO.

Conclusion

- 4.13.24. The ExA concludes that air quality matters have been adequately and approximately assessed. The ExA is satisfied that air quality objectives would not be breached, and predicted pollutant concentrations would be below the air quality objectives at all considered receptors. Adequate and appropriate mitigation arising from dust would be secured by the AQMP as part of the final CoCP secured by R20.
- 4.13.25. In light of the above, the ExA concludes that the Proposed Development accords with NPS EN-1 in this regard and that air quality matters do not weigh against the Order being made.

4.14. HUMAN HEALTH

Introduction

- 4.14.1. This Section addresses the impact of the Proposed Development on human health. It considers those issues arising during the Examination which have not been considered in individual sections above. Impacts associated with offshore elements of the project are not considered as there are no sensitive receptors close enough to experience health impacts.

Policy Considerations

- 4.14.2. Section 4.13 of NPS EN-1 addresses impacts on health. It states that access to energy is clearly beneficial to society and our health as a whole. However, the production, distribution and use of energy may have negative impacts on some people's health. It goes on to say that these impacts can arise from increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increase in pests.
- 4.14.3. Paragraph 4.13.4 states that new energy infrastructure may also affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.
- 4.14.4. According to paragraph 4.13.5, generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either constitute a reason to refuse consents or require specific mitigation under the Planning Act 2008. However, the decision maker will want to take account of health concerns when setting requirements relating to a range of impacts such as noise.
- 4.14.5. Section 2.10 of NPS EN-5 addresses the impact of EMFs on human health. Whilst it primarily refers to overhead lines, it states that before granting consent the decision maker should satisfy itself that the proposal is in accordance with International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines which give an electric field reference of 5kVm⁻¹ for the general public. Paragraph 2.10.3 states that keeping electric fields below this level would reduce the occurrence of indirect effects for most individuals.
- 4.14.6. Paragraph 2.10.12 of NPS EN-5 goes on to say that undergrounding of a line reduces the level of EMFs experienced, but high magnetic field levels may still occur immediately above the cable. Paragraph 2.10.16 concludes that where EMF exposure is within the ICNIRP reference levels, mitigation is unlikely to be proportionate.

Applicant's Case

- 4.14.7. Health impacts are addressed in ES Chapter 27 [APP-351]. In addition, the potential impacts of the Proposed Development on the health issues identified in NPS EN-1 are considered within the individual chapters of the ES.
- 4.14.8. ES Chapter 27 contains an assessment of activities which may have an impact on physical or mental health during the construction, operation and decommissioning of the project. The chapter follows the World Health Organisation (WHO) definition of health as a state of physical, mental and social wellbeing, as well as the absence of disease or infirmity. It also considers the issues of wellbeing as a state in which

every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to contribute to their, her or his community.

- 4.14.9. Impacts associated with offshore elements of the project were not assessed as there are no sensitive receptors close enough to experience health impacts.
- 4.14.10. The human health effects that were considered included: construction and operational noise, air quality, exposure to contaminated land, employment during construction and operation, and exposure to electromagnetic fields (EMFs) during operation. The onshore infrastructure is largely routed through agricultural land and away from population centres and sensitive receptors, thus the potential number of receptors has been reduced through site selection and project design.
- 4.14.11. With the implementation of mitigation measures e.g. those identified for noise or dust, the ES concludes that effects would be negligible for the general population. Due to their increased likelihood to spend more time at home and their vulnerability to environmental changes there would be an increased likelihood of minor adverse effects on older people, those with existing health conditions and those living in deprived areas. The ES also identified a possible beneficial effect arising from the potential in increased employment for those living in deprived areas.
- 4.14.12. Public Health England (PHE) has produced guidelines identifying EMF thresholds above which there is the potential for human health effects. Analysis of potential effects by the NG include the Vattenfall and NG EMF Information Sheet [REP1-019], the relevant information of which is presented in Tables 27.12 to 27.15 of ES Chapter 27. This includes the potential effects of the proposed cable crossing with H3. The ES identifies that the level of EMFs produced under all scenarios (i.e. if H3 use HVAC or HVDC) would be approximately 1% of the value PHE has identified as safe. As such, the conclusion of the assessment is that there would be no effect to population health arising from EMFs during operation.
- 4.14.13. A summary of all health affects is detailed in Table 27.21 of ES Chapter 27. This shows that there are no predicted significant effects on physical or mental health during construction or operation. The effects arising during decommissioning are considered to be the same arising during construction.

Planning Issues

- 4.14.14. Matters pertaining to air quality, noise and vibration, contamination, light pollution and land use are considered within sections 4.5, 4.9, 4.12 and 4.13 above and are not repeated here.
- 4.14.15. Exposure to EMFs from the underground cables and substation apparatus was a matter raised both in WRs and orally throughout the Examination [e.g. RR-066, AS-035]. At OFH2 and 3, residents who lived close to the cable crossing point with H3 raised particular concerns about the effect of EMFs, induced currents and heat dissipation if HVAC and HVDC cables

were to cross. In this regard, Mr and Mrs Pearce drew the ExA's attention to a NG information note and a research paper by Andrew Goldsworthy [REP3-061].

- 4.14.16. Both CPC and OPC submitted questions into the Examination posed by Professor Tony Barnet [REP6-023 and REP7-086] which related to direct and indirect health impacts of the project in the medium and long term and the impact of particulate emission plumes on the ageing and child population.
- 4.14.17. Several IPs commented on the impact of the Proposed Development on mental wellbeing and the stress and anxiety encountered during both the consultation stage and during the Examination. For example, Patricia Lockwood wrote:

"I feel it is important to let PINS know, (in view of the mental health epidemic facing the country), that there is already much stress effecting people's health in Necton which has been directly caused by Vattenfall's proposal and consultations over the last two years" [REP6-040].

- 4.14.18. PHE did not offer any comments on the application [RR-142].

ExA Reasons

- 4.14.19. The District Councils all agreed that the methodology adopted for the Health Impact Assessment (ES Chapter 27) was appropriate and robust and that the outcome of the assessment was suitable [REP9-043, REP8-088 and REP8-082]. NNDC stated that once constructed, the impacts of the proposal on human health is likely to be benign.
- 4.14.20. Current Government policy on electric and magnetic fields is that power lines should comply with the ICNIRP Guidelines on exposure to EMFs. The voluntary Code of Practice: Power Lines: Demonstrating Compliance with EMF Public Exposure Guidelines [REP4-042] implements this policy. The Electricity Industry agrees that whenever evidence is required of compliance with EMF exposure limits, it will provide evidence according to the Code of Practice.
- 4.14.21. An analysis of potential effects of EMFs was produced by the NG for both the Proposed Development and in combination with H3 [REP1-019]. The report states that underground cables, regardless of frequency, have an earthed metallic shield which protects them from damage but also prevents electric fields escaping the cables. However, magnetic shields are not protected in the same way and will be produced outside the cables. The NG analysis confirms that the substation and cable for the Proposed Development (taking into account of the potential future Norfolk Boreas project) would be compliant with the UK exposure limits.
- 4.14.22. The NG report also took into account those fields which may result where it is proposed the power cables from H3 and the proposed Development would cross. As there would be multiple possibilities for cable crossing points the calculations produced by NG were based on the worst-case scenarios typical of the next generation of Vattenfall and Orsted offshore

wind projects in development in the UK. This found that the maximum calculated AC magnetic fields would be 14% of the UK exposure limit values and the maximum DC magnetic fields would be less than 1%.

- 4.14.23. In a question put to the Applicant by the ExA with regard to the concerns and evidence submitted relating to the cable crossing point, the Applicant responded that electromagnetic induction is a phenomenon that only becomes pronounced for longer, parallel runs of cables, rather than a 90 degree crossing such as that proposed and even then the magnitude of induced current is such that the resultant fields are negligible in human health terms. Further evidence pertaining to this matter was submitted at D7 [REP7-050].
- 4.14.24. The ExA has carefully considered all of the concerns and submitted evidence relating to this issue. However, the project specific analysis within the report produced by the NG explicitly states that if different technologies are used, the magnetic fields do not interact with each other and in that scenario the installations of the HVAC and HVDC cables can be considered separately. According to the report, all of the cable crossing scenarios would be compliant with the UK exposure limits. Thus, on the basis of the evidence before it, the ExA is satisfied the EMFs that would be produced if the development were to go ahead would remain well within the ICNIRP exposure guidelines in compliance with Section 2.10 of NPS EN-5. Section 2.10.16 states that when exposure levels are within the ICNIRP reference levels, mitigation is unlikely to be proportionate.
- 4.14.25. In terms of heat dissipation, the Applicant has confirmed that the cable installation works would be designed so as to ensure that the other party (H3) can still install cables without any thermal interactions [REP2-004]. The Applicant also confirmed that whilst the upper cables would have a minimum depth for installation of 1.05m to limit impacts to land use during operation, there is no maximum depth required to achieve adequate separation between the two cables for heat dissipation and separation between the two projects would be determined at the detailed design phase [REP4-040].
- 4.14.26. The ExA recognises that the Examination has been a stressful and daunting process for many local residents. The ExA has strived to ensure that the process has been one of inclusivity for all parties by allowing people ample opportunity to make the points they wished to raise. On this basis, and having regard to the evidence before it, the ExA does not consider that the Proposed Development would lead to significant effects on mental health.

Conclusion

- 4.14.27. On the basis of the evidence before it, the ExA is satisfied the EMFs that would be produced if the development were to go ahead would remain well within the ICNIRP exposure guidelines in compliance with Section 2.10 of NPS EN-5. In addition, the ExA has not found that there would be significant effects arising from air quality, noise and vibration,

contamination or land use and does not consider that there would be any significant impacts on mental or physical health.

- 4.14.28. In light of the above, the ExA concludes that the Proposed Development would comply with NPS-EN1 and that health matters do not weigh against the Order being made.

4.15. ONSHORE ECOLOGY AND ORNITHOLOGY

Introduction

- 4.15.1. The Proposed Development has the potential to impact upon onshore ecology and ornithology. This Section considers the effects of the Proposed Development on these matters, including biodiversity and the natural environment. Offshore ornithology is considered in Chapter 5.
- 4.15.2. This Section should be read together with Chapter 6 which sets out our analysis and conclusions relevant to the HRA under the Habitats Directive and the Birds Directive as transposed in the UK through the Habitats Regulations.

Policy Considerations

- 4.15.3. NPS EN-1 sets out policy considerations relative to onshore ecological matters. The Assessment Principles set out in Part 4 describe the content of the ES that must accompany projects such as the Proposed Development and the parallel process under the Habitats legislation. Part 5 deals with Generic Impacts including impacts on biodiversity and geological conservation.
- 4.15.4. Key policy considerations for onshore ecology set out in NPS EN-1 are;
- whether the development would give rise to likely significant effects, including any significant residual effects taking account of any proposed mitigation measures or any adverse effects of those measures, have been adequately assessed (paragraph 4.2.4);
 - how the effects of the applicant's proposal would combine and interact with the effects of other development including projects for which consent has been sought or granted, as well as those already in existence (paragraph 4.2.5);
 - whether the development would be consistent with the Government's biodiversity strategy Working with the Grain of Nature taking account of the challenge of climate change (paragraph 5.3.6);
 - whether significant harm to biodiversity and geological conservation interests would be avoided, including through mitigation and consideration of reasonable alternatives (paragraph 5.3.7);
 - giving appropriate weight in decisions to designated sites of international, national and local importance as well as protected species (paragraph 5.3.8);
 - refusing consent if development would have an adverse impact on the integrity of a Site of Special Scientific Interest (SSSI) unless the benefits, including need for the development, outweigh the harm that would be caused (paragraph 5.3.11);

- giving due consideration to regional or local designations of sites with a role in meeting national biodiversity targets, and contributing to quality of life and well-being of the community (paragraph 5.3.13);
- not granting development consent that would result in its loss or deterioration of ancient woodland unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat (paragraph 5.3.14);
- maximising opportunities for building-in beneficial biodiversity or geological features in and around developments, using requirements or planning obligations where appropriate (paragraph 5.3.15); and
- refusing consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm (paragraph 5.3.17).

4.15.5. NPS EN-1 also sets out matters that the Applicant is expected to address:

- ensure that the ES describes the aspects of the environment likely to be significantly affected by the project including the effects on flora and fauna, and measures envisaged for avoiding or mitigating significant adverse effects (paragraph 4.2.1);
- ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species of principal importance for the conservation of biodiversity (paragraph 5.3.3);
- show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests (paragraph 5.3.4); and
- include appropriate mitigation measures as an integral part of the proposed development and to demonstrate that:
 - confine activities during construction to the minimum areas required for the works;
 - follow best practice during construction and operation to ensure the risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;
 - restore habitats, where practicable, after construction works have finished; and
 - take opportunities to enhance existing habitats and, where practicable, create new habitats of value via site landscaping proposals (paragraph 5.3.18).

4.15.6. NPS EN-3 on Renewable Energy Infrastructure includes the aim for renewable energy infrastructure projects to mitigate adverse impacts on ecology by good design and ecological monitoring (paragraphs 2.4.2 and 2.6.70). It also states at paragraph 2.7.15:

"There may be some instances where it would be more harmful to the ecology of the site to remove elements of the development, such as the access tracks or underground cabling, than to retain them."

- 4.15.7. Several policy considerations in NPS EN-1 are reflected in the NPPF in Section 15, Conserving and Enhancing the Natural Environment. For example, paragraph 179 states:
- "planning decisions should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity or geological value and soils, commensurately with their statutory status."*
- 4.15.8. European and UK legislation relevant to onshore ecology and onshore ornithology is set out in ES Chapter 22, Onshore Ecology [APP-346] and ES Chapter 23, Onshore Ornithology [APP-347].
- 4.15.9. ES Chapters 22 and 23 set out in Table 22.2 and Table 23.2 respectively, details of local planning policy documents and relevant policies in respect of onshore ecology and onshore ornithology. The relevant policies are:
- NCC's Environmental Policy (2016): *Policies 1 and 2*;
 - BC's Adopted Core Strategy and Development Control Policies Development Plan Document (2009): *SS1 Spatial Strategy, CP10 Natural Environment, DC12 Trees and Landscape*;
 - Joint Core Strategy for Broadland, Norwich and South Norfolk (2011; updated 2014): *Policy 1, Addressing climate change and protecting environmental assets*; and
 - North Norfolk Local Development Framework: Core Strategy (2008, updated 2011): *SS1 Spatial Strategy for North Norfolk and SS2 Development in the Countryside, EN7 Renewable Energy, and EN9 Biodiversity and Geology*.

Applicant's Case

Key documents submitted

- 4.15.10. ES Chapter 22, Onshore Ecology [APP-346] and ES Chapter 23, Onshore Ornithology [APP-347] set out the potential impacts of the Project within an existing baseline environment in respect to onshore ecology and ornithology, within a study area around the onshore Project area. An Ecological Impact Assessment (EcIA) was made of potential impacts and mitigation required for the construction, operation and decommissioning of the Project. The Applicant's ES included the following documents:
- ES Appendix 22.1 - Extended Phase 1 Habitat Survey Report [APP-232];
 - ES Appendix 22.2 - Great Crested Newt Survey Report [APP-241];
 - ES Appendix 22.3 - Water Vole Survey Report [APP-242];
 - ES Appendix 22.4 - Bat Activity Survey Report [APP-243];
 - ES Appendix 22.5 - Bat Emergence / Reentry Survey Report [APP-244];
 - ES Appendix 22.6 - Desmoulin's Whorl Snail Survey Report [APP-245];
 - ES Appendix 22.7 - Botanical Survey Report [APP-246];
 - ES Appendix 22.9 - Norfolk Hawker Dragonfly Survey [APP-248];
 - ES Appendix 22.10 - Onshore Ecosystem Services Assessment [APP-249];

- ES Appendix 23.1 - Onshore Winter Passage Bird Survey Scoping Report [APP-251];
- ES Appendix 23.2 - Wintering Bird Surveys [APP-252];
- ES Breeding Bird Report [APP-254];
- ES Figure 23.6 Breeding Bird Survey Locations [APP-574];
- ES Figure 22.5 - Extended Phase 1 Habitat Survey and Norfolk Living Map [APP-560];
- ES Figure 22.6 - Great crested newt survey results [APP-561];
- ES Figure 22.7 - Water vole survey results [APP-562];
- ES Figure 22.8 - Bat activity results [APP-563];
- ES Figure 22.9 - Bat emergence results [APP-564];
- ES Figure 22.10 - Reptile survey locations [APP-565];
- ES Figure 22.11 - Botanical results [APP-566];
- ES Figure 22.12 - Invertebrate results [APP-567];
- ES Figure 22.2 - Statutory designated sites for nature conservation [APP-557];
- ES Figure 22.3 - Non-statutory designated sites for nature conservation [APP-558];
- ES 2.11 Important Hedgerows [APP-023];
- ES Figure 26.3 - Transects in designated ecological sites [APP-593]; and
- ES Chapter 34 – Summary [APP-358].

- 4.15.11. The Applicant also submitted an Outline Landscape Ecological Management Strategy (OLEMS) [APP-031] intended to be a framework for an Ecological Management Plan (EMP) to be approved under Requirement 24 of the dDCO [REP9-007]. The OLEMS was updated at D7 [REP7-008] and again at D9 [REP9-014].

Applicant's approach

- 4.15.12. The EPP provided a framework for consultation with relevant stakeholders and SoCGs reflected this process as well as ongoing post submission consultation where applicable. Each SoCG with EPP stakeholders covered:
- Existing Environment;
 - Assessment Methodology Findings;
 - Cumulative Impact Assessment; and
 - Mitigation and Management.
- 4.15.13. Different study areas were used for different receptors depending on their sensitivity and on their habitat preferences, discussed and agreed with stakeholders. The EcIA was informed by findings from a desk-based exercise and field survey data collected from July 2016 to October 2017. Access was only possible for approximately 50% of the field survey habitats and species study area (i.e. 50% of the onshore project area plus a 50m buffer) for the 2017 ecological surveys.
- 4.15.14. Therefore, a precautionary approach was taken in assuming that protected or notable species would be present in unsurveyed areas. In such cases an assessment of the habitat and its suitability to support

protected or notable species was made using data from the Extended Phase 1 Habitat Survey and Norfolk Living Map [APP-560].

- 4.15.15. The habitats within the study areas represent typical lowland UK habitat types comprising largely arable farmland with hedgerows, pockets of woodland, wetland and standing and flowing water. Typical habitats for notable species and habitats are the designated sites and parcels of woodland and wetland, with species in other areas relying strongly on ecological corridors such as watercourses and hedgerows between arable farmland (paragraph 171 [APP-346] and [APP-347]).
- 4.15.16. The Applicant's approach to determining the significance of an impact followed a systematic process, namely identifying, qualifying and quantifying the sensitivity, value and magnitude of all ecological receptors scoped into the assessment. The significance of each potential impact was then determined.
- 4.15.17. Pre-application consultation took place with specific reference to onshore ecology including ornithology with Breckland Council, EA, NE, NCC, NNDC and the Wildlife Trusts. (Consultation Report, Appendix 9.3 - Onshore Ecology and Ornithology Outgoing documents, including the Onshore Ecology and Ornithology Method Statement [APP-043]).
- 4.15.18. East Ruston Parish Council, Colby and Banningham Parish Council, CPRE N2RS, Orsted and St Peters Ridlington also responded to consultation on onshore ecology, including RSPB on onshore ornithology [APP-346, APP-347].
- 4.15.19. During the site selection process all statutory and non-statutory sites located within the Order Land, designated for their nature conservation value, have been avoided with the exception of River Wensum SAC/SSSI (Table 22.10 in [APP-346] and Table 23.12 in [APP-347]). At this site alternative construction methods were selected to avoid impacts (trenchless techniques to pass beneath the feature).
- 4.15.20. Ancient woodland and woodland parcels have been avoided where possible and, where hedgerows are crossed the working width would be reduced from 45m to 20m to minimise potential impacts. A buffer of 15m around all ancient woodlands, forms part of the embedded mitigation. Old Carr (Dillington) ancient woodland is adjacent to the cable route as noted at paragraph 300 of [APP-346] but no significant effects have been predicted on this site.
- 4.15.21. Temporary habitat loss and fragmentation would occur during the project construction phase along the OCR and at the proposed substation. No significant effects to any habitat except for hedgerows are identified. For hedgerows mitigation measures would ensure that the habitat which is temporarily lost for between two and four years (plus the length of time for reinstatement hedgerows to mature) is replaced by improved hedgerow habitat which meets the criteria set out in the Norfolk Hedgerow BAP (NBP, 2009). However, given the duration of these

temporary effects, a residual impact of moderate adverse significance is expected to remain. (paragraph 369, [APP-346]).

- 4.15.22. Habitats would be reinstated as far as practicable following construction, for example by replanting and the effects, subject to consideration of the proposed onshore project substation, would be reversible in the long-term. Section 22.7 and Table 22.32 [APP-346] describes the potential impacts on specific ecological receptors. The mitigation set out in the EcIA would be delivered via the OLEMS [REP9-014] and secured through dDCO [REP9-007] Requirement 24, in order to ensure that all potential impacts identified within the EcIA are reduced to a non-significant level.
- 4.15.23. Potential impacts on badgers, bats, water voles, otters, great crested newts, common reptiles, Desmoulin's whorl snail and protected flora are also anticipated to occur during the construction phase. These impacts include disturbance and risk of injury, permanent and temporary habitat loss and habitat fragmentation. Species specific mitigation has been identified for these impacts, which includes pre-construction surveys, reinstatement of lost habitats and precautionary methods of working to be secured in the OLEMS [REP9-014].
- 4.15.24. Significant adverse residual effects would remain after mitigation for bats (loss of connective hedgerow habitat) and hedgerows; however, these impacts would reduce to non-significant over time as replacement hedgerows mature (paragraph 442 of [APP-346]).
- 4.15.25. The Applicant stated in Table 22.32 [APP-346] that no significant adverse effects were identified from maintenance and operational lighting at the onshore project substation. Operational lighting would be designed to conform with best practice guidance to minimise disturbance to light-sensitive species and secured via OLEMS (paragraph 233 [REP9-014]).
- 4.15.26. A final detailed scheme of protection and mitigation measures for any European Protected Species potentially affected during the construction and operation phases of the project, prior to construction, would be agreed with the relevant authorities and proposed as part of draft mitigation licence applications under Requirement 28 of the dDCO [REP9-007].
- 4.15.27. For onshore ornithology the potential for temporary habitat and disturbance of birds during construction was assessed [APP-347], along with potential noise and light disturbance during operation associated with the onshore project substation.
- 4.15.28. Mitigation measures would include removing vegetation prior to bird breeding seasons, reinstatement of removed hedgerows following construction, and an operational lighting scheme at the onshore project substation that conforms to guidance set out in the Bat Conservation Trust's Artificial Lighting and Wildlife Guidance, secured within the OLEMS [REP9-014].

- 4.15.29. The Applicant considers that provided mitigation measures are in place, the Proposed Development is predicted to have no greater than minor residual effects in relation to onshore ornithology.
- 4.15.30. The following projects were included in the Applicant's cumulative effects assessment:
- Norfolk Boreas Offshore Wind Farm;
 - Hornsea Project Three;
 - Dudgeon Offshore Wind Farm;
 - Bacton Gas Terminal Coastal Protection; and
 - Bacton and Walcott Coastal Management Scheme.
- 4.15.31. The Applicant assessed cumulative effects with these projects as being no greater than for the Project alone (ES Chapter 22, paragraphs 591-624 [APP-346]).

Planning Issues

- 4.15.32. Key matters considered during the Examination were:
- impacts to groundwater supply at Dereham Rush Meadow SSSI, Hollow Farm Meadow SSI, Whitwell Common SSSI and Booton Common SSSI;
 - noise impacts to bird features of SSSI's;
 - noise and vibration impacts to sand martin at Happisburgh;
 - impacts to ground nesting birds;
 - monitoring of ecological effects; and
 - air quality impacts at Felbrigg Wood SSSI.
- 4.15.33. Matters relating to European sites are discussed in Chapter 6 of this Report.

Impacts on groundwater

- 4.15.34. NE advised that construction works would potentially affect groundwater supply to a number of SSSIs not considered by the Applicant (Dereham Rush Meadow SSSI, Holly Farm Meadow SSSI, Whitwell Common SSSI and Booton Common SSSI). The Applicant noted [REP1-007] that the sites are partially fed by groundwater from the chalk aquifer, the depth of which in the vicinity of the onshore Project area confirms that interactions with the chalk aquifer will not occur. As there was no direct pathway between the construction works and underlying chalk aquifer a detailed groundwater assessment was therefore unnecessary.
- 4.15.35. However, since surface water flows at the SSSIs mentioned in the above paragraph may be affected by construction works the Applicant committed to a scheme for each watercourse crossing, diversion and reinstatement to include site specific details of sediment management measures and pollution prevention. The scheme would be submitted to and approved by the relevant planning authority in consultation with NE and secured via Requirement 25 of the dDCO [REP9-007].

Bird features of SSSI's

- 4.15.36. NE [RR-106] expressed concern that no detailed assessment of noise on bird features of SSSI's was carried out. It requested a detailed noise assessment for sites within 500m of the project area and mitigation provided for identified impacts. The Applicant had agreed with NE at pre-application stage a buffer of 300m from designated sites in which potential noise impacts were considered. The Applicant sought to avoid sites where possible using the agreed noise buffer and with the exception of the River Wensum all other SSSIs have been avoided by at least 300m. No notified species were recorded roosting during the 2017 breeding bird surveys, and as such no potential impacts on notified features of the River Wensum SSSI were identified. As to the assessment of noise on bird features of SSSIs, NE's final position [REP6-013] was that it was satisfied with the agreement on the 300m buffer.

Sand martin colony at Happisburgh Cliffs

- 4.15.37. Concerns were also expressed by NE [RR-106] and EA [RR-107] on potential impacts to the sand martin colony near the coastal path at Happisburgh and the landfall works, particularly in relation to assessment of noise and vibration. Worst-case construction noise levels were modelled for this location. Noise attributable to the proposed landfall works in this location would be between 35dB and 45dB (Appendix 25.2, ES Chapter 25 [APP-349] a potential noise increase of 3dB along the coastal path. As the sand martins nest in the cliff face there would be further noise reduction as the cliff itself would screen noise effects. As such, the Applicant considers [REP1-007] that any noise increase at the cliff face, associated with the landfall works, would be negligible.
- 4.15.38. The Applicant considered [REP1-007] that the landfall area is underlain by sandy clay and sand to about 18m below ground level (Section 19.6.1.1 of ES Chapter 19 [APP-343]). This material is a poor propagator of vibration and the looser the material the more any vibration effect becomes dampened. As such there is no propagation pathway for vibration effects between the works (either 130m away or up to 20m below) and known sand martin nesting sites, and no impact is anticipated. On this basis the Applicant does not propose that works should specifically avoid the sand martin breeding season and no further mitigation measures are considered necessary. In SoCG [REP9-046] NE expressed satisfaction that specific issues raised with respect to assessment of impacts to sand martins at Happisburgh Cliffs, have been resolved.

Nesting birds

- 4.15.39. NE's commented at [RR-106] Appendix 4, point 16, that nesting birds should be added to the protected species in paragraph 230 of the OLEMS [APP-031] such that works would stop immediately if nesting birds are found during construction.
- 4.15.40. The Applicant's response [REP1-007] to FWQ24.18 [PD-012] points out that OLEMS [APP-031] sets out the procedure if any protected species

are unexpectedly found, i.e. that works will cease immediately. It does not provide a list of protected species where this applies, as all nesting birds are protected³⁷. Therefore, the Applicant does not propose to update the OLEMS [APP-031] which requires vegetation removal to be undertaken outside of the breeding bird season where possible. However the OLEMS has been updated [REP9-014] to explicitly refer to pre-construction checks for nesting birds where vegetation removal is required during the bird breeding season.

Monitoring

- 4.15.41. FWQ 24.19 [PD-012] sought further information as to the monitoring envisaged and asked if a pre-construction survey would be undertaken by a qualified ecologist, and if an Ecological Clerk of Works (ECoW) were proposed.
- 4.15.42. The Applicant stated that monitoring would only be required should great crested newts or water voles need to be translocated. The updated OLEMS [REP9-014] provides for pre-construction surveys for all protected species which would inform the mitigation and monitoring required under the EMP and secured through Requirement 24 of the DCO. An ECoW would be responsible for implementation of the agreed ecological mitigation on site during construction. Specific post-construction monitoring commitments were given for water voles and great crested newts. Post-construction monitoring would be agreed with NE via EMP and secured by Requirement 24 dDCO.

Air quality and Felbrigg Wood SSSI

- 4.15.43. Potential air quality impacts were assessed for designated sites within 200m of the road transport network that will be required during construction. Felbrigg Wood SSSI was identified with the potential to be subject to air quality impacts, being near the A148 between King's Lynn and Cromer, part of the road network proposed to be used. (see Chapters 4.7 and 4.13 of this Report). The impact of the Proposed Development on sensitive habitats of Felbrigg Woods SSSI was assessed by the Applicant as of negligible significance.
- 4.15.44. Felbrigg Wood SSSI is designated for lichens along with its invertebrate assemblage and beech woodland community. NE required further information on woodland species within 200m of the road that would be affected and the timings, the number of vehicles and the pollution which they would bring about. In the SoCG [REP9-046] the Applicant has committed to consult NE on the final AQMP where it would make available the information requested. The AQMP would be part of the COCP and so secured by Requirement 20 dDCO [REP9-007].

³⁷ 'Priority species' listed under Section 41 NERCA2006 were recorded in the Onshore Wintering Bird Surveys [APP-252], Breeding Bird Surveys [APP-254] and the Extended Phase 1 Habitat Survey [APP-232]

- 4.15.45. As a related matter NE requested [REP9-057] that it be consulted before approval was given to the OTMP [APP-032]. This was not agreed by the Applicant and we consider this matter further below.

ExA's Reasons

- 4.15.46. At D9 the Applicant submitted a final updated version of the Statement of Commonality of SoCGs [REP9-037] identifying matters agreed, matters subject to further negotiation or matters not agreed, with respect to each SoCG. As regards onshore ecology, all topics the subject of SoCGs were agreed save that NE had outstanding concerns discussed below. As regards onshore ornithology all topics covered in the EPP had been agreed with the relevant stakeholders in their respective SoCGs.
- 4.15.47. The final SoCG between the Applicant and NE was submitted at D9 [REP9-046].
- 4.15.48. The survey methodology for the EcIA was not agreed as survey data was collected for 50% of onshore cable route where access was available and as the Phase 1 Habitat Surveys were undertaken in February. The optimum period for Phase 1 Habitat Survey is between March and September, however the findings of the Phase 1 survey are considered by the Applicant to be appropriate to characterise the habitats present within the study area. 50% coverage outside the optimum period is not best practice, however we acknowledge the difficulties in surveying such a long cable route, and the efforts to supplement field work with desk based assessments including the Norfolk Living Map. We consider that sufficient baseline information has been provided upon which an assessment of effects can be undertaken. Furthermore, we are satisfied that pre-construction surveys would be undertaken in appropriate survey seasons to inform site-specific mitigation within the EMP. This is reflected in the OLEMS [REP9-014].
- 4.15.49. The Applicant provided at D6 Clarification Notes [REP6-013] regarding the water supply mechanisms to the water dependent designated sites (Dereham Rush Meadow SSSI, Holly Farm Meadow SSSI, Whitwell Common SSSI and Booton Common SSSI). These were of assistance in evaluating the extent to which mitigation techniques would be likely to be effective. NE expressed satisfaction [REP9-046] with the clarification notes relating to these sites, and the conclusion of no likely significant effect to Booton Common SSSI from open cut trenching and dewatering or directional drilling (based on the conceptual model and the mitigation measures, which have enabled a conclusion of low or negligible risk).
- 4.15.50. As to surface water flows at SSSIs potentially affected by construction works the proposed scheme for each watercourse crossing, diversion and reinstatement has been taken into account. The ExA considers there would be sufficient control measures to safeguard designated sites in relation to sediment control, pollution prevention and reinstatement of all work areas at watercourse crossings.

- 4.15.51. The specific issues raised relating to the assessment of impacts to sand martins at Happisburgh Cliffs have been resolved [REP9-046].
- 4.15.52. All ecological management proposals are captured within the OLEMS and would be carried forward into the final EMP, secured within Requirement 24 dDCO [REP09-007]. The EMP would be approved by the relevant planning authority in consultation with NE and informed by post-consent ecological surveying of previously un-surveyed areas for the relevant stage.
- 4.15.53. The updated OLEMS [REP9-014] would provide a good framework for the EMP which would act as a single document for all ecological mitigation considerations on site e.g. a single reference for the ECoW. It provides that all reasonable precautions would be taken by the Applicant and their contractors to safeguard protected species through individual Species Protection Plans.

NE request to be added as consultee to OTMP

- 4.15.54. NE's case for being a consultee on the OTMP is that it maps the final routes in relation to designated sites and an assessment of air quality impacts should be made in combination with other developments. Although air quality is not a matter addressed in terms within the OTMP, that is a specific topic addressed in the final CoCP in respect of which Requirement 20 of the dDCO does include NE as a consultee in advance of its approval. We also note that the final TMP would need to be agreed by the relevant planning authorities and they would be at liberty to consult with NE before approval. Therefore, we are not persuaded to accept NE's request on this matter.

Conclusion

- 4.15.55. The policy considerations relative to onshore ecological matters described above have been complied with and the Assessment Principles set out in Part 4 NPS EN-1 have been followed, giving appropriate weight to designated sites and the effects of the Proposed Development, assessed cumulatively with other development. The process of excluding alternatives that were considered, and the mitigation proposed would avoid significant harm to biodiversity interests and be in line with the Government's biodiversity strategy.
- 4.15.56. The potentially significant effects to designated sites, habitats and species identified by the Applicant would be subject to mitigation measures as described in the further information provided by the Applicant in its written representations and clarification notes. The updated OCoCP and OLEMS provide a satisfactory basis on which the final versions of those plans would be agreed post-consent and secured within the dDCO [REP9-007]. The significant adverse residual effects that would remain after mitigation to hedgerows and bats, whilst significant over a temporary period, would reduce to non-significant over time as replacement hedgerows mature. The temporary residual effects are considered as part of the overall planning balance in Chapter 7 of this Report.

- 4.15.57. With mitigation measures in place, the Proposed Development would have no greater than minor impacts in relation to onshore ornithology.

4.16. LAND USE

Introduction

- 4.16.1. In this section we consider the effects of the Proposed Development on onshore land use and recreation. The issues considered include the effects on agricultural land, soil quality, farming operations and public rights of way. Impacts on tourism are considered as part of Chapter 4.8 (Socio-Economic Impacts).

Policy Considerations

- 4.16.2. Section 5.10 of NPS EN-1 contains policies relevant to land use considerations. In particular, the Government recognises that an energy infrastructure project will have direct effects on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development (paragraph 5.10.1). The Government's policy is to ensure that there is adequate provision of high-quality open space and sports and recreation facilities to meet the needs of local communities (paragraph 5.10.2).
- 4.16.3. Paragraph 5.10.5 sets out that the ES should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.
- 4.16.4. In addition, the Applicant should seek to minimise impacts on the best and most versatile agricultural land, defined as grades 1, 2 and 3a of the Agricultural Land Classification (ALC) and preferably use land in areas of poorer quality except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination (paragraph 5.10.8).
- 4.16.5. The Government explains further that applicants should not site their scheme on the best and most versatile agricultural land without justification. Little weight should be given to the loss of poorer quality agricultural land (grades 3b, 4 and 5) except in areas where particular agricultural practices contribute to the quality and character of the environment or the local economy (paragraph 5.10.15).
- 4.16.6. At paragraph 5.10.19, NPS EN-1 requires applicants to seek to minimise effects on the existing use of the proposed site by applying good design principles, including the layout of the project. Rights of way, National Trails and other rights of access to land are recognised (paragraph 5.10.24) as important recreational facilities for walkers, cyclists and

horse riders. The Government makes clear that applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case appropriate mitigation requirements may be attached to any grant of development consent.

Applicant's Case

- 4.16.7. ES Chapter 21 deals with land use and agriculture [APP-345]. ES Chapter 30 is concerned with tourism and recreation [APP-354]. The effects of the Proposed Development on tourism are dealt with in Chapter 4.8 of this Report. The use of CA powers and access to affected land is dealt with in Section 8 of this Report.

Land use and agriculture

- 4.16.8. Consultation undertaken for the purposes of the EIA as it relates to land use and agriculture assessment is described in [APP-345] and Table 21.3. Responses were received from the SoS, NE, CPRE, NCC, NNDC, NFU and Costessy Town Council.
- 4.16.9. By the close of the Examination agreement had been reached with relevant stakeholders on the Applicant's analysis for EIA purposes, of the existing environment, the assessment methodology, assessment findings and CIA [REP9-037]. NFU had outstanding concerns related to mitigation considered further below.
- 4.16.10. The primary land use in the area covered by the onshore Project is agricultural, Figure 21.2 [APP-345]. Agricultural land across the onshore Project area ranges from ALC Grades 1 to 4 [APP-345]. There are a number of rural towns and villages nearby and urban areas including Dereham, Aylsham, Reepham and North Walsham, adjacent to but outside the Project area.
- 4.16.11. The Applicant reviewed Breckland Council, Broadland District Council and NNDC local plans and set out in section 21.6.1 [APP-345] where land was affected by future development or change of use. Policies and designations relevant to land use and agriculture in relation to the onshore Project area are shown on Figure 21.3 [APP-345].
- 4.16.12. Agriculture in Norfolk is mainly arable or in mixed use and soil types vary from clays, loam to light sands. The county contains over 5% of the total of the agricultural sector in England (Norfolk Rural Development Strategy Steering Group, 2013) and the rural economy accounts for 44% of jobs in the county, the largest agricultural sector of any English county. Field drainage systems are a vital part of agriculture in Norfolk, in some cases these systems are not mapped.
- 4.16.13. Soil erosion is expected to occur naturally over time, exacerbated by climate change and farming practices. Innovative agricultural technology that drive improvements in water, energy and nutrient supply are however expected to increase food productivity as cited by Norfolk's Rural Development Strategy but overall the quality and availability of

agricultural land could reasonably be expected to decline over time, [APP-345] paragraphs 96, 97.

- 4.16.14. Key potential impacts of the project focussed on drainage, agricultural land, soil quality, Environmental Stewardship Schemes (ESS) and utilities.
- 4.16.15. The main findings from the impact assessment are set out in Table 21.21 [APP-345]. The onshore Project area would cross land in agricultural use which is mainly high to medium ALC grade (between ALC grades 2 and 3). The onshore project substation would be located in ALC grade 3 land. About a quarter of the land in the onshore project area would be on land subject to an ESS. However no Higher Level Stewardship Schemes are recorded along the proposed onshore cable route or at the landfall.
- 4.16.16. The site selection process for the onshore cable route was developed to minimise impacts and avoid areas of woodland, urban areas, and sites designated for nature conservation or cultural heritage. Embedded mitigation developed into the design of the Project with specific regard to land use and agriculture is described in Table 21.15:
- land take has been minimised where possible, reducing sterile land parcels, aligning with field boundaries and avoiding the BMV land;
 - an attenuation pond at the onshore project substation and National Grid substation extension will accommodate additional impermeable ground; and
 - sufficient cable burial depth is provided to minimise impact and interaction with drainage.
- 4.16.17. Other relevant embedded mitigation set out in Table 21.14 [APP-345] would indirectly reduce impacts on land use and agriculture, including:
- the use of HVDC technology (reducing the footprint of the Project by installing less cables);
 - duct installation strategy (in a sectionalised approach in order to minimise impacts);
 - use of long HDD at landfall (to avoid closures to Happisburgh beach and retain open access during construction); and
 - trenchless crossings (to reduce impacts including to recreational assets such as Marriott's Way and the Norfolk Coast Path).
- 4.16.18. Should consent for the Project be granted its detailed design and development of the CoCP would refine the worst-case impacts as assessed in the ES [APP-345]. As monitoring is an important element in managing the actual impacts the requirement for appropriate design and scope of monitoring would be agreed with relevant stakeholders and included in the CoCP secured by dDCO Requirement 20 prior to commencement of construction.
- 4.16.19. The potential impacts on land use and agriculture in terms of worst-case scenarios are assessed at Table 21.16 [APP-345] taking account of construction at landfall, the onshore cable route, new substation and NG substation extension and NG overhead modification work. The phasing of

the construction works is assessed for different scenarios with the total construction window for the one phase scenario anticipated to be five years, and six years for the two-phase scenario.

- 4.16.20. Potential impacts during construction, operation and decommissioning are set out in [APP-345] section 21.7.5:
- Drainage
 - Land taken out of existing use/disruption to agricultural activities
 - Degradation of natural resources – soil
 - Loss of soil resource – erosion
 - Impact to ESSs
 - Utilities
 - Permanent change to land use (during operation)
- 4.16.21. The impacts assessed range from no impacts, negligible, minor adverse, to moderate adverse (work at the NG substation extension would result in a temporary loss of some 30ha of arable land during the construction phase (worst case 30 months). Provided mitigation measures are in place, the Project is predicted to have no greater than minor impacts in relation to land use and agriculture.
- 4.16.22. Table 21.18 [APP-345] summarises the projects considered for CIA in relation to land use and agriculture. Cumulative impacts with other relevant projects are assessed as being no greater than minor.
- 4.16.23. The Applicant assessed for potential direct cumulative impacts: Norfolk Boreas Offshore Wind Farm (cable pull and onshore project substation (including the National Grid substation extension, any landscaping or planting, and the onshore 400kV cable route); and Hornsea Project Three (paragraphs 209,210 [APP-345].
- 4.16.24. Without mitigation cumulative impacts of moderate adverse significance would be on drainage systems during construction due to geographical overlap between the Project and Norfolk Boreas and Hornsea Project Three. These would be reduced to minor adverse impact through mitigation strategies including:
- the use of a specialist drainage contractor to locate and draw plans of drainage systems;
 - pre-construction Drainage Plan;
 - temporary damming, culverting or diversion; and
 - installing cables at a depth where they will be laid below the level of typical field drainage pipes.
- 4.16.25. Areas of interaction between impacts are set out in Table 21.20 [APP-345]. The worst-case impacts assessed take these into account and for the impact assessments that are considered conservative and robust.

Recreation

- 4.16.26. Impacts on land users in relation to tourism and recreational activities such as cycle routes, PRoW and national trails are considered in ES Chapter 30 Tourism and Recreation [APP-354]. Geology, ground

conditions and contamination are considered in ES Chapter 19 Soils, Geology and Ground Conditions [APP-343].

- 4.16.27. There are no areas of open access land within the footprint of the onshore project area, however small areas of open access land are found adjacent to the onshore cable route, at Bacton Wood, near Hoveton along the A140 and along the River Wensum [APP-345].
- 4.16.28. The onshore project area crosses five long distance trails, four cycle paths, 23 PRoW footpaths, three PRoW bridleways and three restricted PRoW bridleways. The embedded mitigation developed during the site selection process for the project has resulted in designated sites, heritage assets and urban centres being avoided, thus as a result potential impacts on tourism and recreational assets are largely avoided.
- 4.16.29. The onshore cable route would intersect with public rights of way (PRoW), including National and County Trails at 45 locations. These PRoWs that would be potentially affected by the Project are set out in the following application documents:
- Plan Showing Public Rights of Way to be Temporarily Stopped Up [APP-017]
 - ES Appendix 30.1 - Public Rights of Way and Cycle Routes [APP-318]
 - ES Figure 30.3 - Public Rights of Way, cycle routes and long-distance trails [APP-631]
 - D2 Submission - Public Rights of Way Plans [REP2-014]
- 4.16.30. The OWF sites are of a distance offshore to avoid effects on coastal tourism through visual impact or marine activities through physical interaction. There is potential for some interaction with coastal activities during construction along the offshore cable corridor and at the landfall, although the Norfolk coast does not have a high density of sailing clubs or other marine activity centres.
- 4.16.31. Mitigation techniques have been committed to that are proposed to reduce impacts in an indirect manner as for land use and agricultural considerations, as set out in [APP-354]. Table 30.18 sets out specific embedded mitigation for recreation, notably a commitment to no overhead lines which as assessed would lead to reduced impacts on landscape and visual receptors in the construction phase and practically no impacts during the operational phase.
- 4.16.32. Potential impacts during construction, operation and decommissioning are:
- increased marine construction traffic affecting attractiveness of the coastline for recreation;
 - disruption of marine recreation including sailing and water sports;
 - deterioration to bathing water, beaches and effect on recreation;
 - disruption to onshore coastal tourism and recreational assets;
 - visual impacts of construction activity to recreational receptors;
 - obstruction or disturbance to inland recreation assets;

- obstruction or disturbance to users of PRoW, paths and non-motorised routes;
 - disruption or impacts to open access or public land; and
 - visual and noise impacts on land-based tourism and recreation assets
- 4.16.33. These potential impacts are assessed as from negligible to minor adverse. [APP-354] Table 30.23 sets out high value footpaths and cycleways that would be interacted with by the Project, the impacts on which, arising from the Project would be negligible or minor adverse, save for a moderate adverse impact due to Weaver's Way, a Long Distance Walking Route that would be temporarily closed for about one week and then a controlled crossing installed.
- 4.16.34. The Applicant commits to working with NCC to ensure these impacts are temporary and an OCoCP [REP9-011] and PRoW Strategy [APP-028] are in place, detailing onshore construction methods, including requirements for provision of alternative routes of linear recreation routes including long distance trails, cycle routes, PRoW and local footpath networks. In consequence the residual impact is expected to be negligible due to only one high value PRoW that has the possibility of being closed. Close working with NCC, and good communications with to the public would mitigate adverse effects on Weaver's Way.
- 4.16.35. In addition, traffic increase is projected to affect pedestrian amenity to a moderately adverse effect at Link 41, B1436 – Felbrigg, south of Cromer, and Link 71, Vicarage Road / Whimpwell Street, south west of Happisburgh. Mitigation measures for moderate and major adverse traffic impacts are described in section 4.7 of this Report.
- 4.16.36. Thus, for recreation there would be some moderate adverse impacts associated with the Project assessed as likely in the short term which would be localised and the subject of mitigation in collaboration with directly affected stakeholders and relevant planning authorities (RPAs) to ensure all potential impacts are within an acceptable level.

Planning Issues

- 4.16.37. At the close of the Examination the outstanding matters to be resolved were those between the Applicant and NFU/LIG, as set out in the updated SoSCG [REP9-056] and Position Statement [REP9-033].
- 4.16.38. Some of the matters unresolved related to the proposed compulsory acquisition of land belonging to clients, particularly the farming community, of the NFU/LIG who sought further clarification on issues that would affect their use of the land during the construction and operational phases of the Proposed Development. These are considered in Chapter 8 of this Report.
- 4.16.39. NFU's position is summarised at Table 1 of [REP9-056]. Key points that relate to its clients' land use are:
- jointing bays and link boxes;
 - field drainage;

- increase in surface run off water from the haul road or construction compounds;
- treatment and reinstatement of soil during and after construction;
- soil management during construction and access routes;
- control of dust and effect on irrigation;
- differing ground levels preventing use of some of the access routes; and
- access to landowners' land severed by construction works.

4.16.40. These matters were the subject of further clarification and updates to the OCoCP [REP9-010]:

- consultation would take place with landowners to discuss the potential locations of the link boxes;
- a pre-construction drainage plan would include provisions to minimise water within the working area and ensure ongoing drainage of surrounding land;
- a detailed Surface Water and Drainage Plan (Requirement 20 (2)(i)) will be developed, agreed with the relevant regulators and implemented;
- OCoCP [REP9-010] is updated to ensure required mitigation for treatment and reinstatement of soil would be implemented on site to minimise any effects full records of condition would take place pre- and post-installment;
- OCoCP [REP9-010] updated to include control measures in relation to air quality to ensure that any potential effects are adequately mitigated and details the dust management measures for the construction works, secured through Requirement 20(2)(i) of the draft DCO;
- accesses required for construction have been assessed individually to provide access to complete the construction works and these are secured within the Order Limits submitted as part of the application of the projects and therefore are not able to be changed. Where construction accesses are also planned to be used for operation and maintenance and there are better alternatives, these will be considered on a case-by-case basis;
- landowners would be given an access point across the haul road as long as there are no concerns from an HSE perspective; and
- temporary means of access will be provided to severed fields for vehicles and machinery in order to ensure access is maintained wherever practicable and appropriate planning and timing of works will be agreed with landowners and occupiers, subject to individual agreements, to reduce conflicts.

4.16.41. In the updated SoCG between the Applicant and NCC at D9 [REP9-047] all matters relating to recreation were agreed.

ExA Reasons

4.16.42. Environmental stewardship schemes are an important component of the Government's strategy to improve the environmental management of agricultural land. Entry Level Stewardship (ELS) includes simple and effective land management agreements with priority options. Higher

Level Stewardship (HLS) comprises more complex types of management and agreements tailored to local circumstances.

- 4.16.43. The location of the ESS agreements within the onshore project area is shown in Figure 21.5 [APP-345]. The onshore project substation and NG substation extension and overhead line modification would not be sited on land subject to any ESS, however the onshore cable route would cross Entry Level (34.13, 6.4% of the onshore project area) and Entry Level plus Higher Level (117.8ha, 24.1% of the onshore project area). Stewardship Scheme agreements and therefore elements of the construction, operation and decommissioning of the onshore cable route such as trenching, cable installation and link boxes that could potentially impact on land under an ESS agreement have been considered.
- 4.16.44. The onshore Project area would cross land in agricultural use which is mainly of high to medium ALC grade (between ALC grades 2 and 3), with the onshore project substation located in ALC grade 3 land. A relatively low proportion, about a quarter, of land would be subject to ESS and no Higher Level Stewardship Schemes are recorded, either along the onshore cable route or at landfall.
- 4.16.45. The extent of land that would be affected should be viewed in the context of the overall agricultural land of commensurate quality that exists throughout the county, taken together with the limited timescales envisaged for the construction of the Project. However, land would be directly taken out of existing use or isolated due to construction activities and effectively taken out of use, and soil erosion or degradation may lead to loss of productivity.
- 4.16.46. In response the Applicant would [APP-345] seek agreements with relevant landowners and occupiers regarding any measures required in relation to crop loss. To the extent that compensation is payable for the acquisition or temporary possession of land that may be required, these matters are dealt with in Chapter 8 of this Report. We are satisfied that appropriate mechanisms would exist either in the form of direct compensation under the dDCO or under the Compensation Code to others incurred as a direct consequence of the construction phase of the project.
- 4.16.47. During construction land drains may be crossed. We welcome the proposed appointment of an agricultural liaison officer (ALO) who would be employed to undertake pre-construction land surveys to provide a baseline for reinstatement of drains following the works, as well as to assist with appropriate micro-siting of works. Due to the proposed embedded and some additional mitigation, we are satisfied that no significant impacts would be likely to arise on land take, ESS or drainage systems.
- 4.16.48. Several different soil types would be crossed by the onshore Project area. Recognising the high sensitivity of soils, the final CoCP would contain a Soil Management Plan (SMP). We regard this as an essential part of the mitigation measures to be put in place, incorporating as it would

requirements to apply best practice techniques to all aspects of the Project. It would therefore be necessary for the final CoCP to include removal, storage and reinstatement of topsoil and subsoil layers; vehicle control to prevent soil damage by traffic movements; pollution control measures; fuel and materials storage and waste management. The inclusion of these matters in the OCoCP is welcomed and should ensure that no significant impacts obtain in relation to soils as a result of the Project.

- 4.16.49. The landfall and onshore cable route cross a number of utilities related to domestic services for gas, electricity, water and sewerage connections. The Applicant would need to identify services on the ground prior to construction in consultation with utility providers, and construct utility crossings or diversions to the appropriate standard, avoiding any potential impacts to utilities. Protective provisions for the benefit of statutory undertakers are included within the dDCO [REP9-007] and considered in Chapter 9 of this Report.
- 4.16.50. Given that the construction and operation of the onshore project substation would result in permanent land take, there would be a loss of higher grade agricultural land. However, we agree that this should not be assessed as significant at the county scale, as it accounts for a small percentage of agricultural resource in Norfolk.
- 4.16.51. When assessed cumulatively with Norfolk Boreas and the H3 project, impacts on drainage would potentially lead to a minor adverse impact. In the case of Norfolk Boreas, it is known that the project will seek to adopt similar mitigation strategies, and H3 would be likely to adopt similar mitigation strategies, seeking to avoid, reduce and offset the effects on drainage.
- 4.16.52. We also draw attention to the agreement envisaged to be concluded [REP7-032] among the above undertakers, with reference to the geographical overlap between each of the projects, including the point of onshore cable overlap near Reepham, the accesses for the main construction compound for H3, and the cable logistics areas for this Project and Norfolk Boreas at The Street, Oulton. We see no good reason why the proposed option agreements with landowners would not provide for suitable crop loss and severance compensation where the cumulative impact of projects in construction at the same time have increased impacts to the landowner as compared to separate construction periods.
- 4.16.53. We are satisfied, and relevant stakeholders have agreed that the suite of plans and measures contained within them would ensure that the potential risks relating to land use and agriculture do not result in significant impacts during the Proposed Development.
- 4.16.54. Turning to potential impacts from the Proposed Development upon recreational assets and facilities, we welcome the proposed use of HDD underneath some of the particularly heavily-used long-distance trails, especially at landfall where the cables would intersect with the England Coastal Path. HDD would also be deployed for cable-laying across two

further trails, Marriott's Way and Paston Way, the crossing points for which are also within sites designated as County Wildlife Sites as set out in Table 21.14 [APP-345]. We are satisfied that this approach would result in negligible disruption to users of these trails.

- 4.16.55. Whilst HDD is not proposed at the crossings of the Wensum Way and Weaver's Way, or the majority of the crossing points of the general PRoW network, the disruption would be temporary and mitigation will be agreed in consultation with NCC's PRoW Officers and Trail Officers as the Highways Authority for the purposes of complying with a PRoW Strategy and CoCP secured under dDCO Requirement 20. We are content that these residual impacts would be expected to be negligible.
- 4.16.56. We are pleased to note that the PRoW Strategy [APP-028] details how the Applicant would advertise alternative routes and temporary closures of public rights of way, including the provision of maps, notices placed in the local press, and advanced site notices to be posted at appropriate places.

Conclusion

- 4.16.57. We conclude that the Applicant has adequately assessed the direct and indirect effects on the existing use of the proposed site and the use, or planned use, of land in the vicinity for other types of development in accordance with NPS EN-1. The Proposed Development would not undermine the provision of any high-quality open space or sports or recreation facilities available to meet the needs of local communities.
- 4.16.58. The ES has adequately assessed the effects of replacing the existing use of the Order Land with the Proposed Development. Where the Proposed Development would impinge upon the best and most versatile agricultural land the Applicant has sought to minimise impacts on it. The site selection process has sought to use land in areas of poorer quality wherever possible. The effects on soil quality have been identified and sought to be minimised through the mitigation measures proposed.
- 4.16.59. The risk posed by land contamination has been considered in Chapter 4.9 of this Report and the COCP which would be agreed post-consent and secured in the dDCO [REP9-007] would provide for a scheme for the management of contamination of any land and groundwater.
- 4.16.60. Where the Project would replace the best and most versatile agricultural land we find this is justified in light of the limited extent to which such land would be taken. We have found no robust evidence that agricultural practices contributing to the quality and character of the environment or local economy would justify other than little weight being given to the loss of poorer quality agricultural land (grades 3b, 4 and 5), where this would occur due to the Proposed Development.
- 4.16.61. Rights of way, National Trails and other rights of access to land have been recognised as important recreational facilities for walkers, cyclists and horse riders and we are satisfied that appropriate mitigation measures would be taken to address potential adverse effects on coastal

access, National Trails and other rights of way, secured by requirements that would be incorporated in the dDCO [REP9-007].

4.17. COMMERCIAL FISHERIES

Introduction

- 4.17.1. This section addresses the effects of the Proposed Development on commercial fishing interests.

Policy Considerations

- 4.17.2. Paragraph 2.6.122 of NPS EN-3 considers that the construction and operation of offshore wind farms can have both positive and negative effects on fish and shellfish stocks. Paragraph 2.6.124 notes that in some circumstances transboundary issues may be a consideration as fishermen from other countries may fish in waters within which offshore wind farms are sited.

Applicant's Case

- 4.17.3. Chapter 14 of the ES [APP-338] considers commercial fisheries and accompanying documents have been submitted including a Commercial Fisheries Technical Report [APP-218]. The Applicant acknowledges that there would be the loss of fishing opportunities within the windfarm array for certain types of vessel. Notwithstanding this, the Applicant concludes in ES Chapter 14 that the impacts on commercial fishing interests would be minor adverse both for the project alone and cumulatively.
- 4.17.4. In terms of the effects on the fishing interests of particular countries, the ES concludes that in regard to cumulative loss or restricted access to traditional fishing grounds, impact significance would be the following: 'minor adverse' to 'negligible' for UK and Belgian vessels (the minor adverse finding is in relation to UK and Belgian beam trawling and UK local inshore vessels); 'minor adverse' for French vessels; 'negligible' for Danish and German fishing vessels; and 'minor adverse' for the Dutch vessels in terms of beam trawling, seine netting and nets, purse seines, traps and dredges.
- 4.17.5. Embedded mitigation for commercial fishing is described in section 14.7.1 of the ES [APP-338] and includes burying offshore export cables where possible, using a HVDC solution which reduces the number of export cables and the volume of cable protection required, the appointment of a Fisheries Liaison Officer and the development of a Fisheries Liaison and Co-existence Plan.

Planning Issues

- 4.17.6. The conclusions reached by the Applicant in terms of commercial fishing have been disputed by the NFFO and VisNed, the Dutch fishing association. In their first SoCG [REP1-047] the NFFO and VisNed raised a number of concerns that they then elaborated on orally at ISH 2 [EV-009 and EV-010].

- 4.17.7. In addition, the French Republic (Le Préfet du Nord) in its Regulation 32 responses [OD-010 and OD-015] stated that there would be a clear impact on professional sea fishing, particularly for Dutch and Belgian commercial fishing, but acknowledged that the impact on French professional fishers would be very limited, but raised concern about the displacement of other fishing fleets into areas used by French commercial fishing.
- 4.17.8. Although the NFFO and VisNed did agree [REP8-091] that the list of impacts in the ES is appropriate, they did not agree with the methodologies used in the ES to assess the compatibility of fishing activities taking place within the vicinity of the wind farm and contended that the categorisations given lacked specificity. Also, the NFFO/VisNed contend that as existing plans and projects are assumed to form part of the baseline this results in a 'shifting baseline' that assumes fishing businesses have perfectly adapted to previous projects without cost. The MMO, however, did not disagree with the Applicant's assessment methodology [REP9-045].
- 4.17.9. The NFFO and VisNed had particular concerns about the potential effects on fishing interests if floating turbines were installed due to their anchor lines that would be required. By the time of ISH2, the Applicant confirmed that the option to use floating turbines had been removed from the project design [REP3-004].
- 4.17.10. The NFFO acknowledged that the removal of the floating foundations option from the project design envelope had removed some of its main concerns. However, it maintained its view that the risk to fishing vessels under the worst-case scenario has not been adequately assessed and is not sufficiently defined in order to properly assess the proposed mitigation measures. The NFFO contends that the safety assessment for snagging gears should follow the approach taken with the navigation impact assessment which used traffic survey data to assess the likely frequency against the severity of such an occurrence.
- 4.17.11. In response to this, the Applicant [REP3-004] explained that this follows an impact significance matrix approach taking account of receptor sensitivity and impact magnitude, and is in line with standard environmental impact assessment methodologies and that used previously for other offshore wind farm projects in the area and projects currently in the application phase.
- 4.17.12. Based on the worst-case scenario at the start of the Examination of up to 200 turbines at a minimum spacing of 680 metres the NFFO and VisNed did not consider that it would be possible for commercial fishing activities to be undertaken within the wind turbine array [REP1-047]. The Applicant contends that fishing would be possible and that there is no UK legislation which prevents fishing within operational wind farms [REP3-004].
- 4.17.13. It was agreed between the parties that the increase in the minimum spacing between turbines to 760m, as a result of a reduction in the

maximum number of turbines to 180, and the removal of the floating foundation option did represent an improvement to the worst-case scenario that had been assessed in the ES. Nevertheless, this still would be significantly below the minimum spacing distance between turbines of 1km for beam trawlers and 2km for seine netters that the NFFO/VisNed recommend [REP8-091].

- 4.17.14. In ES Chapter 14 [APP-338] the Applicant states that any cable protection required would be compatible with fishing activities and therefore the presence of cable, including cable protection measures, would not result in any material loss of fishing grounds during the operational phase, with the exception of any safety zones around any required maintenance works. NFFO/VisNed made reference to the use of reburial and backfilling in preference to cable protection measures [REP8-091]. Also, the NFFO/VisNed does not agree that the Outline Fisheries Liaison and Co-existence Plan (OFLCP) presently takes full account of the additional measures they have listed to help minimise snagging risks. This includes consultation on the cable burial plan with the fishing industry and linking the cable burial risk assessment to an appropriate cables survey/monitoring regime.
- 4.17.15. The submission of a final FLCP that accords with the OFLCP is secured in Condition 14(1)(d)(v) of Schedules 9 and 10 and Condition 9(1)(d)(v) of Schedules 11 and 12 of the dDCO [REP9-007]. This is to be approved by the MMO, and the ExA has not been presented with any substantive evidence that in doing so the MMO would not take into account the needs of fishing interests in relation to cable protection matters.
- 4.17.16. In the ExA's SWQs [PD-012] the Applicant was asked to respond to the comments made by the Eastern Inshore Fisheries and Conservation Authority (EIFCA) [RR-180 and REP1-040] and the NFFO/VisNed [REP1-088] that cumulative impact assessment should take into account already installed infrastructure and licensed activities. The Applicant [REP4-040] maintained its the position that existing projects should not be included in the cumulative assessment and to do so would result in a double count of their effect.
- 4.17.17. During the course of the Examination it became evident that areas were to be designated within UK, Dutch and German waters that would potentially restrict their ability to be fished. DEFRA has proposed closed areas to fishing within Marine Protected Areas (MPAs), but this would need to be ratified by other EU member states [REP7-054].
- 4.17.18. In addition, EIFCA has proposed fishing byelaw areas. In [AS-050] EIFCA reported that on 15 May 2019 it had approved the proposed spatial restrictions to bottom-towed gear to protect Annex 1 Biogenic Reef: *Sabellaria spinulosa*. These restrictions include Restricted Area 36 of the draft Marine Protected Areas Byelaw 2019, which lies within the Norfolk Vanguard cable corridor. Figure 1 of [REP7-054] depicts the locations of the proposals for closed areas for fishing. EIFCA also stated in [AS-050] that it will shortly begin formal consultation on the proposed restrictions at which time all relevant stakeholders, including the Applicant, will be

invited to comment on the restrictions before the proposed updated Marine Protected Areas Byelaw is sent to the Secretary of State for consent.

- 4.17.19. In light of this, the Applicant has submitted an Evaluation of the Implications of the Proposals for Closed Areas to Fishing for the Commercial Fisheries Cumulative Impact Assessment [REP7-054]. This concluded that in regard to cumulative impacts on Dutch beam trawlers and seine netters and on Anglo-Dutch beam trawlers the revised impact accounting for the additional fishing restrictions would be of 'moderate adverse' significance. This is a greater degree of impact significance than predicted for these interests in Chapter 14 of the ES. For the local inshore fleet the impact significance was assessed to remain the same as previously, ie minor adverse.
- 4.17.20. An OFLCP [REP2-029] was submitted at D2. It is agreed between the parties that this would be further developed post-consent [REP8-091]. This includes the appointment of a Fisheries Liaison Officer and, as required, an Offshore Fisheries Liaison Officer.
- 4.17.21. The NFFO/VisNed and EIFCA [REP8-092] agree that the measures outlined to facilitate communication and co-existence between the fishing industry and the Applicant are generally appropriate. However, the NFFO/VisNed did not agree that the OFLCP takes full account of the measures necessary to minimise snagging risk. The MMO agreed with the OFLCP approach [REP9-045] but noted that it would not act as arbitrator in regard to compensation and would not be involved in discussions on the need for or amount compensation being issued.
- 4.17.22. The OFLCP also contains details regarding communication procedures between the Applicant and the commercial fishing interests and procedures for compensation claims for loss or damage of fishing gear in line with Fisheries Liaison Offshore Wind and Wet (FLOWW) guidance.
- 4.17.23. The NFFO/VisNed also sought to ensure that there should be no *in situ* seabed hazards left in place following decommissioning. The Applicant [REP1-047] indicated that detailed information on decommissioning is not available at this stage and decommissioning would be subject to a separate licensing process.

ExA Reasons

- 4.17.24. The Applicant considers that for vessels operating towed gear there is the potential for some level of activity to take place within the operational wind farm (with the exception of seine netters), and commercial fishing would also be possible for vessels within the offshore cable array. This has been disputed by the NFFO and VisNed who consider that beam trawlers would not be able to fish safely within the operational wind farm array [RR-051 and REP8-091].
- 4.17.25. In support of its argument the Applicant has indicated [REP8-091] that in the SoCG for East Anglia THREE project NFFO/VisNed agreed that Dutch fishermen would be able to fish within the turbine corridors in safe

conditions for a minimum spacing of 675m within rows and 900 m between rows. This compares to a minimum separation distance of 760m for the Proposed Development, although this is not defined further in terms of within or between rows, as was the case for the East Anglia THREE SoCG.

- 4.17.26. In the absence of conclusive evidence from either of the parties concerned and having regard to the previous agreement in East Anglia THREE, the ExA considers it reasonable to assume that some commercial fishing may be possible within the wind farm array. This would also be somewhat dependent on the eventual layout of the turbines in terms of their spacing and alignment. As the Applicant has indicated [REP5-010], the level of activity within the project would ultimately depend on the perception of risk of the individual skippers of fishing vessels.
- 4.17.27. The proposed closed areas for fishing within MPAs and, to a lesser extent, the EIFCA fishing byelaw area have the potential to place further pressures on commercial fishing activities within the overall area. This is acknowledged by the Applicant in [REP7-054] in reaching a revised finding of 'moderate adverse' significance for cumulative impacts of the loss of grounds and associated displacement. The ExA concurs with the Applicant's view on this. However, as the fishing closures for the MCAs and the EIFCA fishing byelaw areas have not been formally designated during the course of the Examination, this limits the weight the ExA can attach to them.
- 4.17.28. The ExA questioned the precise nature of the two roles of Fisheries Liaison Officer and Offshore Fisheries Liaison Officer at ISH 2 [EV-009 and EV-010]. The Offshore Fisheries Liaison Officer is referenced in the OFLCP, and it is also reported here that this post could be part-time and undertaken alongside the Fishing Industry Representative position. The ExA is satisfied with the clarification the Applicant provided and notes that these positions are secured in the dDCO through Conditions 14(1)(d)(iv) and (v) of Schedules 9 and 10, and Conditions 9(1)(d)(iv) and (v) of Schedules 11 and 12 of the dDCO [REP9-007].
- 4.17.29. At ISH2 [EV-009 and EV-010] the ExA questioned the Applicant and the NFFO/VisNed about the reference in the initial SoCG [REP1-047] to the use of funding arrangements like the West of Morecambe Fisheries Fund. The Applicant responded [EV-009, EV-010] and previously in [REP2-003] that such a funding arrangement would be outwith the DCO consenting regime. The ExA has no reason to disagree with this approach.

Conclusion

- 4.17.30. There is disagreement between the Applicant and the NFFO/VisNed about whether or not any fishing at all would be possible within the windfarm array. The ExA concludes that whilst a degree of fishing would be possible there would be an impact on commercial fishing interests and this impact would be exacerbated should the proposed EIFCA and MPAs closed areas become designated as this would reduce the zones available for fishing within the wider area.

- 4.17.31. The ExA considers that the Applicant has submitted sufficiently robust evidence about the effects of the Proposed Development on commercial fishing interests. As such, it is the view of the ExA that the requirements of NPS EN-1 and NPS EN-3 are met in this regard.
- 4.17.32. In conclusion, the ExA considers that there would be a minor adverse impact on a number of fishing interests, and this is carried over into the planning balance in Chapter 7 of this Report. Whilst this would rise to an impact of moderate adverse significance when taking into account the closed areas for fishing in the MPAs and the fisheries byelaw areas, as these are not yet formally designated, this is not a matter to which the ExA can attribute any significant weight at the close of the Examination.

4.18. SHIPPING AND NAVIGATION

Introduction

- 4.18.1. This section considers the effect of the proposed development on matters relating to shipping and navigation, including marine safety. The specific effect of the Proposed Development on commercial fishing, including safety considerations, has been assessed in Section 4.17 of this Report.

Policy considerations

- 4.18.2. Paragraph 2.6.161 of NPS EN-3 advises that development consent should not be granted if it is considered that interference would be caused with the use of recognised sea lanes essential to international navigation.
- 4.18.3. Furthermore, paragraph 2.6.162 of NPS EN-3 states that site selection should be made with a view to avoiding or minimising disruption or economic loss to shipping and navigation industries with particular regard to approaches to ports and to strategic routes essential to regional, national and international trade, lifeline ferries and recreational users of the sea. NPS EN-3, paragraph 2.6.163, then goes on to state that for less strategically important shipping routes a pragmatic approach should be employed, and an applicant will be expected to minimise any negative impacts to 'as low as reasonably practicable' (ALARP).
- 4.18.4. Paragraph 2.6.169 of NPS EN-3 guides that the cumulative effects of other relevant proposed, consented or operational windfarms should be taken into account when assessing interference, construction or danger to navigation and shipping.

The Applicant's case

- 4.18.5. Chapter 15 of the ES [APP-339] contains information on shipping, navigation and marine safety, including an assessment of cumulative effects. A Navigational Risk Assessment was submitted with the application and this includes the required Formal Safety Assessment to meet MCA guidance [APP-339]. Also included with the application were an Outline Marine Traffic Monitoring Strategy [APP-042] and an Outline Offshore Operations and Maintenance Plan [APP-035]. These documents

were updated during the Examination, primarily to reflect changes to the project design envelope including the removal of the 9MW turbine option.

- 4.18.6. ES Chapter 15 indicates that, as depicted in Figure 15.2 of the ES [APP-510], the DR1 Lightbuoy Deep Water Route (DWR) runs between Norfolk Vanguard East and West approximately 1nm from both of these sites, and the West Friesland DWR passes approximately 2nm to the east of Norfolk Vanguard East.
- 4.18.7. ES Chapter 15 [APP-339] identifies a range of potential impacts on commercial vessels, fishing vessels, recreational vessels and emergency response responders during the construction, operation and decommissioning stages. For the project alone Table 15.15 details impacts ranging from 'no perceptible effect' to 'tolerable with mitigation'. Cumulatively, the effects are classified as being 'tolerable with mitigation'.
- 4.18.8. Embedded mitigation is described in section 15.7.1 of ES Chapter 15 [APP-339] and this includes lighting and marking of structures to be finalised in consultation with Trinity House (TH) and the MCA, management of construction traffic, safety zones around all structures during construction and maintenance operations, and the site design to ensure no outlying or extreme peripheral turbines and regular edges either side of the deep water route. The Applicant considers that with the mitigation the Proposed Development would be within ALARP parameters.
- 4.18.9. In part, this reflects a clarification of certain elements of the Rochdale envelope and includes the removal of the 9MW turbine option, with 10MW now being the smallest proposed turbine size. This has had the effect of reducing the maximum number of turbines from 200 to 180 and thereby has increased the minimum separation distances between turbines from 680m to 760m. Also, the floating foundation turbine design option has been removed from the project envelope. Due to these clarifications the worst-case assumptions for shipping and navigation impacts are reduced from those which have been assessed in the ES.
- 4.18.10. The submission of details for the final layout in the form of a design plan is secured in Conditions 14(1)(a) of Schedules 9 and 10 and Condition 9(1)(a) of Schedules 11 and 12 of the dDCO [REP9-007]. This requires the submission of a Design Plan to be agreed by the MMO in consultation with TH and the MCA. Whilst the layout of the turbines would be defined post consent, the Applicant has submitted a 'Development Principles' document [REP7-029] which contains some details about the proposed layout of the structures for the offshore element of the project, and this is referenced in the above Conditions.
- 4.18.11. The Applicant contends that the Development Principles document [REP7-029] provides details of the Design Plan measures in regard to shipping and navigation that the Applicant is intending to submit. This contains a number of measures including the commitment to position structures as far as practicable in straight lines (albeit with a tolerance of

+or - 100m), and the maintenance of search and rescue access lanes of a minimum width of 500m in at least one direction within the array.

- 4.18.12. Notification and inspection procedures and requirements in regard to aids to navigation are secured in the dDCO³⁸ [REP9-007]. The development of an Emergency Response Co-operation Plan (ERCoP), compliant with Marine Guidance Note 543 (MGN 543), is secured in Condition 15(7) of Schedules 9 and 10, and Condition 10(7) of Schedules 11 and 12 of the ExA's recommended DCO.

Planning issues

- 4.18.13. In its relevant representation [RR-187] and D1 response [REP1-083] the MCA expressed concerns that the lighting and marking should be in accordance with the recommendations contained in MGN 543. By the end of the Examination, as documented in the final SoCG [REP9-049], the MCA was content that Conditions 10 and 11 of Schedules 9 and 10 and Conditions 5 and 6 of Schedules 11 and 12 of the dDCO [REP9-007] contained a sufficient degree of comfort in this regard. The Applicant confirmed [REP8-091] that operational safety zones are not being proposed.
- 4.18.14. In addition, the MCA responded [REP1-083] to the ExA's FWQ regarding the design plan. In its response the MCA stated its belief that by far the safest way to navigate through a windfarm is for a linear array with multiple lines of orientation. A commitment to a linear array, as far as practicable, has been incorporated into the Development Principles document [REP7-029].
- 4.18.15. In the final SoCG with the MCA [REP9-049] all matters are agreed except the Applicant's proposed arbitration clause and the proposed notification period for mariners and the Kingfisher Information Service, and providing copies of notices to the MMO and MCA, regarding any cables that may become exposed. The arbitration clause issue is discussed in more detail in Chapter 9 of this Report.
- 4.18.16. In terms of any exposed cables, as set out in Condition 9(12) of Schedules 9 and 10 and Condition 4(12) of Schedules 11 and 12 of the dDCO [REP9-007], the Applicant is proposing a five-day notification period for mariners but the MCA would wish to see this reduced to three days. Also Conditions 14(j) and 14(k) of Schedules 9 and 10, and Conditions 9(j) and 9(k) of Schedules 11 and 12 of the dDCO require respectively the submission of an offshore operations and maintenance plan and an aids to navigation management plan.
- 4.18.17. The NFFO [RR-051 and REP1-089] raised concerns about the potential impact of the Proposed Development on a number of matters that included navigation and marine safety. By the close of the Examination

³⁸ Condition 9 of Schedules 9 and 10, and Condition 4 of Schedules 11 and 12 for notification and inspections. Condition 10 of Schedules 9 and 10, and Condition 5 of Schedules 11 and 12, for aids to navigation

some of these particular matters were still not agreed between the Applicant and the NFFO/VisNed as detailed in the SoCG [REP8-091]. This is discussed in more detail in the Commercial Fisheries section of this Report.

- 4.18.18. In response to the RYA [RR-109] expressing a preference that there should be no safety zones during the operational stage, the Applicant in [REP1-007] confirmed that there would be no such operational safety zones except around accommodation platforms.
- 4.18.19. At ISH5 [EV-018 and EV-019] TH requested that it, as well as the MCA, should be specifically listed as a consultee for the construction and post-construction traffic monitoring [REP6-039] to be approved by the MMO, as outlined in Conditions 19(4) and 20(2)(d) of Schedules 9 and 10 of the dDCO. This has been amended accordingly in the final version of the dDCO submitted by the Applicant [REP9-007].

ExA Reasons

- 4.18.20. With the exception of the arbitration clause that is discussed in depth in Chapter 9 of this Report, the concerns that were raised quite early on in the Examination by the MCA and RYA appear to have been resolved by information submitted during the process and amendments to the dDCO.
- 4.18.21. This is evidenced by the final SoCGs between the Applicant and the MMO [REP9-045], the MCA [REP9-049], the RYA [REP1-060] and TH [REP8-093], in which there is agreement with the Applicant over all shipping and navigation issues except those that have already been identified, ie the arbitration clause and notification period for exposed cables, that primarily relate to the dDCO. In all of these SoCGs there are no significant outstanding areas of disagreement. Furthermore, the submission of further marine safety and navigation mitigation assessments based on the final project design are also secured in the Applicant's preferred dDCO [REP9-007].
- 4.18.22. The ExA considers that it is reasonable to specify a period of three days for the notification should any offshore cables become exposed. However, since there is the potential for this to fall over a weekend and bank or public holiday period it seems a reasonable approach to specify a time limit of three business or five days whichever is the sooner. This is contained in the ExA's recommended DCO. However, the ExA would like to highlight that this additional wording to Condition 9(12) of Schedules 9 and 10 and 4(12) of Schedules 11 and 12 differs from that contained in the ExA's Schedule of Changes to the dDCO [PD-017].
- 4.18.23. In terms of the 'Development Principles' document [REP9-072], this has been submitted by the Applicant to demonstrate that progress has been made in agreeing some elements of the offshore layout, and is referenced specifically in Conditions 14(1)(a) of Schedules 9 and 10, and Conditions 9(1)(a) of Schedules 11 and 12. The ExA is satisfied with this approach and considers that it provides a sufficient degree of certainty at

this stage about the marine safety and navigation implications of the proposed turbine array layout.

- 4.18.24. Some of the concerns raised by the NFFO/VisNed in regard to marine safety remain unresolved, although these have been reduced through the removal of the floating turbine foundation option. Furthermore, the removal of the 9MW turbine option from the Proposed Development has increased the minimum spacing between turbines from 680m to 760m.
- 4.18.25. It is inevitable that the construction of an offshore wind farm would give risk to an increased degree of risk for fishing and other vessels within the array itself and the offshore cable route due to the increased potential for, among other matters, the snagging of fishing gear. However, the turbine array area avoids any DWR. Marine safety is secured through conditions in the dDCO that require, among other matters the submission of a design plan, an aids to navigation management plan, a cable monitoring plan and details of offshore construction vessels.

Conclusion on Shipping, Navigation and Marine Safety

- 4.18.26. In conclusion, there have been no significant concerns raised regarding shipping, navigation and marine safety issues, except by the NFFO/VisNEd. The Proposed Development would not lie within any recognised international sea lanes essential to international navigation and thus would not conflict with paragraph 2.6.161 of NPS EN-3 in this regard.
- 4.18.27. The ExA agree with the MCA's views in regard to the three-day notification period for mariners and does not consider it unreasonable for this time period to be specified, subject to it relating to 'business days' to cover any weekends that are immediately preceded or followed by public holidays. Therefore, this is contained as an amendment to Condition 9(12) of Schedules 9 and 10, and Condition 4(12) of Schedules 11 and 12 in the ExA's rDCO (as set out in Table 9.2 of Chapter 9).
- 4.18.28. Subject to this amendment to the dDCO, the ExA considers that the impact of the Proposed Development on shipping, navigation and marine safety is acceptable and would be in accordance with NPS EN-3 in this regard.

4.19. AVIATION

Introduction

- 4.19.1. This section considers the effect of the proposed development on matters relating to aviation safety and radar.

Policy Considerations

- 4.19.2. NPS EN-3) and NPS EN-1 provide relevant guidance and legislation to the Proposed Development. Paragraphs 5.4.10 to 5.4.13 of NPS EN-1 state

that if a proposed development could have an effect on civil and military aviation then:

- the MoD, Civil Aviation Authority (CAA) and National Air Traffic Services (NATS) and any aerodrome likely to be affected by the proposed development should be consulted in preparing an assessment of the proposal;
- any assessment of aviation or other defence interests should include potential impacts of the project on the operation of Communication, Navigation and Surveillance (CNS) infrastructure, flight patterns (civil and military), other defence assets and aerodrome operational procedures; and
- the cumulative effects of the project with other relevant projects in relation to aviation and defence should be assessed.

4.19.3. NPS EN-1 Paragraph 5.4.15 states that conflicts between the Government's energy and transport policies, and military interests in relation to the application should be the subject of appropriate efforts by the parties to identify realistic and pragmatic solutions to the conflicts, with parties seeking to protect the aims and interests of the other parties as far as possible.

4.19.4. NPS EN-1 Paragraph 5.4.16 refers to statutory requirements concerning lighting to tall structures. Where lighting is requested on structures that go beyond statutory requirements by any of the relevant aviation and defence consultees, the decision maker should satisfy itself of the necessity of such lighting taking into account the case put forward by the consultees. The effect of such lighting on the landscape and ecology may be a relevant consideration.

4.19.5. NPS EN-1 Paragraph 5.4.17 states that where after reasonable mitigation, operational changes, obligations and requirements have been proposed, consent should not be granted where:

- a development would prevent a licensed aerodrome from maintaining its licence;
- the benefits of the proposed development are outweighed by the harm to aerodromes serving business, training or emergency service needs, taking into account the relevant importance and needs for such aviation infrastructure;
- the development would significantly impede or compromise the safe and effective use of defence assets or significantly limit military training; or
- the development would have an impact on the safe and efficient provision of en route air traffic control services for civil aviation, in particular through an adverse effect on the infrastructure required to support communications, navigation or surveillance systems.

4.19.6. NPS EN-3 Paragraph 2.6.187 states that detailed discussions between the applicant for the offshore wind farm and the relevant consultees should have progressed as far as reasonably possible prior to the submission of an application to the decision maker. As such, appropriate

mitigation should be included in any application to the decision maker, and ideally agreed between relevant parties.

- 4.19.7. NPS EN-3 Paragraph 2.6.107 states that aviation and navigation lighting should be minimised to avoid attracting birds, taking into account impacts on safety.
- 4.19.8. Several publications with guidance on the potential effects of an offshore wind development on aviation stakeholders informed the desk-based study of potential impacts of the proposed project. These are detailed in ES Chapter 16 Aviation and Radar [APP-340], including Policy and Guidelines on Wind Turbines (Civil Aviation Authority (CAA), February 2016, which assists aviation stakeholders to understand and address wind energy related issues, to ensure consistency when considering the potential impact of proposed wind farm developments.

Applicant's Case

Relevant documentation

- 4.19.9. ES Chapter 16 – Aviation and Radar [APP-340] identifies that the Project would have the potential to impact on aviation and radar-related matters.
- 4.19.10. Additional documents referred to are:
- ES Figures 15.3, 15.4, 15.5 and 15.6 presenting overviews of AIS and Radar Data within Norfolk Vanguard East and West study areas excluding temporary traffic in 2016 and 2017 [APP-511, APP-512, APP-513, APP-514];
 - ES Figure 15.7 - Main Traffic Routes and 90th Percentiles within OWF Sites Study Area [APP-515]; and
 - D8 Submission of Applicant - NATS Radar Mitigation Agreement Position Statement with MoD [REP8-079].
- 4.19.11. Also relevant are:
- Consultation Report - Email to MOD Netherlands [APP-120];
 - MoD Additional Submission – [AS-005];
 - MoD Response to Rule 6 - [AS-020];
 - MoD Submission [REP1-129];
 - MoD D2 Submission - [REP2-032];
 - MoD D3 Submission - Response to ExA WQs [REP3-047];
 - MoD D3 Submission [REP3-048]; and
 - MoD D4 Submission - Response to ExA's FWQs [REP4-060].
- 4.19.12. A SoCG was completed between the Applicant and MoD [REP1-046] and updated at D5 [REP5-006]

Applicant's assessment of impacts

- 4.19.13. ES Chapter 16 Aviation and Radar [APP-340] describes the key aspects of the Project as they relate to aviation, followed by an assessment of the magnitude and significance of the effects on baseline conditions resulting

from the construction, operation and decommissioning of the Project, including from cumulative interactions with other existing or planned projects.

- 4.19.14. Table 16.6 [APP-340] presents the worst-case scenarios for each assessed impact related to the construction, operation and decommissioning of the Project. These include:
- creation of aviation obstacles by WTGs and platforms;
 - wind turbines causing permanent interference on civil and military radar; and
 - increased air traffic from helicopter trips associated with the Proposed Development.
- 4.19.15. WTGs are a significant cause of misinterpretation or ambiguity when detecting aircraft movements and their presence may reduce the effectiveness of radar to an unacceptable level and compromise the provision of a safe radar service to participating aircraft (paragraph 82 [APP-340]).
- 4.19.16. During construction and operation a range of embedded mitigation measures for the Proposed Development were detailed in Section 16.7.2 [APP-340]. These comprise appropriate notification to aviation stakeholders, lighting and marking to minimise effects to aviation flight operations, and to reduce impacts to low flying aircraft operating in the vicinity of the WTGs and related infrastructure. The impacts to offshore helicopter operations utilising helicopter main routes (HMRs) and military low flying operations is assessed as not significant.
- 4.19.17. During construction wind turbine blades would not be rotational so there would be no impacts on radar systems during this phase and the impact is considered to be of no change.
- 4.19.18. There would be a maximum of 14 return helicopter trips per week during construction. Helicopters would operate from a local base if necessary. Mitigation of impacts on existing air traffic would reflect that proposed in respect of aviation obstacles, and due to the low number of proposed helicopter movements the impact to aircraft operators in the vicinity is considered to be not significant.
- 4.19.19. Table 16.7 [APP-340] sets out potential cumulative impacts on receptors arising from the Proposed Development when considered with other proposed developments and activities. The potential for cumulative impact created by the radar detection of the Proposed Development exists to those radar systems that would also detect the wind farm developments listed in Table 16.8 [APP-340]. With specific and embedded mitigation in place the cumulative impacts, with the exception of the potential interference from WTGs on civil and military radar, are assessed as not significant.
- 4.19.20. Therefore with the exception of the potential interference from WTGs on civil and military radar, the worst-case scenarios assessed with appropriate mitigation would produce impacts that are not significant.

Transboundary considerations

- 4.19.21. The Proposed Development would be located adjacent to and abutting the London / Amsterdam Flight Information Region (FIR). Helicopter Main Routes (HMR) cross the Norfolk Vanguard OWF sites. Consultation with helicopter operators in the UK, Netherlands and Belgium resulted in no concerns expressed by those operators of any impact to operations on HMRs. The impact has been assessed to be of no significance. The transboundary impact with regard to charting, lighting and marking of wind turbines and radar operations is considered to be limited and to be not significant.

Consideration of whether closed hearing necessary

- 4.19.22. There was initial concern that due to the sensitivity of some of the information held by the MoD it may be necessary to hold a closed hearing to receive evidence that the MoD would otherwise be unable to share in a public session. However this proved to be unnecessary.
- 4.19.23. The ExA in its WQ 17.7 [PD-008], referring to paragraph 19 of ES Chapter 16 [APP-340] requested that the MoD's assessment of Operational Impact which was referred to in 9APP-340], be made available to it or a redacted version.
- 4.19.24. In its reply [REP1-129] the MoD referenced Defence Equipment & Support – Air Defence & Electronic Warfare Systems (DE&S), which is the MOD organisation responsible for completing technical assessments of how proposed wind farms will affect the operation of radars and other types of technical assets. The operational assessment was based on a technical assessment produced by DE&S on 4 December 2017. It was a restricted document due to information it contains on the performance attributes of the air defence radar. The MoD however confirmed the findings of their operational assessment of the effect of the proposed wind farm development on the air defence radar at Trimingham.
- 4.19.25. Having considered these matters and the SoCG between the Applicant and MoD [REP1-046], the ExA wrote to the parties concerned requesting a clear indication as to whether or not a closed hearing was to be requested. The MoD subsequently stated it would not request a closed hearing.

Planning Issues

MoD aviation and radar interests

- 4.19.26. The main focus of discussions with the MoD has been on overcoming the expected impact of the Project on the MoD Air Defence Radar (ADR) at Remote Radar Head (RRH) Trimingham in Norfolk. The MoD objected that the Project would cause unacceptable interference to the Trimingham ADR and that the proposed Requirement 13 in the dDCO [REP9-007] could be agreed without agreement of an alternative mitigation proposal. The impact to the Trimingham ADR without mitigation is considered to be of major significance. Mitigation of the Trimingham ADR as agreed with the MoD would reduce the impact to "not significant".

- 4.19.27. The nearest ADR to the Project is the TPS77 type radar located at RAF Trimingham, North Norfolk. An initial Serco Report (Serco, 2015), using representative wind turbine positions at a blade tip height of 225 m, concluded that all of NV West would be within radar coverage and detectable by this ADR, as well as a western minority of NV East. The worst-case scenario of a maximum wind turbine blade tip height of 350m above HAT would be likely to increase radar detectability of wind turbines to the Trimingham ADR [REP1-129].

Wind turbines causing permanent interference on civil and military radar

- 4.19.28. It is identified in [APP-340] that the Proposed Development's infrastructure might be detectable by the NATS Cromer Primary Surveillance Radar (PSR) and the MoD Trimingham ADR. WTGs detectable by PSR / ADR systems are highly likely to degrade the system for example by saturating the radar receiver leading to clutter potentially concealing real aircraft targets.
- 4.19.29. Mitigation of the Cromer PSR has been agreed with NATS which will remove impact on the PSR. However mitigation needed to be agreed with the MoD over the impact to the Trimingham ADR which without mitigation is considered to be of major significance.
- 4.19.30. The SoCG between the Applicant and MoD [REP1-046] submitted in January 2019 referenced mitigation discussions on the suitability of the Trimingham TPS 77 ADR's in-built capability to mitigate the impact of wind turbine developments by means of 3-dimensional Non-Automatic Initiation Zones (NAIZs). The SoCG [REP1-046] referred to concerns expressed in the MoD industry-wide statement on 24 August 2018 over the operational impact of wind turbines on the TPS-77 ADR. The NV OWF layouts submitted to the MoD for review were reassessed and the MoD stated that the use of NAIZ mitigation would not be suitable for NV OWF.
- 4.19.31. The Applicant requested that the MoD provide further detail on this position and on 23 December 2018 submitted a formal proposal to the MoD for alternative means of mitigation as an alternative solution to TPS-77 NAIZ. The MoD issued a statement to the ExA [REP1-129] confirming acceptance of the technical mitigation proposal entailing the Applicant providing separate radar(s) located to provide infill coverage to the air defence radar at Trimingham over the area of its coverage that will be degraded by the Proposed Development.
- 4.19.32. Requirement 12 of the dDCO [REP9-007] defines an appropriate requirement for the project to be lit and to provide details of offshore development to maintain defence aviation safety. Requirement 13 is intended to secure a technical mitigation for the impacts on the Trimingham ADR that must be put in place before the rotor blades on the wind turbines are allowed to turn on their horizontal axis.
- 4.19.33. The ExA was also concerned at the timing of the implementation of the agreed mitigation set out in Requirement 12 and Requirement 13. The Applicant has accepted that the technical mitigation to address the

impacts of the Project on the Trimmingham ADR would need to be implemented before the turbine blades of the OWF rotate. This has been secured within the Applicant's preferred dDCO

- 4.19.34. On 5 February 2019 the MOD confirmed agreement as set out in [REP5-006] on the wording of Requirements 12 and 13 and withdrew its objection subject to the inclusion of the wording in the DCO.

Radar mitigation and NATS

- 4.19.35. If constructed, the proposed WTGs would without appropriate radar mitigation, have an adverse impact on NERL's Primary Surveillance Radar ("PSR") system at Cromer ("the Cromer PSR") by causing detectable radar clutter effects. A technical solution is required to mitigate these clutter effects which may include, but not be limited to, blanking of the radar coverage at Cromer: NATS Position Statement [AS-022].

- 4.19.36. Documents relevant to this matter are:

- AS-022 NATS Safeguarding Response to Rule 6 - Accepted at the discretion of the Examining Authority;
- REP1-050 Norfolk Vanguard Limited Statement of Common Ground - NATS En-Route Safeguarding;
- REP1-128 NATS Safeguarding Office Response to the Examining Authority's Written Questions. Late Submission – Accepted at the discretion of the Examining Authority; and
- REP7-074 NATS Safeguarding D7 Submission

- 4.19.37. At D7 on 2 May 2019, NATS confirmed that it was engaged with the Applicant to secure the necessary contractual agreement to ensure the implementation of appropriate mitigation, and once completed NATS would withdraw its objection, subject to the inclusion of an agreed Requirement in the dDCO.

- 4.19.38. NATS' concern was to ensure that the mitigation and arrangements for its implementation were in place prior to construction of the WTGs. Requirement 34 included in the dDCO at D8 was amended to address this concern. However final comments from NATS were awaited to confirm that the precise form and wording of Requirement 34 was now agreed.

- 4.19.39. By close of the Examination the commercial agreement had not been completed. However, the parties confirmed at the D8 Submission - NATS Radar Mitigation Agreement Position Statement at D8 [REP8-079] that once the commercial agreement was completed, NATS would write to the SoS to clarify that it no longer has any objection to the Project proceeding. Should these matters be delayed the Applicant would notify the SoS as to progress made in this respect within three months of the close of the Examination.

Aviation warning lighting

- 4.19.40. As noted in the SoCG between the Applicant and the MoD [REP5-006] the MOD stated that that offshore elements of the Proposed Development would need to be fitted with aviation warning lighting. It was agreed that

appropriate aids to aviation safety, including lighting and marking arrangements would be developed post-consent in consultation with Defence Infrastructure Organisation Safeguarding.

- 4.19.41. Key features of the mitigation and management process that were agreed included:
- aviation lighting and marking to be developed post-consent so that these can be implemented during the construction phase;
 - the cable route and associated infrastructure of the onshore element of the project would not impact on MoD safeguarding zones; and
 - technical mitigation to address the impacts of the OWF on the Trimmingham ADR would be implemented before the turbine blades of the OWF rotate.
- 4.19.42. In the most recent SoCG with the MoD-DIO submitted at D8 [REP5-006] the Applicant notes that the MoD accepted the alternative mitigation proposal on 15 January 2019, and the wording of Requirements 12 and 13 was substantially agreed between both parties on 4 February 2019.
- 4.19.43. On 5 February 2019 the MoD updated its safeguarding position at D3 [REP3-048] relating to the attachment of aviation lighting to relevant offshore structures and the provision of radar technical mitigation and formally withdrew its objection subject to agreement on the final wording which was agreed on 18 March 2019.

ExA Reasons

- 4.19.44. We are satisfied that the MoD has been adequately consulted regarding Aviation and Radar issues and the list of potential impacts on Aviation and Radar assessed is appropriate. The impact significance conclusions assessed for the Proposed Development alone and cumulatively with other identified developments and activities, are appropriate. The cable route and associated infrastructure for the onshore element of the Proposed Development would not impact on MoD safeguarding zones. Appropriate aids to aviation safety, including lighting and marking arrangements would be developed post-consent in consultation with the Defence Infrastructure Organisation Safeguarding.
- 4.19.45. A technical mitigation solution alternative to the NAIZ system has been agreed as feasible and it is reasonable to consider that this solution can be implemented in accordance with Requirement 13 dDCO [REP9-007].
- 4.19.46. MOD accredited aviation warning lighting would be installed on relevant offshore structures during construction and post construction, and secured in Requirement 12 dDCO [REP9-007].

Conclusion

- 4.19.47. Requirement 12 dDCO [REP9-007] provides that lighting must be used as determined necessary for aviation safety. It also requires notification of certain information to the Defence Infrastructure Organisation (DIO) at least 14 days prior to commencement of the offshore works, on

completion of the offshore works and of any changes to the information supplied.

- 4.19.48. The MoD's concerns over the operational impact of wind turbines on the TPS-77 ADR at Trimingham have been satisfactorily overcome by the provision within the dDCO [REP09-007] of mitigation technical and design measures to be agreed as an alternative to NAIZ mitigation. Requirement 13 appropriately secures that the mitigation is in place before commencement of operation of any WTG belonging to the Proposed Development.
- 4.19.49. Such a requirement would remove the potential for adverse effects which the operation of the authorised development would otherwise have on the air defence radar at Remote Radar Head (RRH) Trimingham and the Ministry of Defence's air surveillance and control operations.
- 4.19.50. We conclude that the Application meets the policy tests set out in NPS EN-1 and the advice and guidance we have identified above. The aviation or other defence interests potentially affected by the Proposed Development including cumulative impacts have been adequately assessed and in accordance with NPS-EN1 realistic and pragmatic solutions to any conflicts have been identified and secured within the dDCO [REP09-007].

4.20. MARINE PHYSICAL PROCESSES

Introduction

- 4.20.1. This section addresses the effects of the Proposed Development on marine physical processes.

Policy considerations

- 4.20.2. Paragraph 2.6.189 of NPS EN-3 states that the construction, operation and decommissioning of offshore energy infrastructure can affect the following elements of the physical offshore environment: water quality, waves and tides, scour effect, sediment transport and suspended solids. Paragraph 2.6.197 of EN-3 indicates that mitigation measures which applicants should consider include the burying of cables to a necessary depth and scour protection.

The Applicant's case

- 4.20.3. Chapter 8 of the ES [APP-332] assesses marine geology, oceanography and physical processes, and Chapter 9 [APP-333] deals with marine water and sediment quality. Whilst Chapter 8 assesses impacts on the HHW SAC, it does so in terms of matters such as suspended sediment and bedload sediment transport. The more specific impacts on the HHW SAC associated with the construction of the offshore cable corridor are considered in Chapter 6 of this Report.
- 4.20.4. In terms of the effect of the Proposed Development both alone and cumulatively on marine geology, oceanography and physical processes

Table 8.45 of the ES [APP-332] summarises that the Proposed Development would give rise to either 'no impact' or a 'negligible' impact.

- 4.20.5. Table 9.14 of Chapter 9 of the ES identifies that, for the project alone, the potential impacts on marine sediment and water quality would be predominantly 'minor adverse' with the effect due to the re-suspension of sediment bound contaminant being 'negligible'. Cumulatively the potential impacts are classified as 'minor adverse'.
- 4.20.6. The Applicant recognises that scour protection and cable protection would be required. At D7 an updated Outline Scour Protection and Cable Protection Plan (OSPCPP) was submitted [REP7-024] and this took into account certain changes to the project during the course of the examination due to a reduction in the maximum number of turbines from 200 in number to 180 in number and the removal of the floating turbine foundation option from the design envelope. The total amount of scour protection is specified in Condition 8(1)(g) of Schedules 9 and 10 and Condition 3(1)(b) of Schedules 11 and 12 of the dDCO [REP9-007].

Planning issues

- 4.20.7. In the final SoCG [REP9-045] the MMO agrees that the assessment methodologies and conclusions for the project alone, and cumulatively, are appropriate in regard to marine geology, oceanography and physical processes, marine water and sediment quality.
- 4.20.8. NE [REP9-046] did not agree with the magnitude of seabed level changes being categorised as 'low', given the volumes of material to be dredged. Neither did NE agree in regard to the cumulative assessment of the impact on the HHW SAC for suspended sediment and impact on the Annex 1 sandbank feature. As these matters specifically relate to the HHW SAC they are considered more fully in Chapter 6 of this Report. However, NE did agree [REP9-046] that the proposed increase in the maximum number of piles per offshore electrical platform from 6 to 18 does not affect the conclusions of ES Chapter 8.
- 4.20.9. The Applicant submitted the proposed Sediment Disposal Sites: Site Characterisation Report [APP-039] which provides information to enable site designation for the disposal of material. The quantity of material to be disposed of has been amended during the course of the Examination and is defined in the dDCO³⁹ [REP9-007].
- 4.20.10. NE has referred to the need to ensure that the material is disposed of as close to the source as possible within the marine environment [REP8-104]. NE also considers that the particle size of the material to be disposed of matches, as far as practicable, that contained within the disposal location, in order to minimise impacts on benthic ecology. The Applicant states that the methods for sediment disposal would be agreed

³⁹ Part 3,1(d) and 1(f) of Schedules 9 to 12; and Condition 8(1)(h) and 8(1)(i) of Schedules 9 and 10 and Condition 3(1)(c) and 3(1)(d) of Schedules 11 and 12 of the dDCO

through the Cable Specification, Installation and Monitoring Plan that is secured in Condition 14(1)(g) of Schedules 9 and 10 and Condition 9(1)(g) of Schedules 11 and 12 of the dDCO [REP9-007].

- 4.20.11. Notwithstanding this, in [REP9-057] NE suggested the imposition of a Condition to ensure the particle size of disposal material matches that of the seabed at the disposal site within the HHW SAC, and NE has provided its preferred wording for the proposed Condition, or it stated that the Outline HHW SIP should be amended to include such wording.
- 4.20.12. Through the Examination both the MMO and NE continued to have concerns about the fact that a maximum area/volume of scour protection per structure has not been specified within the OSPCPP [REP6-030] and [REP4-062]. This is notwithstanding the concerns that NE has expressed [REP6-032 and REP8-104] about the use of any cable protection within the HHW SAC that are addressed in Chapter 6 of this Report.

ExA Reasons

- 4.20.13. During the Examination clarification was sought by the ExA about the differences between the amount of inert material to be disposed of, the amount of cable protection and the volume of scour protection required between the Proposed Development and specific volumes of material to be disposed of and protection required for other similar offshore windfarm projects such as East Anglia THREE [PD-008, PD-012, EV-009, EV-010 and EV-010a].
- 4.20.14. This resulted in the Applicant submitting an Offshore Parameters: Comparison with East Anglia THREE and Hornsea Project Three document [REP4-039]. The Applicant contends that the main difference between the figures cited for the Proposed Development versus East Anglia THREE or H3 are due to the conservative approach that it has adopted. For example, for the Proposed Development estimated volumes for sandwave levelling have been calculated based on the assumption that 100% of the cable length could require levelling to the stable reference seabed level [REP4-039].
- 4.20.15. The ExA considers that such a worst case scenario seems an appropriate approach to take. We note that neither the MMO nor NE have raised specific concerns about the overall volumes proposed to be disposed of, albeit concerns about the potential impact on the HHW SAC have been raised particularly in regard to cable protection and this will be addressed in Chapter 6 of this Report. Agreement regarding the worst-case scenario used in the assessment is recorded in the SoCGs with NE and the MMO [REP9-046 and REP9-045]. We are therefore satisfied that the overall volumes of material to be disposed of, and the overall amount of cable and scour protection proposed, are acceptable.
- 4.20.16. The MMO has raised concerns about how this would be monitored, particularly given the volumes of material involved. However, the ExA sees no justifiable reason why it would not be possible to monitor the volumes of material to be removed and disposed of nor the locations

where such activities would take place. Consequently, it is considered that the restrictions contained in Conditions 8(1)(h) and 8(1)(i) of Schedules 9 and 10 and Condition 3(1)(c) and 3(1)(d) of Schedules 11 and 12 of the dDCO [REP9-007] are both reasonable and enforceable, and thus can legitimately be imposed.

- 4.20.17. Section 5.4 of the amended Outline HHW SIP [REP9-028] covers sediment disposal. This does not take into account the issue of the particle size composition of the material to be disposed of matching in particle size the material of the seabed at the disposal location, as referenced by NE [REP9-057]. This matter is therefore neither secured in the DCO Conditions nor specifically referenced in the Outline HHW SIP. Other matters relating to the HHW SAC are considered in Chapter 6 of this Report.
- 4.20.18. The ExA agrees with NE and considers that this is a matter that needs to be included. The ExA is of the view that, to provide certainty on this, it is preferable that it be specifically secured as a Condition in the DCO rather than being left to be incorporated into the wording of the final HHW SIP. Therefore, it is recommended that an additional subsection, ie Condition 3(1)(g) of the Transmission Assets DMLs (Schedules 11 and 12), is included. The proposed wording for this is set out in Table 9.2 of this Report. This additional Condition subsection was not contained in the ExA's Schedule of Changes to the dDCO [PD-017] and therefore this is a matter that the SoS may wish to consult the Applicant on.
- 4.20.19. As regards the matter of specifying the volumes of scour protection for each individual structure, the Applicant provided [REP8-003] additional wording in the dDCO, so that in the version 7 of the dDCO [REP-007] Condition 9(1)(e) of Schedules 11 and 12 specifically references the term 'distribution' as having to include quantities in respect of each structure comprised in the offshore works. We consider that this wording has adequately addressed the MMO's and NE's concerns in this regard.

Conclusions

- 4.20.20. Subject to the addition of the aforementioned Condition 3(1)(g) in Schedules 11 and 12 of the rDCO, the ExA considers that the Proposed Development complies with the requirements of NPS EN-3 and is acceptable in regard to marine physical processes. Consequently, there are no outstanding issues in this regard that would justify the DCO not being made.

4.21. OTHER CONSIDERATIONS

- 4.21.1. This section of the Report addresses topics and issues that were raised during the Examination but have not been considered above.
- 4.21.2. Numerous representations including [RR-031, RR-077, RR-114, RR-128] amongst others raised concerns that the proposed substation would become a target for terrorist attacks given its large scale. Similarly, the risk of fire and or malfunction was also of concern given the proximity of the application site to the population of Necton.

- 4.21.3. The EIA Regulations 2017 require significant risks to the receiving communities and environment, for example through major accidents or disasters, to be considered as well as significant effects from the vulnerability of the proposed development to major accidents or disasters.
- 4.21.4. Section 5.6 of ES Chapter 5 [APP-329] provides details on the response to potential major accidents and disasters. This states that the risk of substation fires is historically low but accepts that they can impact on the supply of electricity and create a localised fire hazard. It goes on to say that the highest appropriate levels of fire protection and resilience will be specified for the onshore project substation to minimise fire risk. The ES concludes that none of the anticipated construction works or operational procedures is expected to pose an appreciable risk of major accidents or disasters. This was a matter tested at ISH1 [EV-006 and EV-007].
- 4.21.5. Having regard to the information before it, the ExA considers there is no substantive evidence that the Proposed Development would be likely to result in material danger to nearby residents resulting from fire, malfunction or terrorism. The ExA agrees with the Applicant that in order to mitigate against terrorism the risk must be reasonably foreseeable. There is very little evidence to suggest that is the case, particularly, as the Applicant states, when no attack of a substation has ever been planned or executed on UK soil. In addition, the Applicant has confirmed that the nature of the design of the onshore project substation would be to the highest health and safety standard and there are strict regulatory processes which govern these elements, including the requirement for operators to develop emergency response plans and crisis management procedures.
- 4.21.6. On the basis of the evidence before us, the ExA concludes that the potential for major accidents and disasters has been adequately considered and is not a matter that weighs against the DCO being made.
- 4.21.7. A number of representations were made concerning the potential negative effect of the Proposed Development on property values [e.g. RR-096, RR-017, RR-016, RR-102]. Some residents of Necton felt that the submission of the Application alone had already affected the property market Whilst noting this is a matter of concern to local residents, planning controls exist to regulate land use and development in the public interest. The effect on property values is not a planning matter and cannot be taken into account.

5. OFFSHORE BIODIVERSITY, BIOLOGICAL ENVIRONMENT AND ECOLOGY

5.1. BENTHIC ECOLOGY, FISH AND SHELLFISH ECOLOGY

Introduction

- 5.1.1. This section deals with fish and shellfish ecology, and also benthic and intertidal ecology matters.

Policy considerations

- 5.1.2. The general biodiversity considerations in NPS EN-1 have already been outlined in Section 4.15 of this Report and apply equally to matters in this Chapter.
- 5.1.3. Paragraph 2.6.112 of NPS EN-3 defines the subtidal zone as being the area below the low tide mark which remains submerged at low tide. It advises that loss of subtidal habitat and benthic ecology is an additional issue for consideration, as well as the generic biodiversity impacts that are set out in NPS EN-1. Paragraph 2.6.44 of NPS EN-3 refers to the need for any consent granted to be flexible to allow for micro-siting but also advises that the assessment submitted by the Applicant should reflect the implications of any micro-siting as far as reasonably possible.
- 5.1.4. Paragraph 2.6.114 of NPS EN-3 advises that, if it is proposed to install offshore cables to a depth of at least 1.5m below the sea bed, then the Applicant should not have to assess the effect of the cables on subtidal habitat during the operational phase of the project.
- 5.1.5. Policies BI01 and MPA1 of the EIEOMP 2014, respectively relate to the need to protect biodiversity taking account of the best available evidence and the overall impacts on the overall Marine Protected Area must be taken into account in strategic level measures and assessments.

The Applicant's case

- 5.1.6. Chapter 10 of the ES [APP-334] relates to benthic and intertidal ecology, and Chapter 11 of the ES [APP-335] assesses the potential impacts of the Proposed Development on fish and shellfish ecology.
- 5.1.7. In addition to the ES, a Sabellaria Data Review [APP-049] and a Sandwave Study [APP-048] also accompanied the application. Appendix 4.2 [APP-194] comprises a Cable Constructability Assessment which looks at potential matters affecting the proposed offshore cable route. It is acknowledged that the export cable route would cross a number of sandbanks [APP-048]. The impacts on fish and shellfish ecology that have been assessed for the construction, operational and decommissioning phases include noise, permanent loss of seabed habitat and electromagnetic fields (EMFs) [APP-335]. No protected sites that are designated for fish and shellfish qualifying features have been identified.

However, the ES acknowledges that sites protected for habitats are of ecological importance to fish and shellfish [APP-335].

- 5.1.8. Table 11.29 of Chapter 11 [APP-335] summarises the residual effects for fish and shellfish receptors for the project alone and cumulatively. Predominantly these are categorised as being 'minor adverse', with some impacts defined as 'negligible'. Among the embedded mitigation measures that have been incorporated into the overall project design that are relevant for fish and shellfish ecology are the avoidance of some designated sites such as the Cromer Shoal Beds MCZ, the use of HVDC technology, and a commitment to burying offshore export cables wherever possible to a minimum depth of 1m.
- 5.1.9. In terms of benthic and intertidal ecology, the potential impacts identified by the Applicant during the construction, operational and decommissioning stages include the temporary or permanent loss of seabed habitat, increases in suspended sediment concentrations and associated sediment deposition, changes to water quality, and the colonisation of infrastructure and cable protection.
- 5.1.10. In terms of designated sites, the ES assesses potential impacts on the Cromer Shoal Chalk Beds MCZ, which the offshore cable route has been routed approximately 60m south of (see Figure 10.13 of [APP-414]). The features of conservation importance within the MCZ are subtidal chalk, as well as peat and clay exposures.
- 5.1.11. As depicted in Figure 10.13 of the ES [APP-414] a large proportion of the offshore cable corridor for the Proposed Development runs through the Haisborough Hammond and Winterton SAC (HHW SAC), which is designated due to the presence of Annex 1 sandbanks and biogenic reef (*Sabellaria spinulosa*). The potential impacts of the Proposed Development on the conservation objectives of the HHW SAC are considered in more detail in Chapter 6 of this report.
- 5.1.12. Table 10.21 of ES Chapter 10 summarises the residual effects of the Proposed Development on benthic and intertidal ecology during the construction and operational phases. These are mainly categorised as being 'minor adverse' with some either having a 'negligible' or 'no impact'. No further mitigation beyond the embedded mitigation for the project is proposed. Such embedded mitigation includes avoiding the Cromer Chalk Beds MCZ, avoiding cable crossings where possible, using long horizontal directional drilling (HDD), using a HVDC solution to minimise the number of export cables and volume of cable protection, and micro-siting within the offshore cable route (OfCR) to avoid reef and sandbank features as far as possible.

Planning issues

Areas of agreement by the close of the Examination

- 5.1.13. No issues were raised by IPs in regard to fish and shellfish ecology. It was agreed by NE in the SoCG [REP9-046] that the magnitude of effects on fish and shellfish ecology had been appropriately characterised, and

that the conclusions of negligible or minor adverse significance were appropriate both for the project alone, and cumulatively, and the proposed embedded mitigation would be adequate.

- 5.1.14. EIFCA in [REP1-040] referred to there being 'appreciable gaps' in the literature in regard to the effect of EMFs on fish and shellfish. However, when questioned at ISH2 [EV-009 and EV-010] EIFCA conceded that it was not aware of any pending studies on this matter that were likely to be published during the course of the Examination, and agreed that the Applicant's conclusions on EMFs are acceptable based on the current literature [REP8-092].
- 5.1.15. In terms of benthic and intertidal ecology it was agreed with NE [REP9-046] and EIFCA [REP8-092] that the ES adequately characterises the baseline environment although it is noted that there is uncertainty with *Sabellaria spinulosa* reef mapping due to its ephemeral nature and the use of a range of datasets. NE considers that the list of potential impacts within the ES is appropriate, with the exception of the operational cleaning of installed offshore infrastructure [REP9-026]. NE wishes to see details of the volumes of material that would be deposited in the marine environment as a result of cleaning activities. However, the MMO, Appendix 1 of [REP9-045], confirmed that it is satisfied with the information that has been provided regarding operational and maintenance activity.
- 5.1.16. Although NE [REP9-046] highlighted concerns that no monitoring or surveys are proposed for fish and shellfish within the Offshore In Principle Monitoring Plan [REP9-019], it agreed that the plan provides an appropriate framework to agree monitoring of benthic habitats, and intertidal fish and shellfish ecology with the MMO, in consultation with NE.

Outstanding areas of disagreement by the close of the Examination

Micrositing

- 5.1.17. Figure 10.12 of the ES [APP-413] depicts the areas of reef/potential reef along the offshore cable corridor. NE [REP9-046] stated that it would want to see all Annex 1 reef avoided and one of the issues on which there was a degree of disagreement between the Applicant and NE during the Examination centred around the scope for micrositing around reef within the overall OfCR. It is agreed between the Applicant and NE [REP9-046] that it should be possible to microsite around *Sabellaria spinulosa* reef in the nearshore section of the offshore cable corridor, but NE considers that there is more uncertainty beyond 12 nm.
- 5.1.18. EIFCA acknowledged that its proposed Fisheries Byelaw Areas relate to restrictions on fishing rather than cable laying activities. Nevertheless, it requested [AS-050] that all possible efforts are made to microsite the cable route within the cable corridor to avoid Restricted Area 36, which is one of its proposed Byelaw Areas that would coincide with the OfCR.

- 5.1.19. NE's comments relating to micrositings of the offshore cable focused on the HHW SAC, and these matters are discussed in Chapter 6 of this Report.

ES assessment methodology and conclusions – benthic and intertidal ecology

- 5.1.20. In relation to benthic and intertidal ecology NE [REP9-046] considers that some of the sensitivity assessments contained in the ES are incorrect. NE did not agree that there would be no permanent loss of *Sabellaria spinulosa* reef, particularly due to the potential use of cable protection⁴⁰. Also, the impact significance conclusions reached by the Applicant of 'minor adverse' for the project alone are not agreed with by NE.
- 5.1.21. EIFCA considers that already installed infrastructure and licensed activities should be included in the cumulative assessment [RR-180 and REP8-092].
- 5.1.22. In its D8 submission [REP8-099] EIFCA disputed the Applicant's assertions that the two proposed fisheries bye-law areas did not currently contain *Sabellaria spinulosa* reef. EIFCA state that in order to develop these restrictions it reviewed NE's modelled data, acoustic data and ground truthing data together with an assessment of raw video data supplied by the Centre for Environment, Fisheries and Aquaculture Science (Cefas) [REP8-099]. Consequently, the ExA considers that EIFCA has sufficiently justified its views on this particular matter.

ExA Reasons

- 5.1.23. Much of the assessment and questioning during the Examination related to potential impacts on the HHW SAC, which are discussed in more detail in Chapter 6 of this Report. It is also the case that there are areas that potentially contain *Sabellaria spinulosa* reef that lie outside of the HHW SAC but which the proposed cable route would pass through. This is indicated in ES Figures 10.11 and 10.12 [App-412 and APP-413 respectively]. Similarly, ES Figure 8.13 [APP-393] indicates that there are sandwaves that lie to the east of the HHW SAC but within the proposed OfCR.
- 5.1.24. As also discussed in Chapter 6 of this Report, the Applicant argues that reef would be likely to recover after the cessation of either fishing or cable installation activities and has cited a number of references⁴¹ to support this contention. NE disputes this for cable installation and particularly for the use of cable protection, and in [REP6-032] NE reports that there is conflicting evidence from different developers with regard to the recovery of features following decommissioning. However, NE has not provided any substantive evidence to justify this stance. Therefore,

⁴⁰ See Chapter 6 of this Report for a summary of the discussions relating to the use of cable protection and the resultant impacts on reef.

⁴¹ References are provided in Appendix 3 of [REP9-045] and include CMACS (2013) Greater Gabbard Offshore Wind Farm Year 1 postconstruction turbine colonisation survey technical report.

based on the evidence provided, the ExA considers it reasonable to assume that at least a degree reef recovery would occur post-construction. However, it is also the case that a proportion of any reef that formed along the post-construction cable route could be subsequently disturbed or lost if maintenance activities were required.

- 5.1.25. The ExA notes that the Applicant considers micro-siting to be possible and that a decision-making process for micro-siting around Annex 1 reef within the HHW SAC is set out in Diagram 5.1 of the Outline HHW Site Integrity Plan (HHW SIP) [REP9-028]. Pre-construction surveys are to be undertaken across the entire offshore cable corridor as secured in Condition 13 of Schedules 11 and 12.
- 5.1.26. The Outline HHW SIP [REP7-026, as amended by REP9-028], which was submitted fairly late in the Examination, has done much to assuage the previous concerns that had been expressed by NE and the MMO. However, this has in effect meant that a final decision on whether the mitigation would be sufficient to rule out an AEOI on the HHW SAC has been held over until a later date. This in turn could mean that the entire project could not proceed if it was not agreed that the mitigation would be adequate. As indicated by the MMO [REP8-102], this is not an ideal situation in terms of certainty for a developer and the MMO believes that it could be in the uncomfortable position of potentially having to refuse works on an already consented and part developed project. Nevertheless, this is the course of action that the Applicant has proposed.
- 5.1.27. The ExA finds that based on the uncertainties regarding both the precise cable route and the amount and exact location of both the Annex 1 sandbanks and biogenic reef features, the submission of a Final HHW SIP based on the Outline HHW SIP [REP9-028] represents an acceptable approach to adopt in regard to assessing and mitigating the impact of the Proposed Development on benthic and intertidal ecology.
- 5.1.28. The analysis for fish and shellfish ecology has not been disputed by any of the IPs and therefore the ExA has no reason not to consider the assessment that has been undertaken by the Applicant to be robust. It is therefore the view of the ExA that the impacts of the Proposed Development on fish and shellfish ecology would be acceptable.

Conclusions on benthic ecology, fish and shellfish ecology

- 5.1.29. The ExA is able to conclude that micro-siting of the offshore cable route is likely to be possible within 12nm of landfall and might be possible beyond that. It also seems justifiable that the precise extent of the Annex 1 reef and sandbank habitat features would be assessed closer to the time of construction to inform micro-siting. This is secured in the dDCO⁴² [REP9-007]. Should micro-siting not be possible then there would be potential

⁴² Conditions 14(1)(g)(ii) and 18(2)(a) and (b) of Schedules 9 and 10 and Conditions 9(1)(g)(ii), 9(1)(m) and 13(2)(a) and (b) of Schedules 11 and 12 of the dDCO.

construction impacts on any areas of reef. However, the ExA considers that the Applicant has submitted evidence to demonstrate that reef recovery would occur to a degree and therefore the adverse effects, at least in part, would be temporary and reversible.

- 5.1.30. We conclude that the Proposed Development would not have any effects on the Cromer Shoal Beds MCZ. Consideration of the effects on the HHW SAC is contained in Chapter 6 of this Report.
- 5.1.31. The ExA concludes that harm to Annex 1 habitat features therefore cannot be ruled out. However, we are of the view that as a result of the mitigation employed, which includes the mitigation measures to be contained in the Final HHW SIP that is to be agreed, the Proposed Development either alone or cumulatively would not give rise to significant residual effects on fish and shellfish ecology, and benthic and intertidal ecology. Thus the ExA is able to conclude that the Proposed Development would be acceptable in this regard and would be in accordance with the relevant policies including paragraphs 5.3.5, 5.3.6 and 5.3.17 of NPS EN-1, and paragraphs 2.6.44 and 2.6.115 to 2.6.117 of NPS EN-3 when taken together.

5.2. MARINE MAMMALS

Introduction

- 5.2.1. This section examines the effect of the Proposed Development on marine mammals.

Policy considerations

- 5.2.2. NPS EN-3 notes that in addition to generic biodiversity impacts, there are specific considerations from piling noise which apply to the effect of offshore wind energy infrastructure proposal on marine mammals. Paragraphs 2.6.90 to 2.6.99 of NPS EN-3, among other matters, state that where assessment shows that noise from the offshore piling may reach levels likely to lead to the commission of an offence the applicant should look at possible alternatives or appropriate mitigation before applying for a licence.
- 5.2.3. Furthermore, paragraph 2.6.94 states that unless suitable noise mitigation measures can be imposed by requirements to any development consent then the application may be refused.
- 5.2.4. The entire application site lies within the Southern North Sea SAC (SNS SAC) which has been listed for its harbour porpoise (*Phocoena phocoena*) feature (see ES Figure 12.1 [APP-448]).
- 5.2.5. Even though the two matters are clearly interrelated, nevertheless this Section examines the effect of the Proposed Development on marine mammals as a species, whilst the specific impacts on the SNS SAC are considered in Chapter 6.

The Applicant's case

- 5.2.6. Chapter 12 of the ES [APP-336] relates to marine mammals. The species included in the assessment were agreed with the marine mammals Expert Topic Group⁴³ (EPG) and are harbour porpoise, grey seal (*Halichoerus grypus*) and harbour seal (*Phoca vitulina*, subspecies *Phoca vitulina vitulina*).
- 5.2.7. To accompany the application the Applicant also submitted: a Draft Marine Mammal Mitigation Protocol (Draft MMMP) [APP-037], an In Principle Monitoring Plan (Offshore) (IPMP)[APP-036], an In Principle Norfolk Vanguard Southern North Sea cSAC Site Integrity Plan (In Principle SNS SIP)[APP-041] and Additional Assessment in relation to the Southern North Sea candidate Special Area of Conservation (cSAC) [APP-050]. The draft MMMP provides details of the mitigation requirements in relation to the potential impacts of piling, whilst the In Principle SNS SIP sets out the approach to deliver any potential mitigation measures to avoid the significant disturbance of harbour porpoise in relation to the SNS SAC conservation objectives.
- 5.2.8. Section 12.7 of Chapter 12 of the ES [APP-336] details the potential impacts which have been assessed for the construction, operation and decommissioning phases. This includes physical and auditory injury, behavioural impacts, barrier effects, vessel interaction (collision risk), changes to prey resource, and changes to water quality.
- 5.2.9. The Applicant states [APP-336] that embedded mitigation would include soft-start and ramp-up of piling activity, as well as best practice techniques and due diligences regarding impacts from potential pollution that are included in the Outline PEMP [REP9-023]. Further mitigation for the potential to kill or injure harbour porpoise would include the development of a MMMP that would be based on the Draft MMMP, to be developed in consultation with relevant SNCBs and the MMO to detail mitigation to reduce the risk of physical or permanent auditory injury during all piling operations. This would include the establishment of a mitigation zone to ensure that marine mammals are outside the range for permanent threshold shift (PTS).
- 5.2.10. Table 12.95 of ES Chapter 12 [APP-336] concludes that the residual effects on marine mammals once mitigation had been undertaken would range from 'negligible' to 'minor' for the project alone and cumulatively the impacts would be 'minor adverse' with mitigation ('moderate to minor adverse' without mitigation).
- 5.2.11. By the end of the Examination updated versions of the In Principle SNS SIP [REP9-026] and Draft MMMP [REP9-020] had been submitted by the

⁴³ Consultees for the marine mammals ETG comprised NE, TWT, WDC and Cefas. Further details are contained in ES Chapter 7 [APP-331] and the Consultation Report [APP-043]

Applicant. These primarily reflect amendments to the Rochdale envelope proposed by the Applicant during the Examination.

Planning issues and ExA reasons

Cumulative effects assessment methodology

- 5.2.12. Whilst NE [REP9-046], WDC [REP8-087] and the MMO [REP9-045] agree with the EIA assessment methodology by the close of the Examination TWT had maintained its concerns that commercial fisheries should be included in the cumulative impact assessment (CIA) and should not form part of the baseline [RR-172 and REP8-090]. The views of the Applicant and TWT are set out in Appendix 1 of the final SoCG [RE8-090]. WDC has made comments in relation to cetaceans only, but nevertheless agrees [REP8-087] with the views expressed by TWT and also contends that noise from other vessels associated with other non-wind farm plans or projects should be considered in the CIA.
- 5.2.13. The Applicant acknowledges that by-catch is a long-standing cause of harbour porpoise mortality and that their prey species are also affected by commercial fishing. TWT contends that fishing is a licensable activity and therefore falls within the Habitats Directive definition of a plan or project, and thus is not part of the baseline. TWT has cited the Waddenzee⁴⁴ case in support of this argument and also current Defra policy that all existing and potential commercial fishing operations are managed in line with Article 6 of the Habitats Directive.
- 5.2.14. In [REP3-004, REP8-087 and REP8-090] the Applicant has acknowledged that the Review of Consents (BEIS, 2018), which is discussed in more detail in Chapter 6 of this Report, has attempted to screen in commercial fisheries but then concluded that a quantitative assessment is not possible as there have been no quantified assessments undertaken on the impact of commercial fishing. As such, information is not available to inform the assessment.
- 5.2.15. Furthermore, in [REP3-004] the Applicant has cited the draft HRA for the Review of Consents which states that: "*Commercial fishing has occurred within the SCI for many years and has had, and will continue to have, direct and indirect impacts on harbour porpoise, their habitat and prey within the SCI. As the conservation status of harbour porpoise in UK waters and the SCI is considered favourable (JNCC 2016, 2017a) current and historical levels of fishing in the SCI are not considered to have affected the conservation status of the species.*"
- 5.2.16. Section 4.17 of this Report assesses the impacts of the Proposed Development on commercial fisheries. Fishing is a long-standing activity that has been likely to influence both the numbers of marine mammals and their prey species over the course of many years. Therefore, notwithstanding the fact that it is a licensable activity, the ExA is persuaded by the Applicant's argument that commercial fishing should be

⁴⁴ C-127/02 Waddenzee [2004] ECR I-7405

considered as part of the baseline environment due to its ongoing and multifarious nature. This view is reinforced by the approach taken by BEIS for the Review of Consents due to a lack of relevant information.

- 5.2.17. The MMO [RR-186, EV-009 and EV-010] had expressed concerns about how the potential noise issues would be managed if multiple offshore construction projects were being constructed simultaneously. An Action Point arising from ISH2 [EV-010a] was for the Applicant to provide a note on discussions surrounding cumulative impacts on marine mammals from multiple construction projects. This was provided by the Applicant [REP4-038] but, as it relates to the SNS SAC, is discussed in more detail in Chapter 6 of this Report.
- 5.2.18. Notwithstanding this, concerns have been raised about the cumulative impacts that may arise from the simultaneous construction operations associated with one or more other offshore projects in the same area. It is acknowledged by the Applicant [EV-009 and EV-010] that there could be other such projects being constructed.
- 5.2.19. The worst-case scenario in Table 12.24 of Chapter 12 of the ES [APP-336] comprises two concurrent piling events. This could be either two in Norfolk Vanguard (NV) West, two in NV East, or 1 each in NV East and West. In response to the ExA's FWQ [PD-008] about how the Applicant would ensure that no more than two concurrent piling events would occur, the Applicant has cited the Construction Method Statement and the In Principle SNS SIP.
- 5.2.20. The Construction Method Statement is secured in Condition 14(1)(c) of Schedules 9 and 10 and Condition 9(1)(c) of Schedules 11 and 12 of the dDCO. This in effect puts the onus on the MMO to assess which other construction projects may be ongoing in the area. Although the MMO did express some reservations about this approach, nevertheless by the close of the Examination it did not object to such an approach, as evidenced in the final SoCG [REP9-045].

Use of pile driving and other construction techniques

- 5.2.21. The Applicant was questioned by the ExA [PD-008] about WDC's comments [RR-013] that pile driving should not be used at all as a construction method. In response the Applicant stated [REP1-010] that, based on current technology and market availability, a monopile solution is likely to be the most available construction technique and therefore to remove piled foundations would significantly affect the commercial viability of the project. The ExA has no reason to disagree with the Applicant's view on this matter.
- 5.2.22. The MMO requested that a Condition was included to restrict the maximum hammer energy to the 5,000kJ that has been assessed in the ES. This is contained in the Applicant's revised dDCO [REP9-007].
- 5.2.23. In response to a question from the ExA [EV-010a] it was also agreed by the Applicant [EV-009 and EV-010] that there could be other construction

techniques as well as pile driving, such as vibration techniques, that might also have the potential to affect marine mammals.

Mitigation and noise limits

- 5.2.24. Doubts were also raised by NE, [RR-106] about the effectiveness of soft-start piling techniques. Whilst WDC had concerns about mitigation, it did state that the use of bubble curtains was a proven mitigation method [REP1-124]. As well as bubble curtains, other mitigation measures discussed during the Examination at ISH2 [EV-009, EV-010 and REP3-004] include the use of acoustic deterrent devices and vibro-piling techniques.
- 5.2.25. During questioning at ISH 2 [EV-009 and EV-010] the Applicant stated that mitigation measures are evolving and that there may be new mitigation techniques that become more tested and even established practice by the time construction on the Proposed Development could start. In addition, the potential overlap with construction operations for other offshore projects is not yet known.
- 5.2.26. The Applicant [REP3-004] contends that the approach of submitting an In Principle SIP and draft MMMP, to be followed with a final SIP and final MMMP closer to the time of construction, provides the framework to identify appropriate and effective marine mammal mitigation based on the best available information and guidance at that time. Conditions 14(1)(f) and 14(1)(m) of Schedules 9 and 10 and Conditions 9(1)(f) and 9(1)(l) of Schedules 11 and 12 of the dDCO [REP9-007] contain respectively the requirement for the Applicant to provide a MMMP and SIP that would be in accordance with the Draft MMMP and In Principle SIP and would follow current best practice as recommended by the relevant SNCBs.
- 5.2.27. TWT and WDC in their WRs [REP1-123 and REP1-124 respectively], and also TWT at the offshore environmental matters ISH2 [EV-009 and EV-010] and in its Post Submission [REP3-063], disagree with the view of NE towards underwater noise management and consider that an approach of setting noise limits should be adopted. TWT and WDC [RR-172 and RR-013] instead advocate an approach which entails the setting of noise limits. This is the method that has been applied in other countries such as Germany and Belgium, and has been peer reviewed [REP3-063]. However, this approach is not supported by NE [REP9-046 and REP9-057] or the MMO [REP9-045] who would be responsible for approving the final MMMP and SIP, and is not proposed by the Applicant.
- 5.2.28. The ExA notes the two reports that TWT has cited in [REP3-063] with attached hyperlinks, but enquired in [PD-012] as to whether there existed any further relevant scientific evidence or justification that casts doubt on the existing SNCB approach. No additional evidence was provided.
- 5.2.29. The Draft MMMP does contain details about mitigation. However, the above Conditions have the effect of creating an additional point of decision about marine mammal mitigation techniques at a time closer to

the actual construction period, as the licensed activities cannot commence until the MMMP, among other matters, has been approved by the MMO. The timescales for the submission of the MMMP are set out in the DCO.

- 5.2.30. Concerns had been raised by WDC and TWT [RR-013 and RR-172] about the mitigation measures that the Applicant had proposed. However, the Applicant argues that the draft MMMP allows for the use of any mitigation and that this would be agreed later through the submission of the final MMMP. TWT [REP8-090] agree that the MMMP is currently the best available approach but recommend consideration of the mitigation technology when it is developed and that monitoring is essential to measure its effectiveness. Despite its concerns about the current SNCB guidelines, WDC did also agree [REP8-087] that the MMMP provides an appropriate framework for securing marine mammal mitigation measures.
- 5.2.31. The submission of a MMMP remains a relatively standard approach for marine mammals that has been accepted by the SoS in previous cases, eg East Anglia THREE [REP3-004]. The ExA has not been presented with any substantive evidence that there have been significant changes since the East Anglia THREE DCO was made in terms of either the status of the SNS SAC or changes to the populations and distributions of the relevant marine mammals that could necessitate a different approach to mitigation.
- 5.2.32. Consequently, the ExA accepts that this is a matter whereby the situation is evolving both in terms of mitigation techniques and the identity of other offshore construction projects which are likely to overlap. As such it seems acceptable to secure the submission of a final SNS SIP and MMMP in the recommended DCO. This approach has been accepted by NE and the MMO [REP9-045 and REP9-046].
- 5.2.33. In terms of the issue of the setting of overall noise limits, the Applicant [REP1-004] contends that the SIP format follows that agreed for other consented projects (for example East Anglia THREE Offshore Wind Farm Order 2017) and provides the framework for mitigation to be agreed pre-construction based on the final project design and latest scientific understanding. Furthermore, although proposed by TWT and WDC, this is not supported by either NE or the MMO. The ExA agrees with the views of the Applicant that at present the SIP approach provides an appropriate mechanism to ensure that appropriate mitigation would be provided.

Unexploded ordnance

- 5.2.34. Whilst Table 12.95 of ES Chapter 12 considers the effects of unexploded ordnance (UXO) clearance, it has been agreed by the MMO [REP9-045] and NE [REP9-046] that the matter of UXO clearance would be licenced separately by the MMO and is outwith the DCO process. The draft MMMP [REP9-020] confirms that a separate UXO MMMP would be prepared and submitted in the pre-construction period when there is more detailed information on the UXO clearance which could be required. This has been agreed by the MMO [REP9-045].

Recommended changes to the DCO

- 5.2.35. Earlier versions of the dDCO [eg REP4-027] referred to a MMMP and SIP being required if 'driven or part-driven pile foundations' were proposed to be used. The final version submitted by the Applicant [REP9-007] referred to 'piled foundations'. Despite this amendment, the ExA is concerned that this wording may not account fully for all the possible future construction techniques that may have an effect on marine mammals. At ISH2 [EV-009 and EV-010] and the subsequent written summary [REP3-004] the Applicant provided details of other construction techniques that were being trialled including vibro-piling and the 'blue hammer' that are construction techniques that use vibration and hydro power respectively. The Applicant did not provide any clear details as to the likely noise levels that could be associated with these other techniques. Although this was discussed during the Examination the ExA is concerned that this is not necessarily explicitly reflected in the wording of the final dDCO submitted by the Applicant [REP9-007].
- 5.2.36. Therefore, it is proposed to amend the wording of Conditions 14(1)(f) and 14(1)(m) of Schedules 9 and 10 and Conditions 9(1)(f) and 9(1)(l) of Schedules 11 and 12 to make reference to the proposed use of any construction techniques that have the potential to affect marine mammals. The amended wording is set out in Table 9.2 of Chapter 9 of this Report. Although this matter was discussed at ISH2, as it was not specifically included in the ExA's Schedule of Changes to the dDCO [PD-017] then the SoS may wish to consult with the Applicant on this matter. In terms of actually defining other construction techniques that have the potential to affect marine mammals, this would be determined by the MMO in consultation with NE.

Underwater noise levy

- 5.2.37. TWT [RR-172] requested consideration of an underwater noise levy to fund and deliver strategic mitigation and monitoring. However, in response to this the Applicant has replied [REP1-007 and REP3-004] that there is currently no mechanism for a levy to deliver strategic mitigation and that this recent draft proposal by TWT has not yet been fully consulted on or agreed with the Industry, Regulators or SNCBs. The Applicant contends that it is not appropriate to include this as a Condition, and the ExA concurs with this due to the emerging nature of this proposal.

Conclusion on marine mammals

- 5.2.38. TWT had some concerns about the sensitivity and magnitude criteria used by developers. Overall, however, there is general consensus about the appropriateness of the EIA methodology used, albeit with the aforementioned concerns from WDC and TWT [REP8-087 and REP8-090] respectively.
- 5.2.39. By the close of the Examination both NE and the MMO were content that there would be a sufficient degree of certainty in regard to the mitigation measures that were secured in the Draft MMMP (and the In Principle SIP

which is discussed in more detail in Chapter 6) and which would be carried through to the final versions of these documents. The ExA is of the view that these would provide a framework for future mitigation that strikes an appropriate balance between the need for certainty at this point and the flexibility to account for other mitigation measures that may come into use between now and the time of construction.

- 5.2.40. There is agreement with NE and the MMO that the project alone would not give rise to any significant adverse impacts on marine mammals [REP9-045 and REP9-046] but NE does not agree with the cumulative impact assessment conclusion [REP9-046]. TWT agrees with the assessment for the project alone, subject to the aforementioned concerns about sensitivity and magnitude criteria but does not agree with the cumulative impacts predicted by the Applicant due to its concerns that commercial fishing should be included in the baseline for assessment. WDC [REP8-087] does not agree with the conclusions for the project alone in relation to piling activities or cumulatively due to the predicted numbers affected being high and the CIA does not include noise from vessels associated with other, non-wind farm, plans or projects such as oil and gas, aggregates and commercial fisheries.
- 5.2.41. However, based on the evidence before us and having regard to the mitigation that would be provided in the final versions of the MMMP, the ExA is satisfied that the impacts of the project alone on marine mammals would be acceptable subject to appropriate mitigation being implemented as outlined in the draft MMMP and updated in the final MMMP. Also, the SNS SIP, which is discussed in more detail in Chapter 6, whilst intended for the harbour porpoise features on the SNS SAC would inevitably be of benefit to the harbour porpoise population of the North Sea Management Unit (MU) reference population.
- 5.2.42. The ExA recognises that there would be the potential for cumulative impacts on marine mammals. The need to avoid overlapping offshore construction projects that could impact on marine mammals will require careful management and discussions between the potential developers, and also with the MMO in consultation with NE. We conclude that the MMMP and the SIP provide an appropriate framework for cumulative impacts and mitigation measures to be considered and approved.
- 5.2.43. Subject to the amendment to Conditions 14(1)(f) and 14(1)(m) of Schedules 9 and 10 and Conditions 9(1)(f) and 9(1)(l) of Schedules 11 and 12 that have been discussed above, the ExA is satisfied that the impacts on marine mammals as a result of the Proposed Development alone, and cumulatively, are capable of being mitigated to an acceptable level.
- 5.2.44. Therefore, the ExA concludes that the Proposed Development is policy compliant in relation to the impacts on marine mammals and this matter does not weigh against the DCO being made.

5.3. OFFSHORE ORNITHOLOGY

Introduction

- 5.3.1. This section examines the effect of the Proposed Development on offshore ornithological receptors. The effects of the Proposed Development on ornithological qualifying features of European sites and Natura 2000 sites are considered separately in Chapter 6 of this Report.

Policy considerations

- 5.3.2. The Birds Directive⁴⁵ provides a framework for the management and conservation of wild birds in Europe. Among other matters, it provides for the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable bird species listed in Annex 1 of the Directive and for all regularly occurring migratory species.
- 5.3.3. NPS EN-3 notes that in addition to generic biodiversity impacts, there are specific considerations which apply to the effect of offshore wind energy infrastructure proposals on birds. Paragraph 2.6.101 states that offshore wind farms have the potential to impact on birds through: collisions with rotating blades; direct habitat loss; disturbance from construction activities such as the movement of construction/decommissioning vessels and piling; displacement during the operation phase resulting in loss of foraging/roosting area; and impacts on bird flight times (ie barrier effect) and associated increased energy use by birds for commuting flights between roosting and foraging areas.

The Applicant's case

- 5.3.4. Chapter 13 of the submitted ES [APP-337] and the accompanying Appendix 13.1 Offshore Ornithology Technical Appendix [APP-217] contain information in regard to offshore ornithology. The species considered for assessment are listed in Table 13.10 of ES Chapter 13 and these include the following Birds of Conservation Concern (BoCC) Red listed species: Arctic skua (*Stercorarius parasiticus*), Puffin (*Fratercula arctica*), Black-legged kittiwake (*Rissa tridactyla*) and Herring gull (*Larus argentatus*). As indicated in Table 13.10 some of these species, such as red-throated diver (RTD)(*Gavia stellata*), are also Annex 1 species and all the birds listed in Table 13.10 are Birds Directive migratory species.
- 5.3.5. Section 13.7 of ES Chapter 13 [APP-337] details the potential impacts that have been assessed for the construction, operation and decommissioning phases. This includes collision risk, disturbance/displacement, indirect impacts through effects on habitats and prey species, and barrier effects.
- 5.3.6. The Applicant states that the embedded mitigation outlined in the ES relating to offshore ornithology includes the selection of a site beyond the foraging range of almost all seabird species with the exception of

⁴⁵ Council Directive 79/409/EEC on the Conservation of Wild Birds

northern gannet (*Morus bassanus*) and lesser black-backed gull (LBBG)(*Larus fuscus*) and a reduction in turbine numbers from 257 to 200 in the application scheme as submitted. No additional mitigation was proposed in the ES. The ES concludes that all residual effects in regard to offshore ornithology would either be negligible or minor adverse for the project alone and cumulatively.

5.3.7. Table 5.1 (below) demonstrates that throughout the course of the Examination specific additional ornithological information has been submitted by the Applicant, primarily in response to issues raised by IPs and also matters raised by the ExA at ISH4 [EV-013 to EV-016 inclusive], through First and Second Written Questions [PD-008 and PD-012 respectively] and a 'Rule 17' Request for Further Information [PD-018]. In the main this additional information relates to updates on collision risk modelling (CRM) and displacement assessment.

5.3.8. In addition to the documents that are listed in Table 5.1, the Applicant has also provided offshore ornithological information, for example in Habitats Regulations Assessment report, Statements of Common Ground and responses to representations made by various IPs; predominantly NE and the Royal Society for the Protection of Birds (RSPB).

Table 5.1: Offshore Ornithology documents submitted by the Applicant after the commencement of the Examination

Table 5.1		
Deadline	Document name	Exam Library reference
1	The Applicant Responses to First Written Questions Appendix 3.1 – Red-throated diver displacement	REP1-008
1	The Applicant Responses to First Written Questions Appendix 3.2 – Collision Risk Modelling: update and clarification	REP1-008
1	The Applicant Responses to First Written Questions Appendix 3.3 – Operational Auk and Gannet Displacement: update and clarification	REP1-008
4	Appendix 3.1 Ornithological Aerial Surveys: dates and Times	REP4-045
4	East Anglia THREE, Information for the Habitats Regulations Assessment Appendix 3 Apportioning of the Flamborough Head and Filey Coast pSPA Gannet population among North Sea Offshore Windfarms	REP4-048

Table 5.1		
Deadline	Document name	Exam Library reference
4	East Anglia THREE, Information for the Habitats Regulations Assessment Appendix 4 Apportioning of the Flamborough Head and Filey Coast pSPA Kittiwake population among North Sea Offshore Windfarms	REP4-049
6	Norfolk Vanguard Offshore Wind Farm Offshore Ornithology: Deterministic Collision Risk Modelling	REP6-019
6	Lesser Black-backed Gull Population Viability Analysis	REP6-020
6	Offshore Ornithology Assessment update for Deadline 6	REP6-021
6	Migrant non-seabird Collision Risk Modelling – Revision of REP3-038, addressing Natural England's comments	REP6-022
7	Offshore Ornithology Cumulative and In-combination Collision Risk Assessment	REP7-062
7	Responses to Natural England initial comments on the Alde-Ore Estuary SPA lesser black-backed gull PVA Offshore Ornithology Cumulative and In-combination Collision Risk Assessment: Appendix 1	REP7-063
(Accepted as an additional submission)	Deterministic Collision Risk Modelling for revised layout scenarios	AS-043
(accepted as an additional submission)	Offshore Ornithology Cumulative and In-combination Collision Risk Assessment (Update)	AS-048
(Accepted as an additional submission)	Deterministic Collision Risk Modelling for revised layout scenarios and increased draught height	AS-049
8	Offshore Ornithology Precaution in ornithological assessment for offshore wind farms	REP8-067

5.3.9. By the close of the Examination the Applicant had also proposed a number of refinements to the 'Rochdale envelope' for the Proposed

Development; chiefly to mitigate the predicted collision risk impacts for offshore ornithology. As amendments were proposed by the Applicant in stages during the Examination, this has resulted in some assessments having been superseded by later ones in quick succession, such as [REP6-019 and AS-043] having been superseded by [AS-049].

- 5.3.10. The Applicant's final position on collision risk is reflected in the Deterministic Collision Risk Modelling for revised layout scenarios and increased draught height [AS-049], and the Applicant's analysis of this is provided in the Offshore Ornithology Cumulative and In-combination Collision Risk Assessment (Update)[AS-048] that was accepted as an additional submission after D7. This updated assessment reflects the narrowing of the Rochdale envelope for the Proposed Development as a result of the following commitments:
- a reduction in the maximum number of turbines from 200 to 180, due to the removal of the 9MW turbine option from the design envelope;
 - the split between the percentage of turbines in Norfolk Vanguard East and Norfolk Vanguard West sites having been further defined such that no more than two-thirds of the turbines will be installed in Norfolk Vanguard West and no more than half of the turbines will be installed in Norfolk Vanguard East (with the remainder to be installed in the other site in each case); and
 - a raised draught height above Mean High Water Springs (MHWS) from the originally proposed 22m above MHWS to 27m above MHWS for all the turbines.
- 5.3.11. These amendments have been secured in the final version of the dDCO submitted by the Applicant [REP9-007] and are described in the Offshore Ornithology Position Statement Deadline 9 [REP9-031]. This document responds to the comments made by NE and RSPB at D8 [REP8-104 and REP8-109 respectively].
- 5.3.12. The Applicant contends that the combined revisions to the Proposed Development have reduced the average collision risk by 65% compared with the original project design [AS-049]. However, this percentage figure varies between different species and sites as indicated in Table 1 of [AS-049].
- 5.3.13. The Applicant states that the revised assessment leads to a conclusion of no significant adverse impact due to collisions either for the project alone or cumulatively in terms of EIA. The Applicant also concludes no significant adverse effects from the project alone or cumulatively in terms of displacement effects [REP6-021].
- 5.3.14. Consequently, the Applicant's final position, as stated in REP9-031, is that robust conclusions for all species can be reached and that: "*Norfolk Vanguard Offshore Wind Farm will not have significant impacts on any species' population as a result of collisions or displacement at the project alone (EIA) ... [and] Norfolk Vanguard, cumulatively with other wind farms, will not have significant impacts on any species' population, and furthermore Norfolk Vanguard does not make meaningful contributions to the total estimated impacts.*"

Planning issues and ExA reasons

Offshore ornithology matters agreed during the course of the Examination

- 5.3.15. Due to the submission of the additional assessments by the Applicant in response to comments made by NE and the RSPB and questioning by the ExA at ISH4 and in its First and Second Written Questions [PD-008 and PD-012], by the close of the Examination a number of the initial areas of disagreement for offshore ornithological matters had been resolved.
- 5.3.16. Most of the matters raised by NE and the RSPB at the start of the Examination that related to some of the underpinning methodologies and assumptions contained in the original assessments submitted by the Applicant, have now been refined and agreed. For example, there was disagreement over the use of the Applicant's stochastic CRM. Although the Applicant did not consider it necessary to do so, by the close of the Examination the CRM methodology had largely been agreed through the Applicant's use of the Band model options 1 and 2. Such agreement is detailed in the SoCGs with both NE and the RSPB [REP9-046 and REP8-089] respectively.
- 5.3.17. There is common agreement between the parties that there remains a degree of uncertainty in regard to elements of CRM, bird tracking and other bird modelling assumptions and that this is not an exact science. For example, NE acknowledges [REP9-057] that the detailed nature of behaviour of seabirds from any given colony in the early and latter stages of the breeding season is poorly understood. The RSPB [REP9-063] believes that: "*Assessment methodologies and improvements in understanding of seabird ecology are developing all the time whilst new marine areas are being identified as important and the need for their protection recognised.*"
- 5.3.18. In order to take a proportionate approach, the ExA sees no significant benefit in providing a detailed analysis of all those matters that were not agreed at the start of the Examination but which have now been agreed. However, key matters will be reported on. Furthermore, the ExA is satisfied that these matters have now been resolved to an acceptable standard either through the provision of the additional information as listed in Table 5.1 or, in a few instances, through the provision of Conditions in the dDCO [REP9-007].

Construction phase impacts

- 5.3.19. At the close of the Examination, both NE and the RSPB agree that the magnitude of effects and conclusion on significance resulting from impacts during construction have been correctly identified and predicted, and that no impacts of greater than 'minor adverse' significance are predicted [REP9-046 and REP9-089].

Collision mortality (project alone)

- 5.3.20. In terms of the potential effects on key species, the Applicant's predicted worst-case collision mortality from the project alone [AS-048] are:

kittiwake 115.4 mortalities (range of 66.9 to 174.75 mortalities); gannet 66.31 (range of 37.21 to 103.44); LBBG 23.05 (range of 6.51 to 47.38); and great black-backed gull (GBBG) 46.84 (range of 22.68 to 78.08).

- 5.3.21. The Applicant concludes [AS-048] that annual mortality from the project alone would not increase the background rate by more than 1% and therefore collision mortality from the project alone would have no significant impact at the EIA scale.
- 5.3.22. NE in response, Table 2 of [REP8-104], indicates that it agrees with the Applicant's figures based on the mean data but the mortality ranges it calculated based on the lower and upper confidence levels of the density data differed as follows: kittiwake, range of 12 to 300 mortalities; gannet, range of 12 to 161; LBBG, range of 1 to 66; GBBG, range of 1 to 155.
- 5.3.23. The RSPB's CRM mortality predictions use the upper confidence level figures of bird density and are therefore higher across all of these species than those predicted by the Applicant.
- 5.3.24. Nevertheless, both NE and the RSPB concur with the Applicant that no impacts of greater than minor adverse significance are predicted as a result of collisions from the project alone [REP9-046 and REP8-089].

Auk operational displacement (project alone)

- 5.3.25. With regard to the displacement of auks during the operational phase, the Applicant calculated the following from the project alone [REP6-021]:
- razorbill – 10.5 to 245.5 annual mortalities resulting in a mortality rate increase of 0.24% when assessed against the largest Biologically Defined Minimum Population Scale (BDMPS), and 0.08% when assessed against the biogeographic population;
 - guillemot – 27 to 636 annual mortalities resulting in a mortality rate increase of 0.12% when assessed against the largest BDMPS, and <1% when assessed against the biogeographic population; and
 - puffin - 0.5 to 12.5 annual mortalities resulting in a mortality rate increase of <0.01% when assessed against the largest BDMPS, and <0.001% when assessed against the biogeographic population.
- 5.3.26. For these species the Applicant concluded that the worst-case displacement mortality would have a negligible magnitude and result in an impact of negligible significance.
- 5.3.27. NE concurs with the Applicant that there are no significant effects on auks arising from displacement due to the project alone at the EIA level, on the basis even using its worst-case preferred displacement and mortality rates, impacts on the baseline mortality of the largest BDMPS does not exceed 1% [REP9-046 and REP9-057]. The RSPB also agrees that displacement from the project alone would not result in impacts of greater than minor significance for construction, operation and decommissioning (subject to the use of its recommended displacement/mortality rates) [REP8-089].

Cumulative collision mortality

- 5.3.28. In terms of cumulative impacts, NE confirmed [REP8-104] that it concurs with the Applicant's conclusion of minor adverse effect from cumulative collision mortality to LBBG and herring gull at an EIA scale. Although NE had initially considered [REP8-104] that it could not reach a conclusion about the significance of the level of predicted impact for little gull due to the absence of collision data for Dudgeon, East Anglia ONE and THREE. The Applicant explained that no collision estimates are available for these projects. Therefore in [REP9-046] NE has agreed a conclusion of no significant effect for little gull.

Monitoring

- 5.3.29. In its SWQs [PD-012] the ExA asked the relevant SNCBs whether they were satisfied with the long term ecological monitoring proposed. NE indicated [REP4-062] that the In Principle Monitoring Plan (IPMP) includes monitoring post construction. The SoCG with NE [REP9-046] agrees that the proposed monitoring is adequate.

Offshore ornithology matters not agreed during the course of the Examination

Summary of disagreement regarding predicted impacts on species

- 5.3.30. Despite agreement being reached between the Applicant and NE and RSPB over a number of offshore ornithological matters, there remained at the close of the Examination certain matters of disagreement which are described below.

RTD operational displacement (project alone)

- 5.3.31. In terms of operational displacement effects to RTD from the project alone, the Applicant advocates the use of what is considered to be an evidence-based displacement rate of 90% and a consequent mortality rate of 1% including birds within 2km of the windfarm boundary [REP1-008]. Using these rates the Applicant concludes that the impact significance would be 'minor adverse'.
- 5.3.32. However, NE recommends rates of 100% displacement and 10% mortality within a 4km buffer [RR-106]. Using these rates, the Applicant [REP1-008] and NE [REP9-046] conclude that the impact significance would be 'moderate adverse'.

RTD cumulative operational displacement

- 5.3.33. The Applicant's cumulative operational displacement assessment [REP6-021] shows that the number of RTDs potentially displaced would be 1,578.1. Applying NE's advised rates of 100% displacement 10% mortality within 4km, the Applicant concludes that the increase in background mortality rate would be 6.6% (and a further 0.06% from Tier

4 projects⁴⁶). Applying its evidence-based rate of 90% displacement and 1% mortality, the cumulative effect would increase baseline mortality by 0.6% (a further <0.001% for tier 4 projects). The Applicant asserts that using either its own or NE's preferred rates, the contribution from Norfolk Vanguard and H3, as Tier 4 projects, would be extremely small (together they would displace 0.01% of the BDMPS population).

- 5.3.34. NE [REP7-075 and REP9-057] notes that if the assessment is conducted against the largest relevant BDMPS, the cumulative total equates to 5.1% of baseline mortality which would be of moderate adverse significant; however, it acknowledges that the contribution of Norfolk Vanguard to the cumulative total is small at 0.1%.
- 5.3.35. The RSPB [REP9-063] considers that cumulative displacement impacts at the EIA level are significant for RTD.

Cumulative collision mortality – kittiwake, GBBG and gannet

- 5.3.36. In terms of cumulative collision mortality, the Applicant concludes that the impact significance to all species would be minor adverse [REP9-031]. However, NE [REP9-057] considers that there is a moderate adverse effect, which is therefore classified as being significant at the EIA level, due to cumulative collision totals for kittiwake and GBBG, and for gannet when collision and displacement impacts are considered together. The disagreements over the effects to these species are described in turn below.
- 5.3.37. Kittiwake - The Applicant [AS-048] calculated a cumulative, all age class annual collision mortality of 4,054.8 with H3 (3,816.8 without). It noted a high degree of precaution as a result of headroom from consented versus built projects; and that evidence suggests lower nocturnal activity factors could be applied. The Applicant calculated a population growth rate reduction of 0.3% and noted fluctuations in the British kittiwake population between the years 1969 and 2013. It argued the density dependent population model was more robust than the density independent model that NE had advocated. The Applicant concluded a minor adverse effect.
- 5.3.38. NE [REP8-104] calculated 4,144 mortalities with H3 included and noted that equates to 3.61% of baseline mortality of all UK kittiwake colonies within the North Sea BDMPS scale (2.91% excluding H3). It noted that kittiwake is listed as 'Vulnerable' to global extinction on the IUCN Red List as a result of breeding population declines in Europe and is listed as Red on BoCC4 as a result of severe population declines in the UK. NE therefore considered there to be a moderate adverse, and therefore significant, effect on kittiwake from cumulative collision mortality at an EIA scale.

⁴⁶ The cumulative assessment considers four tiers of projects: 1 – operational projects; 2 – projects under construction; 3 – projects consented but not constructed; 4 – projects in the application process

- 5.3.39. In the view of the RSPB [REP8-089] it is not the impact of the project alone *per se* that is the issue for kittiwake, but the fact that a limit of acceptability cumulatively with other projects for kittiwake has already been breached.
- 5.3.40. GBBG - The Applicant [AS-048] calculated a cumulative annual collision mortality of 1,003.2 with H3 included (937.2 without H3). It noted a high degree of precaution as a result of headroom from consented versus built projects; differences in collision assessment methodologies undertaken prior to 2014 using the Band model Option 1 and a 98% avoidance rate; and that evidence suggests lower nocturnal activity factors could be applied. The Applicant also noted that the cumulative total is lower than those reported for the consented Rampion Offshore Wind Farm project and considered that its contribution to cumulative effects was so small that it would not materially affect the overall cumulative impact magnitude (akin to the consented East Anglia THREE). The Applicant therefore concluded a minor adverse effect.
- 5.3.41. NE [REP8-104] noted that including H3, this equates to 5.93% of the baseline mortality of the BDMPS and 2.31% of biogeographic population (5.54% and 2.16% respectively without H3). It noted that GBBG is Amber listed in BoCC4 and the UK North Sea and Channel BDMPS would be 6.8-8.9% lower after 25 years than in the absence of additional mortality (6.5-8% without H3). NE considered there to be a moderate adverse, and thereby significant, effect on GBBG from cumulative collision mortality at an EIA scale.
- 5.3.42. Gannet - The Applicant [AS-048] calculated a cumulative, all age class annual collision mortality of 2,723.5 with H3 included (2,685.5 without H3). It noted a high degree of precaution as a result of headroom from consented versus built projects; differences in collision assessment methodologies undertaken using the Band model Option 1 and a range of avoidance rates between 95-99%; that evidence suggests a higher avoidance rate than 98.9% used in the CRM; and the use of high nocturnal activity factors. Using a population model, it considered that the risk of a 5% population decline was less than 5% for additional annual mortalities below 5,000. Furthermore, the Applicant noted that the most recent census indicates a higher breeding population than that considered in its population model. The Applicant therefore concluded a minor adverse effect.
- 5.3.43. NE [REP8-104] highlighted that the Applicant had not considered the combined impact of cumulative collision risk and cumulative displacement, which would result in 3,072 gannet mortalities (including H3) and would equate to 3.52% of baseline mortality of the BDMPS and 1.36% of baseline mortality of the biogeographic population. It noted that gannet is Amber listed in BoCC 4. Given the UK's responsibility for gannet as supporting over half the global population and the predicted impacts at the North Sea population scale, NE considered there to be a moderate adverse, and therefore significant, effect on gannet from cumulative collision and displacement mortality at an EIA scale.

- 5.3.44. The RSPB [REP9-063] agrees that the changes to the Proposed Development reduces the project's own contribution to cumulative collision risk, but due to the level of impact already existing, it considers that cumulative collision risks for kittiwake and GBBG are significant.

Auk cumulative displacement

- 5.3.45. With regard to the effects of cumulative displacement, the Applicant [REP6-021] presented cumulative annual mortalities for auk using NE's preferred 70% displacement and 10% mortality rate and its own 'evidence-based' rates of 50% displacement and 1% mortality, the latter of which it argues to be more appropriate.
- 5.3.46. The Applicant calculated cumulative annual mortalities of:
- razorbill – 342 to 7,981 with H3 included (292 to 6,826 without H3) resulting in a mortality rate increase of 7.71% when assessed against the largest BDMPS, and 0.27% when assessed against the biogeographic population using NE's preferred rates (0.55% and 0.02% using its evidence-based rates);
 - guillemot – 853 to 19,910 with H3 included (760 to 17,730 without H3) resulting in a mortality rate increase of 6.9% when assessed against the largest BDMPS, and 3.4% when assessed against the biogeographic population using NE's preferred rates, (0.49% and 0.24% using its evidence-based rates); and
 - puffin – 21,261 in the breeding season and 23,221 in the non-breeding season (with H3 included) resulting in a mortality rate increase of 2.1% when assessed against the largest BDMPS, and 0.16% when assessed against the biogeographic population using NE's preferred rates, (0.15% and 0.01% using its evidence-base).
- 5.3.47. Using its evidence-based rates, the Applicant considers significant cumulative effects would have a negligible magnitude and result in an impact of negligible significance [REP6-021].
- 5.3.48. NE notes [REP9-057] that the abundance values for the H3 contribution to cumulative displacement differ from those it advises and therefore based its conclusions on what it considers to be the most appropriate figures.
- 5.3.49. NE states that razorbill is listed as 'near threatened' on the IUCN Red List and as Amber on BoCC4. Applying a 2% mortality rate and between 40 and 50% displacement, it concludes that predicted cumulative mortality predictions exceed 1% of baseline mortality of the largest BDMPS.
- 5.3.50. With regard to guillemot, NE notes the species is listed as 'least concern' on the IUCN Red List and as Amber on BoCC4. Applying a 2% mortality rate and between 40 and 50% displacement, it concludes that predicted cumulative mortality predictions exceed 1% of baseline mortality of the largest BDMPS.
- 5.3.51. NE advises a minor adverse impact to puffin from cumulative operational displacement at an EIA scale, but it considers a significant (moderate

adverse) impact on guillemot and razorbill due to cumulative displacement effects cannot be ruled out.

- 5.3.52. The RSPB [REP9-063] considers that cumulative displacement impacts at the EIA level are significant for guillemot, razorbill and puffin.

Precaution and disagreements over methodological assumptions

- 5.3.53. The Applicant [REP8-067] asserts that the methodological views expressed by both NE and the RSPB in regard to cumulative and in-combination impacts contain over-precaution. The standard 'building block' approach to impact assessment entails an independent estimation of the population size, an assessment of the magnitude of effects and the subsequent consequences on the populations results in precautionary assessments being made at each stage of the process. In the Applicant's view, this leads to a final conclusion based on over-estimated impacts that is then compounded when cumulative assessments are combined for consideration.
- 5.3.54. The Applicant argues [REP8-067] that the predicted effects for combined precautionary approaches are up to 10 times greater for collision risk and up to 14 times greater for displacement risk than those obtained through the application of more appropriate methods such as the use of mean estimates.
- 5.3.55. The arguments related to the different aspects of precaution are discussed below.
- 5.3.56. Density and abundance data: In its RR [RR-106] and throughout the Examination, NE advised that the upper 95% confidence intervals (CIs) on density be applied to the species abundance estimates to give a range of predicted mortalities. The Applicant believes that the 95% CIs are heavily weighted by a small proportion of the survey data whereas the mean is more representative of all the years' data. As such the Applicant contends that the use of 95% CIs without full consideration of the underlying distributions has the potential to introduce very strong precaution. The Applicant has highlighted the difference between using a mean and an upper 95% CI figure for the survey data used to calculate gannet density.
- 5.3.57. However, NE [REP9-057] notes that surveys are unlikely to capture the full extent of variation in density/abundance of seabirds and this uncertainty in the survey dataset needs to be properly addressed. NE considers it entirely appropriate for the Applicant to present values from both upper and lower confidence limits for consideration.
- 5.3.58. The RSPB [REP9-063] also considers that whilst the mean or other measures of central tendency are the figures used in the assessment, the confidence levels allow consideration of the variability and therefore the uncertainty. Consequently, not to express such uncertainty would not be in accordance with the precautionary principle.

- 5.3.59. The ExA is of the view that it is appropriate to consider the upper confidence level due to the inherent degree of uncertainty that is likely to exist in the ornithological data. As NE has stated [REP8-104] in response to the ExA's Rule 17 Request for Further Information [PD-018], sometimes assumptions are made based on only a few studies or a few seasons of bird data, and seabird distribution across marine areas used for foraging seems to be highly variable. The actual impacts on bird species of offshore windfarms in terms of both collision and displacement mortality are still largely unknown and difficult to determine [REP8-104]. Consequently, at this stage it seems reasonable to have regard to an appropriate element of uncertainty, as represented by the upper 95% confidence level. The ExA considers that this is in keeping with the precautionary principle.
- 5.3.60. Collision risk: The generally accepted model for CRM is the Band (2012) deterministic model, however, the Applicant contends [REP8-067] that this model does not capture the inherent uncertainty in a realistic manner and advocated the use of a stochastic model. Whilst a stochastic version of the Band model is being developed by Marine Scotland Science, it was not at a stage where it was possible to use it in the application documents or the Examination [REP6-004]. The Applicant therefore developed its own version of the stochastic model in order to calculate the collision estimates it presented in its application documents. However, as this has not been peer reviewed the approach of using the Applicant's stochastic model was not accepted by either NE [RR-106, REP1-088 and REP9-046] or RSPB [RR-197, REP1-112, REP9-046 and REP8-089]. The Applicant's subsequent CRM updates submitted during the Examination were based on modelling using the Band (2012) deterministic model.
- 5.3.61. The ExA does not consider that the Applicant's stochastic model has been appropriately independently tested and peer-reviewed and therefore concurs with the views of NE and the RSPB that the Band (2012) deterministic model is appropriate.
- 5.3.62. Throughout the Examination, NE considered the 95% CIs of predicted collision mortality should be presented in the assessments. The Applicant [REP8-067] argues that NE makes precautionary assumptions at each stage of the assessment by focussing attention on the upper limits of each component (ie for the density and abundance data and the assessments). The Applicant states [REP9-031] that the likelihood of obtaining two worst case outcomes at the same time, ie two upper 95% confidence interval estimates, is 0.06% and the probability of having three worst case outcomes is 0.001%.
- 5.3.63. Using collision mortality estimates for gannet in Norfolk Vanguard East, the Applicant [REP8-067] demonstrated how the November collision predictions have a large influence on the annual total and the upper 95% CIs for this month have a large influence on the summed annual estimate.

- 5.3.64. Furthermore, the Applicant [REP8-067] cites the cumulative effects of five offshore wind farms using the precautionary estimate of the upper 95% confidence level (ie a 2.5% probability at each site) for a particular species at each of these sites. Based on these assumptions, the Applicant states that the statistical probability of the correct value being this large is calculated by multiplying the individual probabilities of each of these estimates. The Applicant calculates this would be 1 chance in 100,000,000 [REP8-067]. As such, the cumulative effects would be greatly overestimated according to the Applicant.
- 5.3.65. NE [REP9-057] and the RSPB [REP9-063] responded that the approach of using upper 95% CIs for all projects has not actually been taken and that its understanding is that central values from individual project assessments have been carried forward into cumulative assessments. Furthermore, NE [REP9-057] explains that it cannot use upper 95% confidence limits for all projects since for Round 1 and Round 2 windfarm projects, which form part of the cumulative assessment, such information was not presented.
- 5.3.66. In [REP9-057] NE asserts that, contrary to the Applicant's comment that it focusses on the upper limits of each component of the assessment, instead it takes a 'range-based approach' to where a given dataset or parameter has a high degree of uncertainty. It notes that upper confidence limits are the most robust method to rule out significant impacts, but this is different from an exclusive focus on upper confidence limits.
- 5.3.67. The RSPB argues [REP9-0063] that the 95% confidence levels are used to inform the confidence around the assessment by giving a necessary indication of uncertainty. The RSPB [REP9-063] contends that this is not an over-precautionary approach but instead by quantifying the uncertainty, ie by using the upper 95% confidence level, there is in effect a reduction in the need for precaution to be applied elsewhere.
- 5.3.68. The ExA considers it acceptable to have some regard to the upper confidence level outputs in order to provide a statistical indication of uncertainty and thereby inform the confidence around the assessment.
- 5.3.69. Headroom: In both its application documents and throughout the Examination, the Applicant argues that the precaution arises from the potential difference between the number of turbines permitted in an approved DCO and the number that are actually likely to be built out [APP-337 and REP7-062]. Therefore the Applicant contends [REP8-067] that a degree of 'headroom' applies in cumulative assessments since the cumulative/in-combination worst case scenarios of the maximum number of turbines are unlikely to be built out in practice. The Applicant has cited

Trinder⁴⁷ (2017) that estimates a reduction of 40% between the worst case cumulative total and the total which reflects actual built wind farms.

- 5.3.70. However, NE set out its position on this matter early in the Examination [REP2-038] and it argues [REP9-057] that unless the DCO has been formally amended to reflect a lower number of turbines then it is possible that the greater number of turbines could be constructed. Therefore without the lower number of 'as built' turbines being legally secured the worst-case scenario should be maintained in the cumulative/in-combination assessments.
- 5.3.71. The RSPB [REP9-063] considers the Trinder report cited by the Applicant to be flawed and argues that the approach of headroom implies a species is simply expendable, which is not appropriate. It also considers [REP7-083] that it is only acceptable to consider the 'as built' windfarm envelopes if these have been secured in an amended DCO and hence there is legal certainty for the reduction in the number of turbines.
- 5.3.72. Once a wind farm has been built out with a certain number of turbines, the ExA considers it somewhat unlikely, although not entirely unfeasible, that the developer would then go back at a later stage and construct again up to the capacity permitted in the DCO. Economic and practical considerations would mitigate against such an approach. However, the legal basis for what can be built out is the number of turbines as secured in the DCO. Therefore, unless a DCO is formally amended then the DCO parameters should be the number of turbines that form the basis for cumulative assessments. As such, the ExA does not concur with the Applicant's headroom argument.
- 5.3.73. Displacement: The Applicant in [REP8-067] argues that, as with collision assessments, a number of combined layers of precaution (bird density, displacement rates and mortality rates) result in highly improbable total displacement rates. It also notes that although the standard method for assessing displacement includes a buffer of between 2km and 4km around the site boundary, there is little evidence that displacement actually extends to these distances.
- 5.3.74. However, in [RR-106 and REP9-057] NE and the RSPB [REP9-063] cite a number of studies that have, for example, demonstrated density reductions for RTD up to 12km from offshore windfarms. NE also argues that information in regard to foraging ranges is developing and that, for example, kittiwake tracking data demonstrates that kittiwake could reach both Norfolk Vanguard West and East [REP9-057].
- 5.3.75. The Applicant also argues that the studies on which displacement is based have been based on older windfarms with smaller turbines that are more closely spaced [REP8-067]. However, the RSPB [REP9-063] point out that the Applicant has not provided evidence as to how this would

⁴⁷ Trinder, M (2017) Estimates of Ornithological Headroom in Offshore Windfarm Collision Mortality. Unpublished report to the Crown Estate (submitted as Appendix 43 to Deadline 1 submission Hornsea Project Three)

reduce displacement and argue that turbines spaced further apart could arguably cause greater displacement.

- 5.3.76. In terms of bird density, the Applicant [REP8-067] considers the use of upper 95% confidence estimates for the abundance data also affects displacement assessments, which are undertaken on a seasonal rather than monthly basis. The RSPB [REP9-063] contends this approach is not overly precautionary, but rather the central measure or mean is used to express confidence in the conclusions that have been reached.
- 5.3.77. In terms of displacement and consequent mortality rates to be used in the assessments, these were a matter of disagreement between the Applicant and NE throughout the Examination. The Applicant [REP8-067] argues that although NE has considered a range of displacement rates, the 10% mortality rate it advocates adds a considerable degree of precaution. The Applicant's reviews of evidence regarding displacement mortality for RTD, guillemot and razorbill [REP1-008, REP6-021 and REP8-069] indicate that realistic levels of mortality for displaced birds would be 1% of displaced individuals suffering mortality as a direct result. The Applicant cited the Searle *et al* (2018) study which assessed breeding seabirds, the time when birds have the highest energetic requirements and are thus at greatest risk of displacement impacts, and found adult mortality increases of less than 1% and chick mortality increase of around 2%.
- 5.3.78. NE [REP9-057] argues that it does not focus its assessments on a 10% mortality rate alone and that empirical evidence regarding the consequence of displacement for seabirds is poorly understood.
- 5.3.79. Overall, the Applicant argues that a stochastic model based on probability distributions represents a more appropriate approach than simply combining upper confidence estimates for each parameter, with the resultant effect of compounding precautionary approaches.
- 5.3.80. However, in [RR-106 and REP9-057] NE has cited a number of studies that have, for example, demonstrated density reductions for RTD up to 12 kms from offshore windfarms. NE also argues that information in regard to foraging ranges is developing and that, for example, kittiwake tracking data demonstrates that kittiwake could reach both Norfolk Vanguard West and East [REP9-057].
- 5.3.81. The ExA considers that the level of displacement and the subsequent effects on bird mortality is an area of research that is still developing. Whilst the Searle study would point towards a lower mortality rate as a result of displacement, this needs to be treated with a degree of caution in terms of wider extrapolation as it is only a single study data. Until more research has been undertaken, the ExA considers it reasonable to apply the rates of up to 10% mortality of displaced individuals that NE has indicated. Once again, this is based on the application of the precautionary principle.

- 5.3.82. Seasonal considerations: The Applicant [REP8-067] argues, based on research conducted by Thaxter *et al* (2012), that whilst Norfolk Vanguard is within the upper foraging range of a number of species, with the exception of gannet and fulmar from FFC SPA, it is located beyond the typical breeding season foraging range for most seabirds from colonies along the English coast with the exception of gannet and fulmar from FFC SPA. However, NE [REP9-057] argues that the foraging ranges in Thaxter *et al* (2012) no longer reflect best available evidence.
- 5.3.83. The Applicant acknowledges that the Norfolk Vanguard site lies within a region where large numbers of seabirds pass through on their migratory routes and the Applicant has accounted for the presence of migrants in the impact assessment [REP8-067]. NE [RR-106 and REP1-088] wished to see the application of extended breeding seasons to include months where there are both migration and breeding. The Applicant contends that to assume that all birds that are present in those months where breeding and migration overlap are in fact breeding birds adds another layer of precaution.
- 5.3.84. The Applicant has cited its D8 submission on kittiwake age structure in the Southern North Sea [included in REP8-067] and asserts that this finds 'strong evidence' that during the breeding season the density of breeding adults declines rapidly with distance offshore from colonies and is likely to be extremely low beyond 100km. This is disputed by the RSPB who in [REP9-063] has referred to kittiwake tracking data that records kittiwake foraging 324 km from breeding colonies.
- 5.3.85. Although the Applicant's assessments submitted during the Examination were undertaken following NE's advice, the Applicant considered [REP8-067] that using demographically derived age structures to estimate impacts on individual age classes at windfarms located more than 100km from a particular colony would overestimate the proportion of adults present and is therefore precautionary. NE [REP9-067] argues that although the behaviour of seabirds from any given colony in the early and latter stages of the breeding season is poorly understood, birds can be present in meaningful numbers at these times. It considers that excluding these months from the assessment is likely to result in birds with connectivity to SPAs being excluded.
- 5.3.86. The RSPB acknowledges that it is unlikely that all birds present in the overlapping months would be breeding. However, it argues that apportioning those months where there is both breeding and migration to breeding represents a precautionary approach, as to exclude all of these birds as non-breeders is as equally unsupported by evidence as considering all birds being breeders [REP9-063]. The ExA is not persuaded by the Applicant's arguments that this is an overly precautionous approach, and thus we concur with the analysis and the approach to seasonality as advocated by the RSPB and NE.
- 5.3.87. Population consequences: Another area where the Applicant cites over-precaution is with regard to determining the consequences of the predicted additional mortality using population models. Throughout the

Examination, the Applicant advocated the use of a density dependent population viability analysis (PVA) model, whereas NE and the RSPB advocated a density independent PVA model. The Applicant therefore presented its assessment of effects [AS-048] with reference to outputs from both the density dependent and density independent model.

- 5.3.88. The Applicant explains [REP9-057] that 'density dependence' refers to the inherent regulation that occurs within populations due to competition for resources (e.g. food, mates, breeding space, etc.). Whilst an inherent degree of regulation, i.e. density dependence, is an accepted feature of populations, since without this populations would grow indefinitely, as the mechanisms of how this operates in populations are not fully understood then a 'density independent' approach is proposed as being more precautionary. However, the Applicant contends that a density independent approach is unrealistic and in almost all circumstances it will over-estimate the populations effects of increases in mortality. This is because population growth in a density independent model is not limited and therefore is exponential.
- 5.3.89. The Applicant also argues that NE then considers that a density independent prediction could apply to a population assumed to be stable at its current size, which implicitly assumes density dependence.
- 5.3.90. In response, NE [REP9-057] refutes that density dependence should be excluded from PVA models. It confirms that where there is no clear evidence to support the application of any particular form or magnitude of density dependence in a given model, it bases its advice on the outputs of the density independent PVA model, as these make no assumptions about the form or strength of any density dependent effects [REP9-057].
- 5.3.91. The RSPB [REP9-063] agrees with the Applicant that there is strong evidence for density dependence acting on the kittiwake population of the UK. However, it notes that a JNCC review (Cook and Robinson 2016) concludes that using a density independent model is not necessarily the most precautionary approach. As such, it supported NE's position and disagrees that the density independent model is overly precautionary, but rather that it is the most scientifically robust.
- 5.3.92. Based on the evidence that it has been presented with, the ExA considers that there is currently insufficient certainty about exactly how density dependence operates within the relevant populations. Until more detailed analysis of the factors governing density dependence is available the EXA considers it prudent to use a density independent approach. Consequently, we concur with the views expressed by NE and RSPB on the use of density independence in PVA models.
- 5.3.93. Avoidance rates: Another area of disagreement was for the gannet avoidance rate used in the CRM. The Applicant used a 98.9% avoidance rate, but throughout the Examination the RSPB [RR-197, REP1-112, REP4-070, REP6-038, REP7-083, REP8-089 and REP8-109] advocated that this should be 98% in the breeding season. The RSPB [REP7-083]

confirmed that it would base its conclusions on the use of a 98% avoidance rate for the breeding season.

- 5.3.94. This concern was not shared by NE, who advocated the 98.9% avoidance rate [RR-106 and REP1-088]. The ExA does not consider that conclusive evidence had been provided by the RSPB in this regard and is therefore minded to agree with the 98.9% avoidance rate as advocated by both the Applicant and NE.

Monitoring

- 5.3.95. The RSPB [REP4-070 and REP8-089] stated that whilst it welcomed the inclusion of strategic monitoring, it was concerned that provision had not been made for project level monitoring, particularly regarding collision risk and displacement/barrier effects. The ExA notes the views on monitoring expressed by NE in the SoCG. However, in order to assess the effect of the Proposed Development and to inform future proposals we consider that it is essential that appropriate strategic and project-specific monitoring is undertaken.
- 5.3.96. Condition 14(1)(l) of Schedules 9 and 10 of the dDCO [REP9-007] requires an ornithological monitoring plan, setting out the aims, objectives and methods for ornithological monitoring in consultation with the MMO and relevant SNCBs, to be approved by the MMO. The ExA considers that this has the potential to satisfactorily address all the monitoring requirements in regard to ornithology, including project-specific monitoring.

Conclusion on Offshore Ornithology

- 5.3.97. Throughout the course of the Examination, agreement has been reached between the Applicant and NE/the RSPB on many issues pertaining to offshore ornithology. But a number of issues remain without agreement.
- 5.3.98. As noted above, the ExA has considered the arguments of the Applicant, NE and the RSPB with regard to the degree of precaution that it would be reasonable to apply. The ExA can appreciate how a combination of these would lead to an outcome that is unlikely, but there are no other statistical methods that are subject to common agreement or sufficient research to validate an alternative assessment. Until such time, it would appear to the ExA that it is judicious to base our conclusions on the assessment the Applicant has presented that follows NE's methodological advice.
- 5.3.99. Our conclusions in relation to the disagreements that remained at the close of Examination are set out below.

RTD displacement

- 5.3.100. Both the Applicant and NE agree that there would be a moderate adverse effect to RTD from operational displacement when using NE's preferred displacement and mortality rates. As noted above, the ExA considers

these rates to be appropriate and therefore concludes this would be a significant effect of the project alone.

- 5.3.101. It therefore follows that there would also be a moderate adverse effect to RTD from cumulative displacement. Whilst the contribution from Norfolk Vanguard is small, the increase in baseline mortality cannot be ignored. The ExA therefore concludes there would be a significant effect cumulatively.

Cumulative auk displacement

- 5.3.102. As discussed above, the ExA agrees that NE's displacement and mortality rates are appropriate. Nevertheless, NE's final representation [REP9-057] considered the same displacement rate as the Applicant advocated (50%) and a 2% mortality rate, which was only slightly higher than the Applicant's rate of 1%. This was substantially lower than the figures it had previously advised during the Examination and yet even with these rates, it still concluded a moderate adverse effect from cumulative displacement to both guillemot and razorbill. Noting the status of these species on the BoCC4, the ExA concludes that this would be a significant effect.
- 5.3.103. Although the RSPB considers the impact to puffins to represent a moderate adverse effect, it has not substantiated this conclusion. Noting that NE has agreed to a minor adverse effect, the ExA concludes displacement to puffins would not be significant from the project alone or cumulatively.

Cumulative collision mortality

- 5.3.104. The ExA has considered the arguments presented in relation to cumulative collision mortality for kittiwake, GBBG and gannet along with their respective listings on the IUCN Red List and BoCC4.
- 5.3.105. There appears to be differing opinions as to the trend of the kittiwake population, however its 'Vulnerable' IUCN Red List Status and Red status on BoCC4 highlight to the ExA the importance of giving careful consideration to impacts on this species. The predicted cumulative mortality of 3.61% of the North Sea BDMPS and RSPB's assertion that there is already a high level of impact, are of concern.
- 5.3.106. For GBBG, although the Applicant argues that the contribution of Norfolk Vanguard is small for the total cumulative mortality; this does not detract from the predicted cumulative mortality of 5.93% of the BDMPS. The Applicant argues that this is lower than that predicted for the consented Rampion Wind Farm project. However, the total cumulative mortality would represent a moderate adverse effect even if the contribution from Norfolk Vanguard would be small.
- 5.3.107. The ExA is also aware of the importance of the UK waters for gannet and agrees with NE that the combined impact of cumulative collision and displacement mortality should be considered. Although the Applicant argues that recent census data indicates a higher breeding population

than that considered in its model, gannet is Amber listed in BoCC 4 and the UK waters are of great importance to the species. The predicted cumulative mortality of 3.52% of the BDMPS is therefore of concern.

- 5.3.108. Given the predicted increases in baseline mortality of the relevant BDMPSs, the ExA therefore concludes that cumulative collision mortality to kittiwake and GBBG, and combined cumulative collision and displacement mortality to gannet, would be a significant effect.

Summary

- 5.3.109. The ExA concludes that the following moderate adverse effects, which are considered significant at the EIA level, are all matters which weigh against the Order being made:
- RTD operational displacement (project alone and cumulatively);
 - Guillemot and razorbill cumulative operational displacement;
 - cumulative collision mortality to kittiwake and GBBG; and
 - cumulative collision and operational displacement mortality combined to gannet.
- 5.3.110. These are considered further in Chapter 7 of this Report.

5.4. FINDINGS AND CONCLUSIONS IN RELATION TO NATURA 2000 SITES LOCATED IN OTHER EEA STATES

Introduction

- 5.4.1. This Section examines the effect of the Proposed Development on Natura 2000 sites located outside of the United Kingdom's jurisdiction in other EEA States.

Policy Considerations

- 5.4.2. The ExA has had regard to the 'Guidelines on the Assessment of Transboundary Impacts of Energy Developments on Natura 2000 Sites Outside the UK' published by the Department of Energy and Climate Change (DECC, but now BEIS) in 2015⁴⁸. This document sets out the SoS's guidelines on how they intend to take into account the impact of energy developments on Natura 2000 sites outside of the UK.
- 5.4.3. The ExA notes that, in accordance with this guidance, the SoS will consider information regarding impacts on Natura 2000 sites in other EEA States provided by the Applicant and Interested Parties during the DCO Examination process and undertake an assessment of those impacts.

⁴⁸ <https://www.gov.uk/government/publications/guidelines-on-the-assessment-of-transboundary-impacts-of-energy-developments-on-natura-2000-sites-outside-the-uk>

5.4.4. The Applicant's offshore screening assessment [APP-046] gives consideration of potential likely significant effects (LSEs) from the Proposed Development to Natura 2000 sites outside of the UK. It identifies:

- SACs and SCIs for harbour porpoise, grey seal and harbour seal in:
 - Belgium;
 - Denmark;
 - France;
 - Germany;
 - The Netherlands; and
 - Sweden
- SACs with Annex 1 habitat features in;
 - Belgium;
 - France; and
 - The Netherlands
- SACs with Annex 2 migratory fish species interest features in:
 - Belgium;
 - France;
 - Germany; and
 - The Netherlands
- SPA and Ramsar sites with bird interest features in:
 - Belgium;
 - France;
 - Germany; and
 - The Netherlands

5.4.5. The Applicant concludes that no LSEs exist for all Natura 2000 sites located outside of the UK [APP-045 and APP-046].

Planning Issues

5.4.6. As noted in Chapter 3 of this Report, the Planning Inspectorate undertook a transboundary screening process for the Proposed Development with substantive responses received from France [OD-010 and OD-015] and the Netherlands [OD-013].

5.4.7. The Agence Française pour la Biodiversité (French Biodiversity Agency) also participated directly in the Examination. It reiterated the concerns it had raised in its Regulation 32 consultation responses in terms of collision risk and displacement on bird species associated with Natura 2000 sites, in particular those associated with the Bancs des Flandres and the Cap Gris-Nez SPAs. Furthermore, it requested the cumulative effects assessment be undertaken taking into account French wind farms; that ornithological monitoring be undertaken; and that the Applicant should implement mitigation techniques including clamping of turbines during heavy flows [REP1-074].

- 5.4.8. The Applicant responded to the concerns raised by the French Ministry in [REP1-007 and REP2-003] and submitted screening matrices for the Bancs des Flandres and Cap Gris-Nez SPAs [AS-044]. It noted that many of the named species at both Caps Gris-Nez and Bancs des Flandres SPAs have not been recorded on the Norfolk Vanguard site and are not ones associated with offshore locations. With respect to species named as nonbreeding features of the SPA, these consist of many of the seabird species which pass through the southern North Sea and English Channel on migration.
- 5.4.9. Given the relative size of the SPA population estimates for the migratory species compared with the total passage populations, the Applicant states that effects on the SPA populations due to Norfolk Vanguard would be negligible. Furthermore, the Applicant stated that due to the distances of the aforementioned sites from the Proposed Development (175km and 210km respectively) and the species concerned, then the potential for connectivity is very small. The Applicant considered that cumulative impacts had been thoroughly assessed and confirmed that it had committed to monitoring seabirds through an Ornithological Monitoring Plan⁴⁹. The Applicant concluded that LSEs can be ruled out.
- 5.4.10. In its 'Rule 17' Request for Further Information [PD-018] the ExA asked the French Government to provide any comments it wished to make in relation to the updated screening matrices [AS-044] for any of the Natura 2000 sites located in France. However, by the close of the Examination no further such responses had been received from the French Government. This is a matter that the SoS may wish to pursue further.

ExA reasons

- 5.4.11. Whilst concerns have been raised about the potential effects on some species that are features of the Cap Gris-Nez and Bancs des Flandres SPAs, the ExA has not been presented with any substantive evidence to demonstrate that such impacts would be greater than negligible. As such, the ExA considers that the Proposed Development either alone or in-combination would not give rise to any significant effects on either of these, or any other, transboundary Natura 2000 sites.

Conclusion

- 5.4.12. It is a matter for the SoS to determine, and whether they wish to seek any further information, but at the close of the Examination there is no evidence of any likely significant effect on any Natura 2000 sites in other EEA states.

⁴⁹ Condition 14(1)(I) of the Generation DMLs (ie Schedules 9 and 10 of the dDCO)

6. FINDINGS AND CONCLUSIONS IN RELATION TO HABITATS REGULATIONS ASSESSMENT

6.1. INTRODUCTION, POLICY AND LEGISLATIVE CONTEXT

- 6.1.1. This Chapter sets out our analysis and conclusions relevant to the Habitats Regulation Assessment (HRA). This will assist the Secretary of State (SoS) for Business, Energy and Industrial Strategy, as the Competent Authority, in performing her duties under the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the Habitats Directive) and the Council Directive 79/409/EEC on the conservation of wild birds (2009/147/EC), as transposed in the United Kingdom (UK) through the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 ('the Habitats Regulations').
- 6.1.2. Consent for the Proposed Development may only be granted if, having assessed the potential adverse effects the Proposed Development could have on European sites⁵⁰, the Competent Authority considers it meets the requirements stipulated in the Habitats Regulations.
- 6.1.3. We have been mindful throughout the Examination of the need to ensure that the SoS has such information as may reasonably be required to carry out her duties as the Competent Authority. We have sought evidence from the Applicant and the relevant Interested Parties (IPs), including NE as the Statutory Nature Conservation Body (SNCB), through written questions and ISHs.
- 6.1.4. We produced a Report on the Implications for European Sites (RIES) [PD-016] which compiled, documented and signposted HRA-relevant information provided in the DCO application and Examination representations up to Deadline 7 (2 May 2019). The RIES was issued to ensure that we had correctly understood HRA-relevant information and the position of the IPs in relation to the effects of the Proposed Development on European Sites at that point in time. Consultation on the RIES took place between 9 May 2019 and 30 May 2019.
- 6.1.5. Comments from the Applicant [REP8-064], NE [REP8-104], North Norfolk District Council [REP8-107], the MMO [REP8-102], the RSPB [REP8-109], TWT [REP8-110] were provided on the RIES at Deadline 8. Responses to

⁵⁰ The term European sites in this context includes Special Areas of Conservation (SAC), Sites of Community Importance (SCI), candidate SACs (cSAC), possible SACs (pSAC), Special Protection Areas (SPA), potential SPAs (pSPA), Ramsar sites and proposed Ramsar sites for which the UK is responsible. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see the Planning Inspectorate's Advice Note 10.

these comments were then submitted by the Applicant [REP9-038] and NE [REP9-057] at Deadline 9. These comments have been taken into account in the drafting of this Chapter.

- 6.1.6. A number of submissions relating to HRA matters were made post-publication of the RIES; these are explained in this Chapter.

6.2. PROJECT LOCATION IN RELATION TO RELEVANT EUROPEAN SITES

- 6.2.1. The Proposed Development is not connected with, or necessary to, the management for nature conservation of any of the European/Natura 2000⁵¹ sites considered within the Applicant's assessment.
- 6.2.2. The criteria applied by the Applicant to identify European/Natura 2000 sites that could potentially be affected by the Proposed Development are described in section 1.5 of [APP-045] for onshore sites, and sections 2.1, 3.2, 4.2 and 5.2 of [APP-046] for marine mammals SACs/Sites of Community Importance (SCIs), benthic ecology SACs, fish SACs and offshore ornithological SPAs and Ramsar sites. This is summarised in Section 2 of the RIES [PD-016].
- 6.2.3. The Applicant's Information for the Habitats Regulations Assessment ('the HRA Report') [APP-045] submitted with the DCO application identifies 168 European/Natura 2000 sites which fall within these criteria. Of these, the Norfolk Vanguard application site overlaps with the Greater Wash SPA, the Haisborough Hammond and Winterton (HHW) SAC, the Southern North Sea (SNS) SAC⁵² and the River Wensum SAC (see Figures 5.1, 5.2, 5.3 and 5.5 of [APP-045]).
- 6.2.4. The HRA Report identifies Natura 2000 sites in other European Economic Area (EEA) States that could be potentially affected by the Proposed Development. However, only UK European sites are addressed in this Chapter. Non-UK Natura 2000 sites are discussed in Section 5.4 of this Report.

6.3. APPLICANT'S APPROACH

- 6.3.1. The Applicant's assessment of effects is presented in the HRA Report [APP-045]. Appendices [APP-046] and [APP-047] provide details on the screening of likely significant effects (LSE) in the offshore and onshore environment respectively.

⁵¹ In the context of this report, 'Natura 2000 sites' refers to sites across Europe designated under the Habitats Directive and Birds Directive.

⁵² At the time the Norfolk Vanguard DCO application was made, the SNS European site was a cSAC. The site was formally designated by the UK as a SAC in February 2019. The site is therefore referred to as the SNS SAC throughout this Chapter.

6.3.2. The information to support an AA is presented in the following chapters of the HRA Report:

- Chapter 6 – Special Protection Areas (offshore ornithology);
- Chapter 7 – Offshore SAC Annex I Habitats (benthic habitats);
- Chapter 8 - Offshore cSAC Annex II Species (marine mammals); and
- Chapter 9 – Onshore (terrestrial) Natura 2000 sites.

The potential effects assessed by the Applicant are summarised in Table 6.1 below.

Table 6.1 Potential effects assessed by the Applicant (adapted from [REP1-010])

Site Type	Feature	Potential effects
SPA / Ramsar sites	Birds (offshore)	Collision mortality Displacement/disturbance Barrier effect In-combination effects
	Birds (onshore)	Direct effects within SPA boundary Direct effects on ex-situ habitats Indirect effects within SPA boundary Indirect effects on ex-situ habitats
SAC/ SCIs	Benthic habitats	Temporary physical disturbance Habitat loss Introduction of new substrate Smothering due to increased suspended sediment In-combination effects
	Marine mammals	Underwater noise Vessel interactions Indirect effects on prey Changes to water quality In-combination effects
	Fish	Permanent loss (and introduction of new sediment where applicable) Temporary physical disturbance Smothering due to increased suspended sediment Re-mobilisation of contaminated sediments Underwater noise and vibration Electromagnetic fields (EMFs) In-combination effects

Site Type	Feature	Potential effects
	Terrestrial	Direct effects (e.g. habitat loss) Impacts on ex-situ habitats functionally connected to the SAC Impacts from alterations to geology and land contamination Disturbance due to groundwater / hydrology changes Impacts from noise disturbance Impacts from changing air quality Impacts from light disturbance Impacts from visual disturbance In-combination effects

6.4. HRA MATTERS CONSIDERED DURING THE EXAMINATION

6.4.1. NE, the MMO, RSPB, TWT, WDC and EIFCA all actively engaged with HRA matters during the Examination and have informed the discussions set out below.

6.4.2. The key HRA matters discussed during the Examination were as follows:

Offshore ornithology:

- collision risk modelling (CRM) – choice of model and evidence supporting the Applicant's model parameters;
- in-combination collision mortality of little gull at the Greater Wash SPA;
- apportioning of impacts to Flamborough and Filey Coast (FFC) SPA features and LBBG of Alde-Ore Estuary SPA, including the appropriate definitions of breeding seasons;
- population modelling approaches for the in-combination assessment of LBBG of Alde-Ore Estuary SPA, and gannet and kittiwake of the FFC SPA;
- in-combination collision and displacement mortality with H3; and
- assessment of displacement impacts from the project alone and in-combination for:
 - auks and gannet of FFC SPA;
 - common scoter of Greater Wash SPA; and
 - RTD of Greater Wash SPA and Outer Thames Estuary SPA.

Benthic habitats:

- baseline data for the offshore cable route through the HHW SAC; and

- effects from cable burial and protection on the reef and sandbank features of the HHW SAC, including the ability to microsite through areas of reef which may colonise since the baseline surveys.

Marine mammals:

- in-combination effects from underwater noise during construction on the harbour porpoise population of the SNS SAC.

Terrestrial sites:

- baseline data for wintering birds at Broadland SPA and Ramsar site;
- collision mortality to non-seabird migrants of Broadland SPA and Ramsar site, Breydon Water SPA and Ramsar site and North Norfolk Coast SPA and Ramsar site;
- effects on foraging and commuting habitat for Barbastelle bats of Paston Great Barn SAC;
- impacts to groundwater at Norfolk Valley Fens SAC and The Broads SAC;
- restoration and sediment management at the River Wensum SAC; and
- in-combination effects to onshore SAC sites with H3 onshore cable.

6.4.3. These matters are discussed under relevant European site headings below in this Chapter, however, it is important to also be aware of a number of matters which were relevant to numerous European sites and/or qualifying features; these are explained below.

Collision risk modelling methodology

6.4.4. From the beginning of the Examination, there were numerous concerns raised by NE and the RSPB regarding the Applicant's CRM methodology. These are detailed in Section 2 of the RIES [PD-016], but in summary revolved around the Applicant's use of its own stochastic model, the use of median bird density values and the need to present upper and lower 95% confidence intervals (CIs) as well as mean bird density. These discussions are not repeated in this Chapter as agreement was reached with NE [REP7-075] and the RSPB [REP6-038 and REP7-083] over the CRM methodology during the Examination (the exception to this being the avoidance rate for gannet, which is discussed below in relation to FFC SPA).

6.4.5. For the avoidance of doubt, we agree with NE [REP9-057] that it would be inappropriate for NE and decision makers to base impact conclusions on a stochastic CRM model that had not been subject to appropriate testing or scrutiny by stakeholders. We are satisfied that further to the revisions made by the Applicant during the Examination, the CRM presented in the Applicant's final assessments [AS-048 and AS-049] is sufficiently robust and appropriate.

- 6.4.6. This Chapter has therefore focussed on the outstanding disagreements of the effects of collision mortality to qualifying features of European sites which were predicted in the Applicant's revised assessments that followed NE's methodological advice.

Population modelling

- 6.4.7. In reaching its conclusion for kittiwake and gannet of FFC SPA, the Applicant had referred to the Population Viability Analysis (PVA) model undertaken for the Hornsea Project Two [APP-045]. However, NE [RR-106, REP1-088, REP4-062 and REP4-051] and RSPB [REP1-112] argued that the PVA model was not appropriate for use with Norfolk Vanguard and listed a number of issues with the modelling approach.
- 6.4.8. With regard to LBBG of the Alde-Ore Estuary, the Applicant had referred to the Galloper PVA model [APP-045]. NE [RR-106] and the RSPB [RR-197, REP1-110 and REP1-112] both had concerns with its suitability for use with the Proposed Development.
- 6.4.9. Although the Applicant retained the view that the models remain reliable and relevant to its Proposed Development [REP1-007 and REP2-004], its assessments submitted during the Examination were informed by H3's PVA model for FFC SPA and the Applicant's own PVA model for Alde-Ore Estuary SPA. Although NE had some reservations over these PVA models, it considered they represent the best available evidence on which to base an assessment [REP8-104]. This provides us with comfort that these are suitable for use in assessing impacts on populations.
- 6.4.10. The Applicant advocated the use of density dependent PVA models, although it presented both density dependent and density independent values⁵³ to enable the difference in predictions to be seen. However, both RSPB [REP6-038] and NE [REP6-032 and REP7-075] advised that the more precautionary density independent models should be used to interpret the population scale impacts of the CRM. NE based its advice on the outputs of the density independent PVA model, as these make no assumptions about the form or strength of any density dependent effects [REP9-057].

⁵³ The Applicant explains [REP9-057] that "density dependence" refers to the inherent regulation that occurs within populations due to competition for resources (e.g. food, mates, breeding space, etc.). While the presence of density dependence is accepted as self-evident, since without this populations would grow indefinitely, the argument for not including this in population models for seabird impact assessment has been that the mechanism for how this operates in the natural populations is insufficiently understood for it to be modelled. Furthermore, it is typically stated that the risks of including density dependence but mis-specifying the mechanism will result in unreliable model predictions. It is also regularly stated that density independent models, lacking any inherent means by which a population can recover once it has been reduced beyond a certain point, are therefore appropriate on the grounds of precaution (i.e. another source of precaution in the assessment process).

- 6.4.11. The Applicant's HRA Report [APP-045] also made reference to Potential Biological Removal (PBR). NE [RR-106 and REP1-088] and RSPB [RR-197, REP1-112 and REP4-070] argued against the use of PBR and the Applicant subsequently confirmed that the PBR outputs are not relied upon to support the assessment [REP2-044].

Changes to the Proposed Development

- 6.4.12. During the Examination, the Applicant narrowed the project design envelope on three different occasions in order to reduce predicted collision mortality to SPA qualifying features. These alterations were accompanied by the submission of revised collision risk estimates and assessments for gannet, kittiwake, LBBG and little gull, and are detailed below:
- Firstly, the Applicant proposed an increase in the minimum turbine size from 9MW to 10MW. This change was reflected in the Applicant's assessments presented in [REP6-019] and [REP6-021].
 - Secondly, a revision to the wind turbine layout based on the following maximum proportion of turbines which could be installed in either site with two alternative scenarios, (a) and (b) as follows:
 - the maximum proportion of turbines in Norfolk Vanguard West would be two-thirds (with one-third in Norfolk Vanguard East); or
 - the maximum proportion of turbines in Norfolk Vanguard East would be half (with the other half in Norfolk Vanguard West).
 - This change was reflected in [AS-043] and [REP7-062]. [REP7-062] also included assessments of combined operational displacement and collision mortality for gannet; and
 - Thirdly, raising the draught height from 22m to 27m above Mean High Water Springs (MHWS). This change was reflected in the Applicant's assessments presented in [AS-048] and [AS-049]. [AS-048] also included revised assessments of combined operational displacement and collision mortality for gannet.
- 6.4.13. The findings of, and comments on the collision risk assessments presented at points 1 and 2 above [REP6-019, REP6-021 and AS-043] and [REP7-062]⁵⁴ have not been discussed in detail in this Report as the assessments were superseded by [AS-048] and [AS-049] (which incorporate all three changes detailed above). The discussions in this Chapter with regard to the effects of collision mortality on gannet, kittiwake, LBBG and little gull SPA populations are therefore based on the collision mortality estimates and assessments in [AS-048] and [AS-049] and the comments received on these submissions.

⁵⁴ Note, the RIES reports on the Applicant's collision risk estimates and assessments presented in [AS-043] and [REP7-062]. It also summarises NE's comments on [REP6-019] and [REP6-021].

In-combination effects

H3 and Thanet Extension Offshore wind farms

- 6.4.14. The offshore infrastructure for the proposed Norfolk Vanguard and H3 are both located off the east coast of England. An application for development consent for H3 was submitted by Ørsted Hornsea Project Three (UK) Ltd on 14 May 2018 and the Examination ran from 3 October 2018 to 2 April 2019.
- 6.4.15. An application for Thanet Extension Offshore Wind Farm, located off the coast of Kent, was made by Vattenfall Ltd on 27 June 2018 and the Examination ran from 12 December 2018 to 11 June 2019.
- 6.4.16. The Norfolk Vanguard HRA Report [APP-045] utilised 'preliminary estimates' of collision mortality for H3 and Thanet Extension Offshore Wind Farm. The Applicant updated its in-combination assessment [AS-006], following submission of DCO applications for these projects, stating that the overall conclusion of no AEoI remains.
- 6.4.17. The provision of the revised in-combination assessment was welcomed by NE. However, it noted methodological issues and uncertainties associated with the baseline data and assessments completed by H3 and some methodological issues with the assessments for Thanet Extension.
- 6.4.18. At D6 of the Norfolk Vanguard Examination, NE [REP6-032] confirmed that the H3 Examination had closed on 2 April 2019 and that due to insufficient baseline surveys it is, in its view, not possible to rule out AEoI from the project. It therefore advised the Norfolk Vanguard Applicant to ensure that the assessment and figures presented for the Proposed Development alone are as robust as possible and to consider opportunities to minimise the project alone impacts as much as possible. It suggested the Applicant could base its in-combination assessment on where there is some degree of certainty in the figures presented, e.g. for East Anglia THREE cumulative totals, and then adding the figures for both Norfolk Vanguard and Thanet Extension (ie excluding H3). It suggested the Applicant could also run a separate assessment which includes H3 and present both figures. The RSPB [REP6-038] supported NE's concerns regarding the baseline data and its recommended approach to the use of H3 figures.
- 6.4.19. The Applicant's final in-combination assessments [AS-048 and AS-049], comprised two sets of in-combination mortality figures, one including and one excluding the H3 datasets (from the H3 Environmental Statement). It also included Thanet Extension values from the Thanet D3 submission⁵⁵.

⁵⁵ [REP3-058] of the Thanet Extension Offshore Wind Farm Examination Library <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010084/EN010084-000737-Internal%20Examination%20Library%20PDF%20Version.pdf>

- 6.4.20. Where the inclusion of potential effects from H3 have implications for the conclusions of the Norfolk Vanguard in-combination assessment, we have reported the potential effects both with and without H3 being granted development consent.
- 6.4.21. With regard to Thanet Extension, NE did not raise concerns over the data used in the Applicant's final in-combination collision mortality predictions. As such, we have not sought to differentiate in-combination effects with and without Thanet Extension.

Fishing

- 6.4.22. The Applicant's assessment considered extant fishing activities as part of the environmental baseline. However, TWT [RR-172, REP1-062, REP1-123, REP3-063 and REP8-090] considered that fishing should not be part of the baseline but should be included in the in-combination assessment for all offshore European sites as a 'project'.
- 6.4.23. The positions of both parties and our conclusions on the matter are detailed in the Marine Mammals Section of this Report. In summary, we have accepted the Applicant's position that commercial fishing activities are addressed as part of the baseline environment and need not be identified as projects in the in-combination assessment for offshore European Sites.

Precaution in the assessments

- 6.4.24. The Applicant [REP8-067] presented its assessment following the methodological advice of NE (except where identified in Section 6.7 below). It considered that NE's methodology has led to a high degree of precaution and that in following NE's advice, the predicted combined effects would be up to 10 times greater for collision risk and up to 14 times greater for displacement risk than those obtained through what it considered to be more appropriate methods. The Applicant provided a detailed explanation in [REP8-067], which NE rebutted stating that the Applicant had misinterpreted its position on a number of issues. It disputed that the worst-case prediction according to their method is overly precautionary. NE highlighted that it did not have the capacity to provide a detailed rebuttal given the late stage of Examination but provided a response to highlight some areas of disagreement in [REP9-057].
- 6.4.25. We have given consideration to these arguments in the Offshore Ornithology Section of this Report and have not sought to duplicate these here. Nevertheless, to summarise, we consider:
- it is appropriate to consider the upper confidence level due to the inherent degree of uncertainty in ornithological data and to provide a statistical indication of uncertainty and thereby inform confidence around the assessment;
 - there would appear to be a certain degree of headroom in the worst-case scenario assumptions made for windfarms that have already been developed. However, it is not appropriate to take this into

account without legally secured reductions in turbine numbers and revised assessments;

- it is reasonable to apply rates of up to 10% mortality of displaced individuals, as per NE's advice;
- the approach to seasonality as advocated by the RSPB and NE is acceptable; and
- it is appropriate to use the more precautionary density independent population model.

6.4.26. We have therefore based our conclusions on the figures calculated by the Applicant in [AS-048 and AS-049] using NE's recommended methodology and the comments received on these documents.

6.5. FINDINGS IN RELATION TO LIKELY SIGNIFICANT EFFECTS (LSE)

6.5.1. Of the 168 European sites and Natura 2000 sites screened, the Applicant concluded that the project is likely to give rise to significant effects, either alone or in-combination with other plans or projects, on the qualifying features of the 13 European sites listed in Table 6.2 below.

6.5.2. The locations of the onshore sites for which a LSE was identified by the Applicant are shown on Figure 5.5 [APP-045]. Offshore sites for which a LSE was identified by the Applicant are shown on Figures 5.1, 5.2, 5.3 and 5.4 [APP-045].

6.5.3. The HRA Report [APP-046] concluded that there would be no potential for LSE from the Proposed Development for any of the European sites which have migratory fish species as a qualifying feature.

Table 6.2. European sites, qualifying features and potential impacts for which the Applicant concluded a LSE in [APP-045]

European site	Distance from NV	Feature	Impact
Alde-Ore Estuary SPA	92km	LBBG (breeding)	Collision mortality (alone and in-combination)
Flamborough & Filey Coast SPA	205km	Gannet (breeding) Kittiwake (breeding)	Collision mortality (alone and in-combination)
Flamborough Head and Bempton Cliffs SPA ⁵⁶	205km	Kittiwake (breeding)	Collision mortality (alone and in-combination)
Greater Wash SPA	0km from export cable, 36km from array area	RTD (non-breeding)	Construction disturbance and displacement due to cable laying (alone and in-combination)
		Little gull (non-breeding)	Collision mortality (alone and in-combination)

⁵⁶ Paragraph 53 of [APP-045] states that “*Flamborough Head and Bempton Cliffs SPA is entirely within the Flamborough and Filey Coast pSPA and relevant features of the former are features of the larger, latter pSPA. Therefore, these are considered under Flamborough and Filey Coast pSPA and not unnecessarily repeated.*” NE [REP1-049] agreed that Flamborough Head and Bempton Cliffs SPA is now subsumed into the designated Flamborough and Filey Coast SPA and the former can therefore be removed from the list. The ExA has applied a similar approach to this Report; any statements made in relation to Flamborough & Filey Coast SPA apply equally to Flamborough Head and Bempton Cliffs SPA.

European site	Distance from NV	Feature	Impact
Haisborough, Hammond and Winterton SAC	0km (cable route intersects the SAC)	Sandbanks slightly covered by seawater at all times Reef	Permanent loss (and introduction of new substrate where applicable) Temporary physical disturbance Smothering due to increased suspended sediment Re- mobilisation of contaminated sediments In-combination effects
Southern North Sea SAC	0km	Harbour porpoise	Auditory injury Disturbance from underwater noise Disturbance from vessels Collision mortality (vessel interactions) Changes to prey resource Changes to water quality In-combination effects
Humber Estuary SAC	112km from export cable, 150km from array area	Grey seal	Disturbance at haul out sites Collision mortality (vessel interactions) Disturbance when foraging at sea In-combination effects at haul out sites In-combination effects at sea

European site	Distance from NV	Feature	Impact
The Wash and North Norfolk SAC ⁵⁷	33km from export cable, 82km from array area	Harbour seal Grey seal	Disturbance at haul out sites Collision mortality (vessel interactions) Disturbance when foraging at sea In-combination effects at haul out sites In-combination effects at sea
Winterton-Horsey Dunes SAC ⁵⁷	47km	Grey seal	Disturbance at haul out sites Collision mortality (vessel interactions) Disturbance when foraging at sea In-combination effects at haul out sites In-combination effects at sea
River Wensum SAC	0km	Watercourse of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation; Desmoulin's whorl snail	Direct effects within the ex-situ habitats of the SAC Indirect effects within the SAC from geology/contamination/groundwater/hydrology effects Indirect effects within ex-situ habitats of the SAC from geology/contamination/groundwater/hydrology effects

⁵⁷ The HRA Report [APP-045] explains that although grey seal is not a qualifying feature at The Wash and North Norfolk SAC (which includes Blakeney Point) or Winterton-Horsey Dunes SAC, it is recognised that these sites are important for the population, as breeding, moulting and haul-out sites; therefore this was taken into account within the HRA.

European site	Distance from NV	Feature	Impact
			In-combination effects
Paston Great Barn SAC	2.9km	Barbastelle bats	Direct effects in ex-situ habitats of SAC Indirect effects in ex-situ habitats from light and groundwater/hydrology effects In-combination effects
Norfolk Valley Fens SAC	0.6km	Alkaline fens; Northern Atlantic wet heaths with <i>Erica tetralix</i> ; European dry heaths; Molinia meadows on calcareous, peaty or clayey-silt-laden soils; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> ; Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ;	Indirect effects on features present within ex-situ habitats of the SAC arising from air quality and groundwater / hydrology effects In-combination effects
The Broads SAC	3.6km	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp; Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation; Transition mires and quaking bogs; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> ;	Indirect effects upon habitats and species within the SAC boundary arising from changes in local groundwater / hydrology conditions In-combination effects

European site	Distance from NV	Feature	Impact
		Alkaline fens; Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae); Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae); Desmoulin's whorl snail; Fen orchid; Ramshorn snail	
		Otter	Direct effects upon ex-situ habitats which may support the qualifying feature otter, due to suitable ex-situ habitats for this feature being present Indirect effects upon ex-situ habitats which may support the qualifying feature otter, arising from changes in groundwater / hydrology conditions

- 6.5.4. There were several matters discussed during the Examination relating to the identification of LSEs; these are summarised below. Further details can be found in the RIES [PD-016].

Flamborough & Filey Coast SPA

Gannet – Operational displacement

- 6.5.5. The Applicant initially screened out a LSE to gannet of the FFC SPA from operational displacement from the project alone and in-combination. It explained that FFC SPA is 205km from the Norfolk Vanguard site and noted that Thaxter *et al* (2012) report a mean foraging range of breeding gannets as 92.5km, and a maximum recorded distance of 590km. The Applicant considered breeding gannets from FFC SPA could be affected by displacement and barrier effects but noted that Searle *et al* (2014) found that even with offshore wind farms located considerably closer to a gannet breeding colony, impacts of displacement and barrier effects were negligible for this species because of its very long foraging range and large area used for foraging. [AS-044].
- 6.5.6. In response to NE's [RR-106] concerns regarding uncertainty in the gannet abundance estimates, the Applicant presented revised displacement impact predictions from 60-80% displacement and 1% mortality for the project alone [REP1-008]. The Applicant also noted [REP4-040] that, although NE advised [RR-106] that the gannet cumulative displacement approach should follow that for auks, gannet in-combination displacement assessment had not been required for previous offshore wind farm applications, therefore there were no assessments upon which it can build.
- 6.5.7. The Applicant [REP4-040] concluded that less than 1 individual from the FFC would be at risk of displacement mortality across the entire non-breeding period from the project alone. NE queried the non-breeding season used by the Applicant [REP1-049 and REP3-051], but the Applicant stated this calculation would only be very slightly altered if NE's alternative estimated apportioning rates were used. It did not consider gannet to be a species of concern with regard to displacement impacts due to its wide-ranging habitats, varied prey and as very few gannets were recorded at Norfolk Vanguard during the breeding season [REP4-040]. It therefore considered a LSE could be ruled out due to gannet displacement from Norfolk Vanguard alone.
- 6.5.8. However, as NE advised throughout the Examination that a LSE could not be ruled out for the project alone [REP6-032, REP1-049 and REP3-051], the Applicant subsequently screened in a LSE [AS-044].

Guillemot, razorbill and seabird assemblage – Operational displacement

- 6.5.9. The Applicant [APP-045] ruled out the potential for a LSE to guillemot, razorbill and puffin⁵⁸ from operational displacement from the project

⁵⁸ Puffins form a component of the FFC SPA seabird assemblage.

alone and in-combination as the Norfolk Vanguard site is considerably beyond the normal foraging range of these species from FFC SPA. It considered it unlikely that any breeding adults from FFC SPA would be present at Norfolk Vanguard during the breeding season and that nonbreeding birds from FFC SPA are likely to be mixed with the large Biologically Defined Minimum Population Scales (BDMPS) populations of these species.

- 6.5.10. However, NE advised that the LSE test should be a coarse filter and noted that an impact pathway had been identified; it therefore advised that a LSE should be screened in [REP8-104], to which the Applicant agreed [AS-044 and REP8-064].
- 6.5.11. Further to the Applicant's agreement to screen in a LSE from operational displacement, the Applicant produced a displacement assessment [REP6-021] which was subsequently revised [REP8-069] in response to advice provided by NE at Deadline 7 [REP7-075]. The Applicant's conclusions drawn in [REP8-069] in relation to AEoI are discussed in Section 6.7 of this Chapter.

Greater Wash SPA

Common scoter – Construction and operational phase disturbance/ displacement

- 6.5.12. The Applicant [AS-044] stated that surveys found no common scoters in the Norfolk Vanguard site since this species favours waters <20m in depth. Common scoter was also only present at very low densities along the export cable route, therefore the Applicant concluded no LSE.
- 6.5.13. However, NE [REP1-088, REP3-051 and REP6-032] considered that *"the LSE screening should be a coarse filter and as the offshore cable route passes through the Greater Wash SPA, this would indicate a potential impact pathway for species sensitive to disturbance/displacement from the presence of vessels and hence an LSE concluded for the common scoter...qualifying features. The analysis of whether the cable corridor overlaps spatially with the distributions of these species should then be considered within the AA"* [REP1-088].
- 6.5.14. The Applicant [REP4-040] considered NE was unnecessarily precautionary due to the very low likelihood of spatial overlap and a realistic period of installation through the SPA measured in weeks and continued to conclude the risk of LSE can be excluded [REP7-059, AS-044 and REP8-064]. However, we progressed these impacts to the integrity stage of the RIES [PD-016] and the Applicant subsequently accepted this position [REP8-064].

Greater Wash SPA and Outer Thames Estuary SPA

Red-throated diver - Operational disturbance/displacement from vessel movements

- 6.5.15. The Applicant [AS-044] screened out an LSE from displacement/disturbance of RTD during operation. It explained (Appendix 3.1 of [REP1-008]) that operation and maintenance (O&M) would result in the addition of 1.2 vessel movements per day and small changes from the baseline given the extent of existing vessel movements (almost 100 vessel movements per day).
- 6.5.16. NE did not agree to screen out a LSE and advised a 1% increase to the baseline could cause disturbance and requested that consideration should be given to the O&M vessels speed [RR-106, REP1-049 and REP1-088]. The Applicant subsequently screened in a LSE from the project alone for both the Greater Wash SPA and the Outer Thames Estuary SPA [AS-044 and REP8-064].

Broadland SPA and Ramsar site, Breydon Water SPA and Ramsar site and North Norfolk Coast SPA and Ramsar site

Non-seabird migrants – collision mortality

- 6.5.17. Whilst Breydon Water SPA, Broadland SPA and North Norfolk Coast SPA were considered within the HRA Report [APP-045], collision risk to non-seabird migrants of these sites was not assessed. Chapter 13 of the ES [APP-337] explained that collision risk for 23 species of non-seabird migrants had been assessed for the adjacent East Anglia THREE wind farm and none were at risk of significant collision whilst on migration. The Applicant stated that the East Anglia THREE migrant collision assessment used wide migration corridors which also covered Norfolk Vanguard, therefore results from this assessment would be almost identical to those which would be generated for Norfolk Vanguard.
- 6.5.18. NE [RR-106, REP1-049 and REP8-104] did not agree with this approach, advising that new CRM should be carried out for a wider suite of species using the Norfolk Vanguard turbine specifications and site location information. NE advised that coastal SPAs with wintering waterbirds as qualifying species (namely Broadland SPA, Breydon Water SPA and potentially the North Norfolk Coast SPA) should be screened in [REP1-088]. NE also advised that cumulative collision risk impacts on non-seabird migrants should be assessed as Vanguard East is located immediately north of East Anglia THREE and so birds migrating north and south may encounter both sites. Also, if Norfolk Vanguard is built across both Vanguard East and Vanguard West then birds migrating east-west could encounter both sites.
- 6.5.19. At D3, the Applicant provided collision estimates for the Norfolk Vanguard project alone and in-combination with the adjacent East Anglia THREE Offshore Wind Farm [REP3-038] and subsequently concluded a LSE for both the project alone and in-combination [AS-044].

Broadland SPA and Ramsar site

Impacts to ex-situ habitats

- 6.5.20. The HRA Report [APP-045] noted that wintering qualifying features of the Broadland SPA are likely to utilise a range of supporting habitats outside the boundary of the SPA (ex-situ habitats) over the winter months. However, the Applicant explained that wintering bird surveys of the ex-situ habitats recorded waterbird counts that are not of national or greater importance, or a significant component of the Broadland SPA and Ramsar [APP-045] and [AS-044]. Consequently, it did not consider the ex-situ habitats to be important habitats for the qualifying features of the Broadland SPA and Ramsar site and screened out a LSE.
- 6.5.21. However, NE requested an assessment of impacts of cropping rotation on bird species to confirm whether the low numbers of birds in the Applicant's survey was due to the cropping regime of that particular year or genuinely represents low usage of those areas. NE advised that mitigation would be required in terms of crop rotations that would be in place at the time of construction. [RR-106, REP5-017 and REP6-032].
- 6.5.22. The Applicant [REP1-007] considered that the majority of crops were in place over winter within the wintering bird survey area and therefore the surveys provided a robust estimate of the use of these habitats by qualifying features of the Broadland SPA and Ramsar site. It explained that a single year of surveys was agreed with NE during the evidence plan process; this was acknowledged by NE [REP5-017].
- 6.5.23. The Applicant also confirmed that mitigation measures had been proposed to account for changes in cropping patterns and for wintering birds to use different habitats for foraging and resting on an interannual basis in the OLEMS [APP-031] (including no winter works in any one area in consecutive years) [REP1-007 and REP6-013].
- 6.5.24. On a precautionary basis and considering the People Over Wind judgement (see below), we progressed impacts on ex-situ habitats to all SPA qualifying features and Ramsar Criterion 6 to the integrity stage of the RIES [PD-016]. The Applicant accepted this position but noted that only the qualifying swan and geese species of the SPA and Ramsar site utilise the relevant ex-situ habitats (i.e. crop stubble and improved grassland pasture) which are present within the study area [REP8-064].

Norfolk Valley Fens SAC

Semi-natural dry grasslands and scrubland facies on calcareous substrates, narrow-mouthed whorl snail and Desmoulin's whorl snail

- 6.5.25. The HRA Report explained that the Norfolk Valley Fens are comprised of 17 separate sites; only one of which (Booton Common Site of Special Scientific Interest (SSSI)) is located within 1km (the maximum extent of zone of influence). The Applicant explained that the Booton Common SSSI citation did not include the 'semi-natural dry grasslands and

scrubland facies on calcareous substrates', 'narrow mouthed whorl snail' or 'Desmoulin's whorl snail' features [APP-045], therefore they were not considered further in the assessment and a LSE was screened out [AS-044].

- 6.5.26. Nevertheless, NE identified these as features for which concerns remain [REP1-088] and requested further information regarding the water supply mechanism for all component SSSIs of Norfolk Valley Fens located within 5km of the onshore project area [RR-106]. On a precautionary basis, we progressed these impacts and features to the integrity stage of the RIES [PD-016]. The Applicant accepted this position [REP8-064].

European sites for which the Applicant's screening conclusions were unclear

- 6.5.27. We noted in the RIES [PD-016] that there are some onshore European sites and qualifying features where the screening conclusions reached by the Applicant lacked clarity as they were not specifically addressed within the Applicant's screening matrices or HRA Report, nor were they explicitly referred to during the Examination. These were:

- Broadland Ramsar site – Ramsar criterion 6;
- Breydon Water Ramsar site – Ramsar criterion 5 and 6;
- North Norfolk Coast SPA - Montagu's harrier; and
- North Norfolk Coast Ramsar site – Ramsar criterion 5 and 6.

- 6.5.28. As such, the ExA progressed these features to the integrity matrix in the RIES, on a precautionary basis. The Applicant accepted this position [REP8-064].

Mitigation measures in the screening stage

- 6.5.29. The 2018 ruling by the Court of Justice of the European Union (the CJEU) on the interpretation of the Habitats Directive in the case of People Over Wind and Sweetman vs Coillte Teoranta (2018) ('the People over Wind judgement'), confirmed that mitigation should not be taken into account when determining LSE for European sites (the HRA screening stage).

- 6.5.30. The application documents identified a number of measures to avoid LSE, including those detailed below:

- trenchless crossings to screen out direct LSEs at the River Wensum SAC [APP-047];
- limits to the construction hours (7am-7pm) to screen out construction noise effects on Barbastelle bats at Paston Great Barn SAC [APP-045];
- (unspecified) mitigation to avoid a LSE on harbour porpoise of the SNS SAC from lethal effects and permanent auditory injury of piling and the clearance of unexploded ordnance [APP-045]; and
- micro-siting of the offshore cable to avoid permanent loss of Annex I reef at the HHW SAC [APP-045].

- 6.5.31. In response to the ExAs questioning, NE [REP1-088] advised that it would consider the activities noted above to be mitigation.

- 6.5.32. The Applicant [REP1-007] considered mitigation to be "*measures that are intended to avoid or reduce the harmful effects of the envisaged project on the site concerned*". With regard to trenchless crossing and construction hours, it argued that these are not intended to avoid or reduce harmful effects of projects but are inherent features of the works. With regard to UXO clearance⁵⁹/piling noise mitigation and cable routing, the Applicant confirmed that these were mitigation measures and have been assessed within the integrity stage.
- 6.5.33. As a result of the disagreement regarding trenchless crossing at the River Wensum SAC and construction hours at Paston Great Barn SAC, the ExA progressed these impacts to the integrity stage in the RIES. This was welcomed by NE [REP8-104], however the Applicant still considered these measures to be a component of project design [REP8-064].

ExA's screening conclusions

- 6.5.34. We have taken on board the advice of NE that screening for LSE should be a coarse filter and that unless an impact can be considered trivial or inconsequential, LSE should be concluded [REP8-104].
- 6.5.35. Of the qualifying features and potential impacts discussed above that we progressed to the integrity stage in the RIES, the Applicant only disputed our conclusions in relation to the River Wensum SAC and Paston Great Barn SAC. However, we consider that limiting construction hours and trenchless crossings are necessary to support the findings in the assessment and should be considered as measures which avoid or reduce effects. Therefore, we consider that a LSE should be identified in accordance with the People over Wind judgement.
- 6.5.36. In relation to Broadland SPA and Ramsar site, we take on board the Applicant's response that only the qualifying swan and geese species of the SPA and Ramsar site utilise the relevant ex-situ habitats (i.e. crop stubble and improved grassland pasture) which are present within the study area.
- 6.5.37. Table 6.3 below presents those sites, features and potential impacts discussed above, that we consider have a LSE. The complete list of sites, features and impacts for which we recommend an AA is undertaken by the SoS therefore comprises those detailed in both Tables 6.2 and 6.3.

⁵⁹ Note the Applicant subsequently confirmed that UXO clearance did not form part of the authorised works.

Table 6.3. European sites, features and potential impacts discussed during the Examination for which the ExA advises a LSE cannot be ruled out

European site	Distance from NV	Feature(s)	Potential Impact
Flamborough & Filey Coast SPA	205km	Gannet	Operational displacement
		Razorbill Guillemot Seabird assemblage ⁶⁰	Operational displacement
Greater Wash SPA	0km from export cable, 36km from array area	Common scoter	Construction and operational disturbance/ displacement
		RTD	Operational disturbance/ displacement from vessel movements
Outer Thames Estuary SPA	21km	RTD	Operational disturbance/ displacement from vessel movements
Broadland SPA and Ramsar site	3.6km	Bewick's swan Whooper swan Ramsar Criterion 6	Impacts to ex-situ habitats

⁶⁰ Note that the seabird assemblage has been screened in on the advice of NE that impacts on puffin should be assessed in the context of the seabird assemblage [REP8-104].

European site	Distance from NV	Feature(s)	Potential Impact
		Great bittern Bewick's swan Whooper swan Eurasian wigeon Gadwall Northern shoveler Eurasian marsh harrier Hen harrier Ruff	Collision mortality
		Ramsar Criterion 6	Collision mortality, displacement/ disturbance, barrier effects
Breydon Water SPA and Ramsar site	53km	Avocet Bewick's swan Golden plover Assemblage qualification	Collision mortality
		Ramsar Criterion 5 and 6	Collision mortality, displacement/ disturbance, barrier effects
North Norfolk Coast SPA and Ramsar site	80km	Great bittern Pink-footed goose Dark-bellied brent goose Eurasian wigeon	Collision mortality

European site	Distance from NV	Feature(s)	Potential Impact
		Eurasian marsh harrier Pied avocet Red knot	
		Montagu's harrier	Collision mortality, displacement/disturbance, barrier effects
		Ramsar Criterion 5 and 6	Collision mortality, displacement/disturbance, barrier effects
Norfolk Valley Fens SAC	0.6km	Semi-natural dry grasslands and scrubland facies on calcareous substrates Narrow-mouthed whorl snail Desmoulin's whorl snail	Disturbance due to ground-water / hydrology changes
Paston Great Barn SAC	2.9km	Barbastelle bat	Construction phase noise disturbance
River Wensum SAC	0km	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation Desmoulin's whorl snail	Direct effects (e.g. habitat loss) on land within the SAC boundary

6.6. CONSERVATION OBJECTIVES

- 6.6.1. The conservation objectives for the European sites detailed in Table 6.2 of this Report (ie those for which a LSE was identified by the Applicant at the point of the DCO application) were included within the Applicant's HRA Report (Chapters 6, 7, 8 and 9 of the HRA Report [APP-045]).
- 6.6.2. During the Examination, NE provided revised conservation advice for the HHW SAC in [REP6-032] and the Applicant provided a copy of the SNS SAC conservation objectives and Advice on Operations dated March 2019 at Deadline 7 [REP7-052].
- 6.6.3. Of the additional sites for which a LSE was identified during Examination (Outer Thames Estuary SPA, Broadland SPA and Ramsar site, Breydon Water SPA and Ramsar site and North Norfolk Coast SPA and Ramsar Site), the conservation objectives were provided by the Applicant at Deadline 7 [REP7-053].
- 6.6.4. NE [REP8-104] confirmed that draft conservation advice for FFC SPA was published in March 2019 and can be found at the following location:
<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9006101&SiteName=flamb&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

6.7. FINDINGS IN RELATION TO ADVERSE EFFECTS ON INTEGRITY (AEoI)

- 6.7.1. The Applicant concluded that the Proposed Development would not adversely affect the integrity of any European site, either alone or in combination with other plans or projects [APP-045].
- 6.7.2. NE agreed [REP1-088] with the Applicant's conclusion of no AEoI to the Humber Estuary SAC, Winterton-Horsey Dunes SAC and The Wash and North Norfolk Coast SAC.
- 6.7.3. However, NE's relevant representation [RR-106] stated that it was not satisfied that it can be concluded beyond all reasonable scientific doubt that the Proposed Development would not have an AEoI on any of the following European sites:
- Alde-Ore Estuary SPA;
 - FFC SPA;
 - Greater Wash SPA;
 - Outer Thames Estuary SPA;
 - HHW SAC;
 - SNS SAC;
 - Paston Great Barn SAC;
 - River Wensum SAC;
 - Norfolk Valley Fens SAC; and
 - The Broads SAC.

- 6.7.4. NE made numerous representations throughout the Examination about various matters relating to all these sites. As noted in Section 6.5 of this Chapter, NE also made representations regarding potential effects on non-seabird migrants from Broadland SPA and Ramsar site, Breydon Water SPA and Ramsar site and North Norfolk Coast SPA and Ramsar site, for which a LSE was identified during the Examination.
- 6.7.5. The RSPB also did not agree an AEoI could be ruled out for kittiwakes and gannets of the FFC SPA or LBBG of the Alde-Ore Estuary SPA and made numerous representations on these matters throughout the Examination.
- 6.7.6. NE, the MMO, Whale and Dolphin Conservation (WDC) and TWT made several representations relating to impacts to harbour porpoise of the SNS SAC.
- 6.7.7. The key discussions related to effects on site integrity are detailed below.

Alde-Ore Estuary SPA

LBBG – collision mortality

- 6.7.8. The effects of collision mortality on LBBG of the Alde-Ore Estuary SPA were discussed throughout the Examination. In addition to the discussions relating to the overall CRM methodology, specific concerns related to the Applicant's apportionment of impacts to LBBG during the breeding season were raised by NE [RR-106 and REP1-088] and RSPB [RR-197, REP1-110, REP1-112 and REP7-083]; details are presented in Integrity Matrix 1 of the RIES. The Applicant [REP1-007, REP4-040, REP6-021, REP7-062 and AS-048] considered there to be very low connectivity between Norfolk Vanguard and the Alde-Ore Estuary SPA and revised its breeding season apportionment to less than 17%.
- 6.7.9. NE [REP7-075 and REP8-104] acknowledged that the variable ecology of LBBG between individuals within a colony and between seasons and years had made it difficult to determine an actual figure for use in apportionment. Therefore, it advised a full range of apportionment rates for the breeding season be considered, with a focus on rates between 10 and 30%. The RSPB [REP7-083 and REP8-109] did not agree with the Applicant's apportioning out of juveniles and argued that doubling the 17% breeding season apportioning value would be reasonable and appropriate.
- 6.7.10. In addition, although the Applicant [REP6-021] considered the migration free season to be more appropriate for assigning collisions to the SPA, it presented the full breeding season in its revised CRM [AS-048] as a result of NE's comments [RR-106 and REP1-088].
- 6.7.11. The Applicant [AS-048] noted the relevant conservation objective for the site is to restore breeding numbers of LBBG from the present level of about 2,000 pairs back to the population size at designation which was about 14,000 pairs.

Project alone

- 6.7.12. The Applicant's final CRM and assessment [AS-048 and AS-049] used a breeding season apportionment rate of 17% and predicted that most collisions would occur during the second half of the breeding season and during early autumn (June to August). It calculated:
- up to 2.9 collisions for the full breeding season (35.1 using the upper 95% CI); and
 - this would result in an increase in mortality of 0.6% (1.3% using the upper 95% CI).
- 6.7.13. The Applicant concluded that the annual number of collisions at Norfolk Vanguard is very small and would not materially alter the natural mortality rate for the population. As the increased mortality predicted as a result of mean collisions at Norfolk Vanguard is below the threshold of 1% at which increases in mortality are detectable, and the upper CI only just exceeds this level, it concluded that there would be no AEOI of the Alde-Ore Estuary SPA as a result of LBBG collisions at the proposed Norfolk Vanguard from the project alone.
- 6.7.14. NE [REP8-104] based its own calculations on the 10-30% seasonal apportionment range. It acknowledged that a breeding season apportionment of 30% is likely to be overly precautionary and that using this rate the collision prediction only just exceeds 1% of baseline mortality. NE therefore agreed with the Applicant that there would be no AEOI for the LBBG for collision impacts from the project alone.
- 6.7.15. Despite its outstanding methodological concerns relating to the breeding season apportioning values, the RSPB also agreed that the project alone would not result in AEOI for LBBG of the Alde-Ore Estuary SPA [REP8-109].

In-combination

- 6.7.16. The Applicant's final CRM and assessment [AS-048] calculated:
- an annual mortality of 35 (25.6 using as-built wind farm designs);
 - an increase in mortality of 7.6% (5.5% using as-built wind farm designs); and
 - with a worst-case adult mortality of 40, the population growth rate would be 1.3% lower than the baseline (density independent) or 0.4% (density dependent) (<0.9% using as-built wind farm designs).
- 6.7.17. The Applicant considered that the reduction in growth rate is very unlikely to have a detectable effect on the population and that the breeding success and hence population trend of LBBG appeared to be mainly determined by the amount of predation, disturbance and flooding at the site. The Applicant ultimately concluded that there would be no AEOI from collision impacts on LBBG in-combination with other plans and projects.
- 6.7.18. NE [REP8-104] explained that its own calculations were of an annual in-combination total of 39 LBBG collisions per year. It also noted that the

Applicant had applied a generic rate of 30% apportionment rate to the total breeding season collision predictions from all wind farms within 141km of the SPA which was overly simplistic and could potentially overestimate the contribution of some of the other projects and underestimate others. It advised using the apportionment rates used by the other wind farms in their assessments.

- 6.7.19. NE advised [REP8-104] that the Alde-Ore LBBG population is at best currently stable. It concluded that if the additional mortality from the windfarm is 35-40 adults per annum, then the population growth rate would be reduced by 0.9-1% which, assuming that the population is stable, would mean that the population would be 22.5-25.2% lower than the current population size; this would result in the population declining below its current level. It stated that the population is likely to be hindered from restoration to target levels even when more optimistic assumptions about the population trend of the colony are made. Therefore, NE advised that it is not possible to rule out AEoI of the LBBG feature of the Alde-Ore Estuary SPA for collision impacts from in-combination with other plans and projects and that the Proposed Development makes a meaningful contribution to the in-combination effects. [REP8-104 and REP9-057].
- 6.7.20. The RSPB [REP8-109] also did not agree an AEoI from in-combination collision mortality could be ruled out, and considered that the population reduction after 30 years would be 31%.
- 6.7.21. With regard to H3, NE [REP8-104] noted that H3 is outside of the foraging range of LBBG of the Alde-Ore Estuary SPA, therefore it agreed with the approach to not apportion any collisions to H3. The RSPB [REP8-109] also noted there is no contribution from H3 to the in-combination impact.

ExA conclusion

- 6.7.22. We are content that an AEoI on the LBBG of Alde-Ore Estuary SPA can be ruled out from the project alone.
- 6.7.23. Whilst we note the Applicant's assertion that factors other than collision risk appear to determine the LBBG population, we do not consider that this should deflect from the contribution of collision mortality from the Proposed Development, given the objective to restore the population from 2,000 breeding pairs to 14,000 breeding pairs.
- 6.7.24. NE predicted 4 more in-combination mortalities than the Applicant (39 compared to 35), however both considered similar growth reduction rates (0.9% by the Applicant and 0.9-1% by NE) and additional mortality of up to 40 adults in the PVA. The Applicant has not commented on the population size of the colony after 30 years but argued that NE was overly precautionary. It noted that NE considers there to be insufficient evidence for density dependence, however stated that NE has applied results obtained without density dependence in a manner which implies density dependence is operating in order to maintain a stable population.

It explained this represents another example of over precaution and therefore the Applicant contends that the probability of an in-combination AEoI is extremely low [REP9-031].

- 6.7.25. As noted above, we have taken on board NE's advice and believe that its approach is sound. We do not consider the level of precaution applied to the Applicant's assessment as a result of NE's advice to be excessive and therefore must consider the effects on the reduced growth rate on the SPA colony. Given the restore conservation objective, the reduction in colony size reported by NE and RSPB is of great concern to us and on the basis of the information presented to us, we are not persuaded that an AEoI on the LBBG of the Alde-Ore Estuary SPA from in-combination collision risk can be excluded.

Flamborough & Filey Coast SPA

- 6.7.26. The effects of collision mortality and displacement on the qualifying features of the FFC SPA were discussed throughout the Examination. This included discussions relating to the overall CRM methodology, which are explained above in this Chapter, as well as matters related to individual qualifying features, which are detailed in this section.
- 6.7.27. Of relevance to both kittiwake and gannet were discussions regarding nocturnal activity factors and the Applicant's approach to assessing the effects of in-combination mortality. By the close of Examination, there was agreement with NE and RSPB on the rates used in the Applicant's assessment [REP9-046 and REP8-089], however, the discussions are summarised in Integrity Matrix 2 of the RIES [PD-016].
- 6.7.28. Details of the discussions for the relevant qualifying features are provided below.

Black-legged kittiwake – collision mortality

- 6.7.29. In addition to the overarching CRM methodological issues, concerns relating to the Applicant's apportionment of 16.8% of impacts to the FFC SPA kittiwake colony during the breeding season were raised by NE [RR-106, REP1-049, REP1-088 and REP3-051] and RSPB [RR-197, REP1-112 and REP6-038]. In response to RPSB and NE's advice to consider RSPB kittiwake tagging data from 2017 (which indicates birds from the FFC SPA do forage within the Norfolk Vanguard site), the Applicant concluded that a precautionary upper value of 26.1% of kittiwakes at Norfolk Vanguard could be from the FFC SPA adult (breeding) population. The Applicant refuted NE's suggestion that a wider range of possible breeding season connectivity percentages should be considered (including up to 100% of birds at Norfolk Vanguard during the breeding season being treated as birds from the FFC SPA) [REP6-021 and REP7-062].
- 6.7.30. NE advised [REP7-075] that the 26.1% value was not suitably precautionary and considered the 86% value obtained from the SNH tool should be applied by the Applicant. The RSPB [REP6-038] also did not agree with the apportioning rates and suggested [REP7-083 and REP8-

109] doubling the Applicant's 26.1% value would be a reasonable approach; the RSPB therefore based its conclusions on that value.

6.7.31. The Applicant [AS-048] stated that there is very little evidence for connectivity between the FFC SPA and Norfolk Vanguard East and that there is more compelling evidence for connectivity to Norfolk Vanguard West. Therefore the Applicant based its conclusion on collisions at Norfolk Vanguard West. It also provided a review of kittiwake demographic and distribution data [REP8-067] to explore the likely proportions of adult (breeding) and immature birds present at sites offshore and in relation to proximity to breeding colonies in the SNS.

6.7.32. In drawing its conclusions of effects to kittiwakes of FFC SPA, the Applicant [AS-048] noted that breeding numbers at the FFC SPA have been relatively stable over the last 20 years (although an RSPB unpublished report suggests a 0.4% annual growth rate) and the population appears to be in favourable conservation status. It also stated that the relevant conservation objective is to maintain favourable conservation status of the kittiwake population, subject to natural change.

Project alone

6.7.33. Using the 26.1% breeding season apportioning rate, the Applicant calculated [AS-048]:

- the maximum annual collisions apportioned to the FFC SPA using the full breeding season is 9.6; and
- this would increase mortality rate by 0.07%.

6.7.34. The Applicant concluded that this would be undetectable against natural variation and there would be no AEoI from the project alone.

6.7.35. NE [REP8-104] undertook its own calculations applying an 86% breeding season apportionment rate. It calculated:

- an annual total of 43 kittiwake collisions (2-120 using 95% CIs); and
- an increase in baseline mortality of 0.33% (0.02%-0.93% using 95% CIs) using the designated population, or 0.29% (0.02-0.80% using 95% CIs) using the mean 2016-2017 population.

6.7.36. Despite the differences compared to the Applicant's figures, NE advised that a conclusion of no AEoI of the kittiwake feature of the FFC SPA from collision risk from Norfolk Vanguard alone can be reached [REP8-104 and REP9-046].

6.7.37. The RSPB also agreed that a conclusion of no AEoI for the kittiwake population of FFC SPA due to collisions from the project alone was appropriate [REP8-109 and REP8-089].

In-combination

6.7.38. Throughout the Examination, NE advised [REP2-038, REP4-062, REP6-032 and REP8-104] that the in-combination threshold for kittiwake from

FFC SPA had already been reached for previous offshore wind farms, dating back to the Hornsea Project TWO Examination; consequently, all subsequent projects would continue to add to this cumulative collision total.

6.7.39. Nevertheless, the Applicant's revised assessment [AS-048] concluded no AEoI from in-combination collision mortality to kittiwakes of FFC SPA. It calculated:

- an in-combination total, all age class, annual FFC SPA kittiwake population collision estimate of 490 individuals (332.1 individuals without H3);
- an increase in background mortality of 3.8% (2.5% without H3); and
- at an adult mortality of 500, a maximum reduction in the population growth rate of 0.6% (0.4% without H3) using the density independent model and 0.1% (both with and without H3) using the density dependent model.

6.7.40. The Applicant concluded that this would represent a very small risk to the population's conservation status. It concluded that there is a small risk that further population growth would be restricted when considering the density independent model, but that the density dependent model (which it argued to be appropriate) suggests only a very slight reduction in the growth rate. The Applicant concluded that there would be no AEoI of FFC SPA from collision impacts on kittiwake due to the proposed Norfolk Vanguard project in-combination with other plans and projects.

6.7.41. NE [REP8-104] stated that the growth rate of the colony at the Flamborough Head and Bempton Cliffs/FFC SPA between 2000 and 2017 was 0.37% per annum, following declines from 1987. It considered, it reasonable to assume that the FFC SPA colony growth rate is <1% per annum and that there is no evidence to suggest the future population trend would be significantly different. It confirmed the conservation objective for kittiwake population of the FFC SPA is to restore the size of the breeding population to above 83,700 breeding pairs (the 1987 designated population for Flamborough Head and Bempton Cliffs SPA) and to avoid deterioration from its current level.

6.7.42. By the close of Examination, NE [REP9-046] and RSPB [REP8-089] did not agree with the Applicant's conclusion. NE's own calculations and assessment of in-combination mortality, using a precautionary 86% breeding season apportionment rate and the density independent PVA outputs, were [REP8-104]:

- 547 annual collisions (366 without H3);
- the population growth rate would be reduced by 0.6% (0.4% without H3);
- the population of FFC SPA after 30 years would be 15.1-16.5% lower than it would have been in the absence of the additional mortality (10.8% without H3); and
- Norfolk Vanguard's contribution to the in-combination total is 7.86% (11.76% without H3).

- 6.7.43. NE concluded that both with or without H3, in-combination collision mortality to kittiwake of FFC SPA would be counter to the restore conservation objective for this feature at the site and that it could not advise beyond reasonable scientific doubt that this level of impact would not result in an AEoI. It further considered that the Proposed Development makes a meaningful contribution to the in-combination effects¹ [REP8-104, REP9-046 and REP9-057].
- 6.7.44. The RSPB [REP7-083, REP8-089, REP8-109 and REP9-063] similarly considered that an AEoI exists from in-combination collision mortality irrespective of whether or not mortality from H3 is included. It argued that the H3 PVA demographic rates do not account for recent decline in kittiwake productivity at FFC SPA and did not agree the population can be considered to be at favourable conservation status. It maintained that the breeding season apportionment is too low and disagreed over the Applicant's exclusion of Norfolk Vanguard East during the breeding season. NE [REP9-057] similarly was of the view that kittiwake could travel as far as Norfolk Vanguard East.

ExA conclusion

- 6.7.45. We are content that an AEoI on kittiwakes of the FFC SPA can be ruled out from the project alone.
- 6.7.46. NE and RSPB both state that no AEoI for in-combination collision mortality cannot be concluded irrespective of whether H3 is included. NE's calculations were undertaken using a higher apportioning rate than the Applicant (86% compared to 26.1%) which has resulted in a greater number of in-combination collisions. However, both the Applicant and NE have reached the same conclusion regarding the reduction in population growth rate regardless of the method applied (ie a 0.6% reduction with H3).
- 6.7.47. As noted above, we have taken on board NE's advice and are persuaded by the approach they advocate. We do not consider the level of precaution applied to the Applicant's assessment as a result of NE's advice to be excessive and therefore must consider the effects on the reduced growth rate on the SPA colony.
- 6.7.48. The Applicant presented arguments [REP9-031] that the predicted 0.6% reduction in population growth was very minor compared to a trend of around 7% growth over the last 20 years. Although the Applicant also argued that the density dependent model suggests only a very slight reduction in growth rate, we have already determined that we will consider the density independent models, following NE's advice.
- 6.7.49. NE consider the FFC SPA kittiwake population growth rate to be <1% and RSPB argue there is a decline. However, the Applicant has stated that there is evidence that the FFC SPA population is very likely to be around as large as any kittiwake population can sustain due to resource constraints and that the target population size should be between 40,000-50,000; the current population status should be categorised as

favourable (the 2017 count estimate was 51,000 pairs) and the probability of an in-combination AEoI is extremely low. Furthermore, the Applicant considers that NE's conservation objective to 'restore the population to 83,700' pairs mistakenly identified the population as pairs when in fact it referred to individuals and that this view was endorsed in the Recommendation Report for the Hornsea Project One Wind Farm.

- 6.7.50. The Applicant's arguments presented in [REP9-031] were submitted at the final deadline in the Examination which gave insufficient time for us to scrutinise these arguments further. Although the Applicant highlights an apparent discrepancy in population sizes, we consider the obligation is to have regard to the population presented on the citation which underpins the legal designation of the site. We also note that NE argues the threshold for kittiwake in-combination collision mortality was reached before Norfolk Vanguard. Although we acknowledge that population trends over a 30 year timeframe could be influenced by factors which cannot be modelled, we are concerned the population decline from in-combination collision mortality after 30 years would be counter to the restore conservation objective of the site. As such, we do not consider that we have been presented with sufficient information that allows us to exclude an AEoI beyond reasonable scientific doubt.

Northern gannet – operational displacement

Project alone

- 6.7.51. Further to agreeing to screen in a LSE for operational displacement of gannet from the FFC SPA colony, the Applicant submitted an assessment of displacement risk for gannet [REP6-021]. This presented a range of displacement rates between 60% and 80% displacement and 1% mortality. Apportioning 100% of gannet displacement mortality to the FFC SPA and using NE's preferred rates in spring and autumn, it calculated:
- a worst-case mortality of between 2.5 and 3.3; and
 - this would result in an increase to the mortality rate by up to a maximum of 0.04% (designated population).

- 6.7.52. The Applicant and NE agreed that operational displacement of gannet from the project alone would not have an AEoI on FFC SPA [REP8-104 and REP9-046].

In-combination

- 6.7.53. The Applicant's Deadline 6 assessment of displacement risk for gannet [REP6-021] calculated the total annual in-combination displacement mortality apportioned to the FFC SPA to be between 49.1 and 65.5. This would result in an increase in background mortality of the FFC SPA all age class population between 0.64% and 0.85% (designated) and between 0.53% and 0.70% (2017 population). The Applicant concluded there would be no AEoI for the FFC SPA gannet population due to in-combination displacement mortality.

- 6.7.54. NE did not explicitly confirm its agreement to the Applicant's conclusion in relation to in-combination displacement. However, it commented on the additive impacts of in-combination displacement and collision mortality, as discussed below.

ExA conclusion

- 6.7.55. We are content that an AEoI on gannet of the FFC SPA from operational displacement can be ruled out from the project alone and in-combination with other projects. However, our consideration of additive impacts of in-combination displacement and collision mortality are discussed below.

Northern gannet – collision mortality

- 6.7.56. In addition to the overarching CRM methodological issues, concerns related to the use of the migration-free breeding season were raised by NE [RR-106 and REP1-088] and the RSPB [RR-197 and REP1-112] during the Examination, as noted in Integrity Matrix 2 of the RIES [PD-016]. By the close of Examination, NE and the Applicant agreed that the methods used to define seabird breeding seasons were appropriate [REP9-046].
- 6.7.57. Concerns were also raised by NE [RR-106, REP2-036, REP2-037, REP3-051 and REP4-062] regarding the seasonal apportioning of impacts. The Applicant and NE did not agree on apportioning rates during the Examination (see Integrity Matrix 2 of the RIES [PD-016]), therefore the Applicant's revised assessment presented both its own and NE's preferred rates.
- 6.7.58. Lastly, throughout the Examination, RSPB [RR-197, REP1-112, REP4-070, REP6-038, REP7-083, REP8-089 and REP8-109] maintained its disagreement with the Applicant's use of 98.9% avoidance rate used by the Applicant for gannet during the breeding season. It considered that a 98% avoidance rate is more appropriate. The RSPB [REP7-083] confirmed that it would base its conclusions on the use of a 98% avoidance rate for the breeding season, although it did not submit any calculations using this rate.
- 6.7.59. In drawing its conclusions of effects to gannets of FFC SPA, the Applicant [AS-048] noted that the population growth rates over the last 25 years have been at least 10% increase per year, therefore the population is in favourable conservation status. It noted that the relevant conservation objective is to maintain favourable conservation status of the gannet population, subject to natural change.

Project alone

- 6.7.60. Using NE's preferred apportioning rates, the Applicant [AS-048] calculated that for the project alone:
- mortality would be 19.9 adults (5.8-39.2 using 95% CIs);
 - this would increase mortality rate by 1.1% (designated count) (2.2% using 95% CIs) and 0.9% (2017 count) (1.8% using 95% CIs); and

- the maximum reduction in the population growth rate, at an adult mortality of 50, would be 0.2% using the density independent model (0.1% using the density dependent model).
- 6.7.61. The Applicant concluded that the collisions attributed to the FFC SPA are not at a level which would trigger a risk of population decline but would only result in a slight reduction in the growth rate seen at the colony and concluded no AEoI for the project alone.
- 6.7.62. NE [REP8-104] agreed with the apportioned figure of 20 gannet collisions per annum, however, it calculated a broader range of 1 to 56 collisions. It also noted that the Applicant did not consider the combined impact of collision risk and displacement from Vanguard alone in its submissions in [AS-048] which NE calculated to be:
- 23 mortalities (range of up to 2-64);
 - an increase of around 1% of baseline mortality of the colony;
 - the population of FFC SPA after 30 years would be 3.2% lower than in the absence of the additional mortality (6.4-9.4% lower using the upper range of 64 mortalities); and
 - the population growth rate would be reduced by 0.1% (0.2-0.3% using the upper range of 64 mortalities).
- 6.7.63. NE confirmed that the conservation objective for the gannet population of the FFC SPA is to maintain the size of the breeding population at a level which is above 8,469 pairs (16,938 adults), whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. The latest mean count is 24,594 adults based on the mean of the 2012, 2015 and 2017 counts. It advised that under a range of plausible future growth rate scenarios the colony would still be predicted to grow above the current mean population with the addition of collision and displacement mortality to FFC SPA gannets from the project alone. It therefore agreed no AEoI can be concluded. [REP8-104 and REP9-046].
- 6.7.64. The RSPB also agreed with a conclusion of no AEoI for gannet population due to collision from the project alone [REP8-089 and REP8-109].

In-combination

- 6.7.65. The Applicant's revised assessment [AS-048] concluded no AEoI from in-combination collision mortality to gannets of FFC SPA. It calculated:
- an in-combination total, all age class, annual FFC SPA gannet population collision estimate of 231 individuals (212 individuals without H3);
 - an increase in background mortality of between 12.9% (designated population) and 10.6% (2017 count) (11.8% and 9.8% without H3); and
 - at an adult mortality of 250, a maximum reduction in the population growth rate of 1.1% (0.4% without H3) using the density independent model and 0.7% using the density dependent model.

- 6.7.66. The Applicant further combined the annual in-combination gannet collision estimate to the in-combination annual displacement prediction to give:
- a combined SPA mortality estimate of 280 to 296; and
 - at an adult mortality of 275-300, a maximum reduction in the population growth rate of 1.4% using the density independent model and 0.9% using the density dependent model.
- 6.7.67. It concluded that in-combination gannet collisions and displacement would result in a slight reduction in the growth rate currently seen at this colony but would not be at a level which would trigger a risk of population decline, and so would not have an AEoI of the SPA. The Applicant also highlighted the precaution in its assessment.
- 6.7.68. NE [REP7-075] confirmed that the approach to the in-combination assessment had addressed its methodological concerns. It noted [REP8-104] that combining predicted in-combination mortality from collision risk and displacement would equate to more than 1% of baseline mortality of the colony. It advised that at an adult mortality of 275-300 per annum, the population of FFC SPA after 30 years would be 30.4-32.7% lower than it would have been in the absence of the additional mortality.
- 6.7.69. In considering in-combination effects without H3, NE [REP8-104] advised that under a 1% colony growth rate scenario, the additional mortalities would result in a reduction from the current colony size, but above the breeding population size. Under a 2% to 5% growth rate scenario, the colony would be predicted to grow at about the current mean count. NE considered a growth rate as low as 1% would be unlikely, therefore agreed that an AEoI of the gannet feature of the FFC SPA can be ruled out for collisions plus displacement impacts from in-combination with other plans and projects if H3 is excluded from the in-combination total.
- 6.7.70. However, NE explained that it had significant concerns regarding the incomplete baseline surveys for H3, and the associated level of uncertainty as regards the potential impacts of that project. NE therefore stated it was not in a position to advise that an AEoI can be ruled out for the gannet feature of the FFC SPA for collision plus displacement impacts in-combination with other plans and projects when H3 is included in the in-combination total. It further considered that the Proposed Development makes a meaningful contribution to the in-combination effects.
- 6.7.71. RSPB similarly did not agree that an AEoI can be excluded from in-combination collision plus displacement mortality to gannets when H3 is included [REP8-089 and REP8-063].

ExA conclusions

- 6.7.72. We note RSPB's maintained position that a 98% avoidance rate for gannet of the FFC SPA is more appropriate than the 98.9% used by the Applicant and NE. However, the 98.9% avoidance rate was advocated by

NE [RR-106 and REP1-088] and we have not been persuaded that there is any reason to depart from the advice of NE.

- 6.7.73. We are content that an AEoI on gannet of the FFC SPA from collision mortality can be ruled out from the project alone. Our consideration of the combined in-combination collision and displacement mortality as a result of the inclusion of H3 is given below alongside discussion of razorbill, guillemot and the seabird assemblage.

Razorbill - displacement

- 6.7.74. The Applicant noted that razorbill breeding numbers have shown strong growth over the last 20 years [REP7-035] and are therefore in favourable conservation status. It considered the relevant conservation objective is to maintain favourable conservation status of the guillemot population, subject to natural change [REP8-069].
- 6.7.75. NE [REP9-057] acknowledged the FFC SPA razorbill colony increased by 3% per annum between 1987-2008; that the designated population size is 21,140 breeding adults; and that the 2017 count indicated approximately 40,506 breeding adults. It confirmed that the conservation objective for the razorbill population of the FFC SPA is to maintain the size of the breeding population at a level which is above 10,570 breeding pairs whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.

Project alone

- 6.7.76. During the Examination, NE raised concerns with the apportionment rates used by the Applicant [REP7-075] (as detailed in Integrity Matrix 2 of the RIES [PD-016]), which led the Applicant to provide a revised assessment in [REP8-069]. This calculated:
- worst-case displacement mortality would be 5.8 adults (2.4 to 9.9 using the 95% CIs);
 - this would increase the baseline mortality by 0.2% (0.1% to 0.4% using the 95% CIs), which is below the 1% threshold of detectability; and
 - the maximum reduction in the population growth rate at a mortality of 50 would be 0.2% (density independent) which would represent a negligible risk for the population.
- 6.7.77. The Applicant and NE agreed that operational displacement from the project alone would not result in an AEoI on razorbill of FFC SPA [REP7-075, REP9-046 and REP9-057].

In-combination

- 6.7.78. The Applicant [REP8-069] calculated:
- the combined displacement mortality of razorbill across the whole year would be in the range 18 to 418 adults;

- this would increase the baseline mortality rate of the population (adults) by 0.8% to 19% (using NE's preferred displacement and mortality rates) or 1.3% (using the Applicant's preferred evidence-based rates);
- the contribution to this from Norfolk Vanguard was estimated to comprise 1.3%; and
- the maximum reduction in the population growth rate at a mortality of 400 would be 1.9% which would still permit population growth at over 5.3% per year.

6.7.79. The Applicant concluded that in-combination razorbill displacement would result in a slight reduction in the growth rate currently seen at this colony but would not be at a level which would trigger a risk of population decline, and so would not have an AEoI of the SPA.

6.7.80. NE's own calculations [REP9-057] using alternative abundance figures, calculated an annual in-combination mortality of 17 to 403 excluding H3 and 18 to 422 including H3. Based on the current population trend for the colony and productivity levels for the colony and a predicted decline in growth rate of less than 0.5% per annum, NE advised that an AEoI on the razorbill feature of the FFC SPA can be ruled out from displacement in-combination with other plans and projects if H3 is excluded from the in-combination total. However, as with gannets of the FFC SPA, NE stated it was not in a position to advise that an AEoI can be ruled out for the guillemot feature of the FFC SPA when H3 is included in the in-combination total, due to concerns over the H3 data [REP9-046 and REP9-057].

ExA conclusion

6.7.81. We are content that an AEoI on razorbill of the FFC SPA can be ruled out from the project alone. Our consideration of in-combination impacts as a result of the inclusion of H3 is given below alongside discussion of gannet, guillemot and the seabird assemblage.

Guillemot – displacement

6.7.82. The Applicant considered that guillemot breeding numbers have shown strong growth over the last 20 years and are therefore in favourable conservation status [REP7-035]. It noted that the relevant conservation objective is to maintain favourable conservation status of the guillemot population, subject to natural change [REP8-069].

6.7.83. NE [REP9-057] acknowledged the FFC SPA guillemot colony increased by 2.8% per annum between 1987-2008; that the designated population size is 83,214; and that the 2017 count indicated approximately 121,754 breeding adults. It confirmed that it did not expect the population growth rate to decline by more than approximately 0.4% per annum.

Project alone

6.7.84. The Applicant's displacement assessment [REP8-069] used NE's preferred 70% displacement and 10% mortality rates and calculated:

- worst case displacement would be up to 10 adults (8 to 23.2 using 95% CIs);
- this would increase the background mortality by 0.3% (0.15% to 1.46% using the 95% CIs); and
- the maximum reduction in the population growth rate at a mortality of 50 would be 0.1% which would represent a negligible risk for the population.

6.7.85. The Applicant and NE agreed that operational displacement of guillemot from the project alone would not have an AEoI on FFC SPA. [REP7-075, REP9-046 and REP9-057].

In-combination

6.7.86. The Applicant [REP8-069] calculated:

- the combined displacement mortality of guillemot across the whole year would be in the range 71 to 1,649 individuals;
- this would increase the baseline mortality rate of the population (all ages) by 1.3% to 3.2% (using NE's preferred 70% displacement and 10% mortality rates) or 2.3% (using the Applicant's preferred evidence based 50% displacement and 1% mortality rates);
- the contribution to this from Norfolk Vanguard was estimated to comprise 0.8%; and
- the maximum reduction in the population growth rate at a mortality of 1,600 would be 1.9% which would represent a negligible risk for the population.

6.7.87. The Applicant concluded that in-combination guillemot displacement would result in a slight reduction in the growth rate currently seen at this colony but would not be at a level which would trigger a risk of population decline, and so would not have an AEoI on the guillemot population of the FFC SPA.

6.7.88. NE [REP9-057] calculated an annual in-combination mortality of 68 to 1,595 excluding H3 and 71 to 1,654 including H3.

6.7.89. Based on the current population trend for the colony and the restore conservation objective, and on the basis of predicted displacement mortality for the project in-combination with other plans and projects resulting in a decline in growth rate of no more than 0.4%, NE advised that an AEoI on the guillemot feature of the FFC SPA can be ruled out from displacement in-combination with other plans and projects if H3 is excluded from the in-combination total. However, as with gannets and guillemots of the FFC SPA, NE stated it was not in a position to advise that an AEoI can be ruled out for the guillemot feature of the FFC SPA when H3 is included in the in-combination total, due to concerns over the H3 data. [REP9-046 and REP9-057].

ExA conclusion

6.7.90. We are content that an AEoI on guillemot of the FFC SPA can be ruled out from the project alone. Our consideration of in-combination impacts

as a result of the inclusion of H3 is given below alongside discussion of razorbill, gannet, and the seabird assemblage.

Assemblage feature – puffin component

Project alone

- 6.7.91. Further to NE's comments on apportionment rates and CIs for puffin [REP7-075], the Applicant's initial displacement assessment [REP6-021] was revised [REP8-069]. It calculated that using NE's preferred 70% displacement and 10% mortality rates, there would be up to 0.02 additional mortalities which would increase the background mortality rate by 0.01%. The Applicant concluded that this would not result in an AEoI.
- 6.7.92. Although NE calculated slightly different predicted impact figures [REP9-057], it confirmed that the predicted mortality is significantly closer to zero than a single bird, even at the upper 95% CIs. It therefore advised that an AEoI of the puffin component of the FFC SPA assemblage feature can be ruled out for predicted displacement impacts from the project alone.

In-combination

- 6.7.93. The Applicant considered [REP7-035] that there is no requirement to undertake an in-combination assessment for puffin given the level of mortality attributable to Norfolk Vanguard. It also noted that the FFC SPA population is almost certainly significantly underestimated due to its inaccessibility and puffin nesting habits. Nevertheless, it provided an in-combination displacement assessment at Deadline 6 [REP6-021] which was subsequently revised [REP8-069] in response to NE's comments regarding apportioning of impacts [REP7-075].
- 6.7.94. The Applicant [REP8-069] calculated that the number of puffins apportioned to the FFC SPA population at risk of displacement on North Sea wind farms to be 907 in the breeding season (none from Norfolk Vanguard) and 95 in the non-breeding season (0.3 from Norfolk Vanguard). Overall, of the 1,002 puffins (including H3) at risk of displacement annually, 0.03% were birds on Norfolk Vanguard.
- 6.7.95. The Applicant considered that Norfolk Vanguard's contribution to any in-combination effect would make no difference and considered that the SPA population could be significantly underestimated due to difficulties to census puffin populations. The Applicant and NE agreed that an AEoI could be excluded for in-combination displacement impacts on the puffin component of the seabird assemblage feature [REP9-057].

ExA conclusion

- 6.7.96. We are content that an AEoI on the puffin component of the seabird assemblage of the FFC SPA can be ruled out from the project alone and in-combination with other plans or projects.

Assemblage feature

- 6.7.97. NE [REP8-104] explained that breeding puffin is not a qualifying feature of the FFC SPA in its own right but is a component of the seabird assemblage qualifying feature. It agreed that an AEoI can be ruled out for the seabird assemblage feature of the FFC SPA as a whole from the project alone.
- 6.7.98. However, it confirmed that when considering in-combination effects, given that it considers there is an AEoI effect on the kittiwake, gannet, guillemot and razorbill features (which form part of the assemblage feature), it therefore follows that an AEoI cannot be ruled out for the assemblage feature of the FFC SPA in-combination with other OWFs, irrespective of whether H3 is included or excluded.

ExA conclusion

- 6.7.99. We are content that an AEoI on the seabird assemblage of the FFC SPA can be ruled out from the project alone.
- 6.7.100. However, NE noted that an AEoI to kittiwake cannot be excluded for in-combination collision mortality irrespective of whether H3 is included. NE stated that as kittiwake forms a component part of the FFC SPA assemblage feature, it therefore follows that an AEoI cannot be ruled out for the assemblage feature of the FFC SPA in-combination with other OWFs, irrespective of whether H3 is included or excluded.

Gannet, guillemot, razorbill and seabird assemblage

In-combination

- 6.7.101. As noted above, whether or not in-combination effects to guillemot and razorbill (displacement) and gannet (collision risk plus displacement mortality) would result in an AEoI to FFC SPA all hinge on whether H3 is consented. The ExA therefore considers that an AEoI could be excluded for these impacts and features if the SoS decides not to grant consent for H3.
- 6.7.102. However, a decision on H3 will not be made by the SoS before this Report is submitted to the SoS, therefore we agree with Ørsted [REP7-081] that there would not be any basis upon which to depart from the normal approach of assessing in-combination effects.
- 6.7.103. The ExA understands [REP9-031 and REP9-057] that NE's position regarding AEoI is not because of the additional mortality, but as a result of concerns over the incomplete baseline surveys for H3 and the associated level of uncertainty of the potential impacts. The Applicant explained [REP9-031] that this has the consequence that any cumulative total in its assessment, which subsequently includes H3, automatically becomes an unknown number.

- 6.7.104. Ørsted, the Applicant for H3, submitted a representation to the Norfolk Vanguard Examination [REP7-081] arguing that its ornithological baseline is robust, and its assessment is highly precautionary.
- 6.7.105. We acknowledge NE's position regarding the uncertainty with H3 numbers and appreciate that the Applicant's ability to assess in-combination effects accurately is affected by the availability of information from H3.
- 6.7.106. Nevertheless, we are aware of the need to assess effects from the project alone and in-combination with other plans or projects. On the basis of the uncertainty and information presented regarding impacts from H3, we do not consider that we can exclude an in-combination AEoI beyond reasonable scientific doubt.

Greater Wash SPA and Outer Thames Estuary SPA

Red-throated diver – operational phase disturbance/ displacement from vessel movements

- 6.7.107. Further to the Applicant's agreement to screen in a LSE, NE advised that if mitigation measures such as those agreed for East Anglia THREE could be agreed for fast moving boats, this would remove the likelihood of an AEoI for RTDs [REP1-088, REP3-051 and REP6-021]). The Applicant therefore updated the dDCO to require "*procedures to be adopted within vessels transit corridors to minimise disturbance to red-throated diver during operation and maintenance activities*" (Condition 14(1)(d)(vi) of Schedules 9 and 10) [AS-038]. The outline Project Environmental Management Plan [REP7-022] was also revised to include the following mitigation measures to minimise disturbance to RTD:
- avoiding and minimising maintenance vessel traffic, where possible, during the most sensitive time period in January/ February/ March;
 - restricting vessel movements where possible to existing navigation routes (to areas where RTD density is likely to be lowest);
 - maintaining direct transit routes (to minimise transit distances through areas used by RTD);
 - avoidance of over-revving of engines (to minimise noise disturbance); and
 - avoiding rafting birds either in-route to array from operational port and/or within the array (dependent on location) and where possible avoid disturbance to areas with consistently high diver density.
- 6.7.108. Following the Applicant's agreement to adopt best practice vessel operation measures whilst traversing the SPAs, NE [REP9-046] agreed there would be no AEoI from operational displacement to the RTD population at the Greater Wash SPA and Outer Thames Estuary SPA from the project alone and in-combination with other plans or projects.

ExA conclusion

- 6.7.109. We are content that an AEoI on RTD of the Greater Wash SPA and Outer Thames Estuary SPA from operational disturbance/displacement can be

ruled out from the project alone and in-combination with other plans or projects.

Greater Wash SPA

Red-throated diver – construction phase displacement/ disturbance

- 6.7.110. The Applicant's initial assessment [APP-045 and REP1-010] assumed 80% displacement and 5% mortality of RTD, however, NE advised a worst case scenario of up to 100% displacement and up to 10% mortality out to 2km from the cable route should be applied which could result in an AEoI [REP1-088, REP3-051 and REP4-062]. NE [RR-106, REP1-088, REP2-036 and REP7-075] also highlighted concerns over the potential for the cable installation through the Greater Wash SPA to overlap with that for H3. For this reason, NE [RR-106, REP1-088 and REP7-075] advised that measures, such as avoiding cable laying activities during the non-breeding season/period of peak RTD numbers, should be considered to mitigate disturbance.
- 6.7.111. Although the Applicant presented a review of published evidence to justify the use of 90% displacement and 1% mortality within 2km of the windfarm boundary [REP1-008], RSPB [REP2-035] and NE [REP3-051] did not agree there was compelling evidence to warrant a change to NE's recommended rates.
- 6.7.112. The Applicant subsequently provided an updated assessment using NE's preferred rates (100% displacement and 10% mortality from 2 vessels) [REP6-021]. This calculated:
- between 4 to 8 additional mortalities during a single year from the project alone and between 6 and 10 individuals in-combination with H3; and
 - this would increase baseline mortality by approximately 1.3% to 2.6% (project alone) and 2% to 3.3% (in-combination with H3).
- 6.7.113. The Applicant noted the in-combination effect would only be expected to occur during a single non-breeding season, if both cable laying vessels planned for Norfolk Vanguard are present at the same time, and this was also at the same time when those for H3 are present, and furthermore that this combination of events occurs within the SPA during the non-breeding period (which is the least favoured period for such work due to less suitable weather conditions). The Applicant concluded no AEoI.
- 6.7.114. Although NE [REP7-075] agreed with the Applicant's calculations, it noted the cable route traverses an area of high RTD density compared to elsewhere in the Greater Wash SPA and that displacement would mean the loss of habitat in an important area of the SPA for approximately 40 days during a winter/non breeding season. It did not agree to no AEoI.
- 6.7.115. In response, whilst the Applicant explained that export cable installation is not planned to occur during the winter, it agreed that only one main cable laying vessel would be used should installation through the SPA be

unavoidable during the most sensitive period for RTD (January to March inclusive) [REP8-064]. This commitment was included in Condition 18 of the Transmission DMLs (Schedules 11 and 12 of the dDCO) [REP8-003]. NE [REP7-075] confirmed that such restriction would allow a conclusion of no AEoI both for the project alone and in-combination with other plans and projects as regards cable installation. It further confirmed that it had reviewed the predicted cable installation timetables for consented projects due to undertake cable installation or remedial works and considers that these are highly unlikely to overlap temporally with cable installation from Norfolk Vanguard [REP9-046 and REP9-057].

- 6.7.116. The Applicant also stated it would avoid construction in the SPA during these months if possible, however this avoidance was not secured, therefore NE placed no weight on this aspect of the Applicant's position [REP9-046].
- 6.7.117. NE [RR-106, REP7-075 and REP8-104] also initially advised that consideration should be given to the in-combination disturbance/displacement effect on RTD of cable laying with operational phase traffic from currently constructed or consented wind farms within the Greater Wash SPA. The Applicant [REP8-064 and REP9-038] argued that such an assessment would be inappropriate given the short duration of cable installation within the SPA (a maximum of six weeks would be required within the SPA), the limited area over which a cable laying vessel could exert an effect (even when a precautionary 2km radius is applied) and the fact this would be a one-off event. This was agreed with NE by the close of Examination [REP9-046].

ExA conclusion

- 6.7.118. We are content that an AEoI on RTD of the Greater Wash SPA from construction phase disturbance/displacement can be ruled out from the project alone and in-combination with other plans or projects.

Little gull – collision mortality

Project alone

- 6.7.119. Further to discussions during the Examination of the Applicant's overall approach to CRM, and the changes to the Proposed Development, the Applicant's revised collision risk assessment [AS-048 and AS-049] calculated:
- a maximum of 0.6 mortalities; and
 - an increase background mortality rate by 0.24%.
- 6.7.120. The Applicant concluded this additional mortality would be undetectable and there would be no AEoI from the project alone. This conclusion was supported by NE [REP8-104].

In-combination

- 6.7.121. The Applicant's revised in-combination assessment [AS-048 and AS-049] predicted:
- a maximum of 7.6 mortalities using the smallest regional population estimate of 10,000 (4.8 using as built or planned designs and 2.4 using a wider population of 20,000); and
 - increases in mortality of 3.0% (0.95% for as built projects or planned designs and the wider population of 20,000).
- 6.7.122. The Applicant noted a very similar total collision estimate of 7 individuals was assessed by the Secretary of State on the Triton Knoll non-material change application (BEIS 2018), for which the SoS concluded that such a small impact would be undetectable in the SPA population and that an AA was not required. The Applicant therefore concluded that an AEoI could be excluded.
- 6.7.123. NE [REP8-104] initially commented that Dudgeon, East Anglia One and East Anglia THREE should also be included in the in-combination assessment. However, it further acknowledged that CRM for this species was not carried out for the above projects during their Examinations, and therefore this is not possible [REP9-057]. It therefore [REP9-046] agreed that the in-combination assessment includes all appropriate and publicly available collision estimates for other wind farms and that a conclusion of no AEoI for the little gull population at the Greater Wash SPA is appropriate on basis of in-combination collisions, based on the best available evidence.

ExA conclusion

- 6.7.124. We are content that an AEoI on little gull of the Greater Wash SPA can be ruled out from the project alone and in-combination with other plans or projects.

Common scoter – disturbance/displacement

- 6.7.125. The Applicant provided a figure showing Greater Wash SPA common scoter distribution and the offshore cable route, using the data presented in NE and JNCC (2016) [REP2-030]. The Applicant concluded that the offshore cable route does not overlap with any concentrations of common scoter [REP2-044 and REP4-040].
- 6.7.126. NE [REP8-104 and REP9-046] confirmed that the provision of the map allowed it to reach a conclusion of no AEoI for the project alone or in-combination.

ExA conclusion

- 6.7.127. We are content that an AEoI on common scoter of the Greater Wash SPA from disturbance/displacement can be ruled out from the project alone and in-combination with other plans or projects.

Haisborough, Hammond and Winterton SAC

- 6.7.128. The HHW SAC is designated for Annex I sandbanks which are slightly covered by seawater all the time and Annex I reefs. The offshore cable corridor passes through the site. The HRA Report [APP-045] confirms that pre-construction surveys⁶¹ would be undertaken to inform the approach to cable installation which would be detailed in the Cable Specification, Installation and Monitoring Plan⁶², to be submitted to and approved by MMO, prior to construction commencing.
- 6.7.129. It should be noted that whilst the Applicant had proposed mitigation measures in the application documents, during the Examination it acknowledged there is significant uncertainty relating to the HHW SAC, particularly for Annex I reef features due to its ephemeral nature. It explained that it is not possible to provide detailed method statements for construction prior to consent due to the long lead in times [REP7-039 and REP7-058]. Therefore, the Applicant proposed to secure mitigation in a single HHW SAC Site Integrity Plan (HHW SIP) [REP4-051] to be secured through Condition 9(1)(m) of the Transmission DMLs (Schedules 11 and 12 of the dDCO). The HHW SIP would set out the process for agreeing with the MMO and NE all works and mitigation measures associated with offshore cable installation and maintenance within the HHW SAC, to ensure there would be no AEOI on the HHW SAC.
- 6.7.130. The HHW SIP is relevant to all of the discussions during the Examination and further details are provided in the sections below.

Cable protection

- 6.7.131. The precise requirement for cable protection was not determined at the time of application, therefore the effects of a realistic worst-case scenario of up to 10% of the offshore export cable length within the HHW SAC [APP-045] have been assessed. The Applicant [REP1-007] explained that cable protection may either be installed during construction or operation/maintenance phases, up to the total volume that had been assessed.
- 6.7.132. The proposed use of cable protection is relevant to impacts on both the sandbank and reef features of the HHW SAC. NE [RR-106, REP1-088, REP2-004, REP4-062 and REP6-032] considered that the addition of hard substrate would be incompatible with conservation objectives for Annex I sandbanks and reef features and repeatedly advised that it should not be used within the SAC. It advised that cable protection has the potential to cause long-term impacts and/or permanent changes to interest features (including a loss of feature extent), could potentially be displaced over time and is unlikely to aid in the recovery of the HHW SAC site (which NE considered to be in unfavourable status). EIFCA [RR-180] also stated

⁶¹ As required under Conditions 13(2)(a) of the Transmission DMLs (Schedules 11 and 12 of the dDCO) [APP-005].

⁶² As required under Condition 14(1)(g) of the Generation Asset DMLs (Schedules 9 and 10) and Condition 9(1)(g) of the Transmission DMLs (Schedules 11 and 12) of the dDCO [APP-005]

that cable protection is not desirable and not in keeping with the East Marine Plans.

- 6.7.133. NE [REP2-036, REP4-062 and REP6-032] and the MMO [REP6-030] advised that it is not appropriate to deploy cable protection over the lifetime of the project as repeated activities could prevent recovery of Annex I reef and that cable protection should be restricted to the construction phase. The Applicant subsequently agreed that cable protection would not be deployed during operation and maintenance, save in relation to cable protection already deployed which may be moved or extended to the extent assessed in the ES [REP7-040].
- 6.7.134. NE was also concerned that there is no evidence that rock armouring can be removed, to which the Applicant [REP2-003 and REP4-040] responded that it had assessed impacts from cable protection as being permanent on the basis that it is unlikely to be practicable to lift cable protection and that there could be unacceptable health and safety implications in doing so. The two parties agreed [REP8-064] there are currently no alternative cable protection measures that can be decommissioned, but that the HHW SIP [REP9-029] committed to reviewing the potential for cable protection to be decommissioned should options become available.
- 6.7.135. During the Examination, the Applicant submitted an interim cable burial study [REP7-026] which identified that at least 95% of the offshore export cable length within the HHW SAC would be capable of burial. Therefore, the worst-case length of cable protection required within the HHW SAC was reduced from 10% to 5% of the total [REP6-004]⁶³. It confirmed that a final cable burial risk assessment study would be agreed and commissioned as part of the cable specification, installation and monitoring plan.
- 6.7.136. NE [REP6-032] welcomed the Applicant's effort to reduce cable protection, although still considered this to be a significant amount within a designated site. NE considered that the permanent loss of Annex I habitats could be considered as an AEoI [RR-106] and that cable protection would result in permanent habitat loss [REP2-036, REP4-062, REP6-032, REP8-104 and REP9-046].

Annex I sandbanks

Construction phase impacts

- 6.7.137. The Applicant [APP-045] states that the maximum area of temporary physical disturbance (9.5km²) due to cable laying operations equates to 1.4% of the sandbanks and 0.6% of the total area of the HHW SAC [APP-045]. The Applicant concludes there would be no AEoI to sandbanks on the basis that:

⁶³ As stated in the outline HHW SAC Site Integrity Plan [REP9-028], to be secured through Condition 9(l)(m) of Transmission DMLs (Schedules 11 and 12) [REP9-007]

- the overall form and function of any particular sandwave, or the SAC sandbank system as a whole, would not be disrupted;
- the cable corridor is in an active and highly dynamic environment which is conducive for the development and maintenance of sandbanks;
- sediment would remain within the boundaries of the SAC so there would be no significant change to sandbank extent, topography and sediment composition; and
- once re-deposited on the seabed, the sediment would immediately re-join the local and regional sediment transport system and would not affect the form or function of the sandbanks or the sandbank communities which are adapted to natural disturbance and are therefore likely to be able to recover within a few tidal cycles.

6.7.138. Throughout the Examination, the Applicant [REP7-039, REP7-035, REP8-064 and REP9-038] maintained that there would be no AEoI to the sandbank feature.

6.7.139. However, NE explained that its (unpublished) condition assessment of the SAC concluded that the sandbank feature is in unfavourable condition and needs to be restored; therefore, the Applicant should demonstrate the risk levels of their operations to the restoration of the extent and distribution of the sandbank [REP1-088]. It acknowledged [RR-106 and REP1-049] the mobile nature of the sandbank system would make it more likely to recover from changes in structure than less mobile ones. NE [RR-106, REP1-049, REP1-007 and REP2-036] considered that there was limited survey data within the HHW SAC and noted that as the proposed construction techniques are new, their level of success is uncertain. It considered there to be a lack of evidence for timescales of recovery of sandwaves from sandwave clearance or evidence that the sandbank system would remain undisturbed. It had concerns in relation to the overall impacts to the form and function of the Annex I sandbank and sandwave fields and their potential recoverability. Furthermore, NE [REP8-104] advised that greater clarity was required as to where dredging sediment is to be disposed.

6.7.140. The MMO [RR-186 and REP1-044] also did not agree that the SAC would remain undisturbed from sandwave levelling.

6.7.141. NE also had concerns over potential repetitive impacts to the same area and feature over different installation phases [REP2-036]. However, the Applicant confirmed [REP4-040] that cables would not be installed at the same location, therefore there would be no repeated disturbance of the same footprint during construction and sandwave levelling is not expected for cable maintenance.

6.7.142. The Applicant [REP2-031 and REP9-038] noted that the biological communities of the site are relatively species poor as a result of the highly dynamic sediment environment, therefore cable installation works and the small scale of cable protection would not significantly alter the community.

- 6.7.143. Whilst the Applicant and NE [REP5-007 and REP9-046] agreed that the physical processes of Annex I sandbanks in the HHW SAC has the potential to recover from construction activities, within the range of natural variation, NE [REP8-104] was of the opinion [REP8-104] that the proposed 5% cable protection would result in persistent habitat loss, to which the Annex I sandbank feature has high sensitivity.
- 6.7.144. As noted above, the Applicant proposed the HHW SIP during the Examination to provide the framework to agree installation methods (including cable protection) and sediment disposal methods and locations. Condition 9(1)(m) of the Transmission DMLs (Schedules 11 and 12 of the rDCO) would ensure that works cannot commence until the MMO is satisfied that the HHW SIP provides such mitigation as is necessary [REP8-104 and REP9-038].
- 6.7.145. At the close of Examination, the SoCG between the Applicant and NE [REP9-046] identified NE's residual concerns in relation to the overall impacts to the form and function of the Annex I sandbank fields and their potential recoverability. However, NE agreed [REP9-046] that the HHW SIP, along with Condition 9(1)(m), allows a conclusion of no AEoI to be made at the consent stage on the basis that it restricts the commencement of construction until such time that mitigation measures can be adopted to contain the effects of the development to those already assessed and to rule out an AEoI.
- 6.7.146. NE [REP8-104 and REP9-057] further advised that either Condition 9(1)(m) of the Transmission DMLs, or the HHW SIP should be amended to ensure the particle size of disposal material matches the disposal site within the HHW SAC, in order to ensure there is no change to sediment distribution or composition.

Operational phase impacts

- 6.7.147. The Applicant's HRA Report [APP-045] concludes that due to the short term, temporary nature and small scale of any maintenance works (if required) there would be no effect on the form or function of the sandbank systems or on the sandbank communities and therefore no AEoI. However, NE [REP1-088] noted there was no discussion of the need for future reburial or cable protection and that it had not seen any evidence that sandwave levelling ensures cables remain buried [RR-106, REP1-088 and REP2-036]. It highlighted that the Race Bank Offshore Wind Farm located in the Wash and North Norfolk Coast SAC had demonstrated cable installation is not a one-off activity [REP4-062].
- 6.7.148. The Applicant [REP7-039 and REP8-035] explained that the HHW SIP [REP7-026] aims for cables in the SAC to be buried below the mobile sandwaves to avoid or minimise re-burial during operation. The requirement for cable reburial during operation would depend on the installation strategy. It confirmed [REP2-031] that the worst-case scenario assessed for the operation and maintenance phase is based upon the potential for suboptimal burial in the absence of sandwave levelling.

- 6.7.149. NE subsequently agreed that an AEoI to sandbanks from physical disturbance during operation could be ruled out [REP8-104]. However, this conclusion was dependent on no cable protection being used at the ends of the cable repair sections which may be sub-optimally buried. The Applicant [REP9-038] confirmed that in accordance with the Offshore Operations and Maintenance Plan⁶⁴ [REP9-016], any new areas of cable protection required during maintenance would be subject to additional licensing.

Annex I reef

Construction phase impacts

- 6.7.150. The Applicant's HRA Report [APP-045] states that the space available for microsinning within the offshore cable corridor where it overlaps with the HHW SAC is approximately 1.05km along most of the route (2km corridor width), with up to 3.75km available in the 'dog-leg' area (4.7km corridor width). The Applicant therefore concludes that due to the width available for microsinning, it is likely that no physical disturbance would occur to reef in the offshore cable corridor. However, in the unlikely event of disturbance, the Applicant considers that *Saballeria spinulosa* shows good recoverability to disturbance, depending on the degree of impact and local conditions and that local environmental conditions are suitable for *S. spinulosa*.
- 6.7.151. NE [RR-106, REP1-088 and REP2-037] advised that reef in the HHW SAC is currently considered to be in unfavourable condition and that the Applicant should demonstrate that activities would not impede restoration. It advised that all reef within the SAC should be microsinning around and agreed that where Annex I reef could be avoided, there is a reduced risk of adverse effects from ground preparation and installation activities. However, NE considered that it is the Applicant's duty to demonstrate that microsinning can be achieved in order to rule out an AEoI [REP6-032].
- 6.7.152. NE [RR-106] considered there to be a high probability that reef could develop in the 'dog leg' area of the offshore cable corridor and therefore microsinning would not be possible. In particular, NE noted that reef extent could increase as a result of two proposed fisheries byelaws which could result in insufficient space for microsinning [RR-106, REP1-088, REP2-036, REP4-062 and REP6-032]. The first, is a byelaw being considered by the EIFCA which would likely straddle part of the cable route; this would close *S. spinulosa* reef areas to bottom-towed fishing and could therefore result in more extensive reef. The EIFCA [REP8-092] did not consider it appropriate to lay electricity cables within the reef and requested that all efforts be made to avoid Restricted Area 36 within the byelaw area.

⁶⁴ Secured through Condition 14(1)(j) of the Generation Asset DMLs (Schedules 9 and 10) and Condition 9(1)(j) of the Transmission DMLs (Schedules 11 and 12) within the dDCO

- 6.7.153. The second and larger area, also identified by the MMO [REP6-030], is a Defra Fisheries Management Area which would overlap with the cable corridor. NE [REP6-032] noted this would be a wide area which would be difficult to route around and therefore advised that as a minimum, areas of high confidence reef should be avoided in their entirety and that cable protection should be excluded within the management area. NE also noted that allowing cable installation could slow or temporarily reverse the trajectory of any recovery resulting from the fisheries byelaw [REP4-062].
- 6.7.154. Furthermore, NE [RR-106] raised concerns with the Applicant's caveat of micro-siting around reef 'where possible' as there are no parameters to assess and agree what is 'possible'. The Applicant [REP1-007 and REP2-031] acknowledged that the area available for micro-siting could change prior to construction and explained [REP2-031] that 'where possible' is a necessary caveat to the mitigation.
- 6.7.155. Should micro-siting not be possible and the reef is temporarily disturbed, the Applicant and NE disagreed on the significance of effects. The Applicant's HRA Report [APP-045] concludes that given the small proportion of temporary disturbance and the high recoverability of reef, there would be no AEoI [APP-045 and REP1-007].
- 6.7.156. However, NE [RR-106, REP1-088 and REP4-062] raised concerns over the evidence presented to support the ability of reef to recover if impacted through cable installation. As noted above in this Chapter, it also recommended that cable protection should not be permitted anywhere within designated sites as it would result in a permanent change to reefs. It advised that a change of habitat is just as significant as loss of habitat, when that habitat is the designated feature [REP1-088]. NE further advised that the deposition of material or other alteration of surface sediment would be likely to lead to a persistent change to substrate which is not suitable habitat for mixed sediment Annex I reef communities [REP1-088]. It did not consider that establishment of *S. spinulosa* on artificial substrate is Annex I reef as designated because it is not replacement for reef on natural site sediment as set out at the time of designation.
- 6.7.157. NE advised that without removal of cable protection at decommissioning, the impacts are likely to persist and depending on the location may hinder the conservation objectives of the designated sites [REP1-088]. However, NE also stated [RR-106, REP4-062 and REP6-032] that there is no empirical evidence of successful decommissioning where the habitat is returned to its pre-impact state and that it is not possible to rule out an AEoI. Furthermore, it advised [REP4-062] that it is not appropriate to trade one Annex I habitat for another⁶⁵; therefore, it cannot be considered a benefit to the site if one feature is lost (eg sandbanks) and another is gained (eg reef).

⁶⁵ ECJ Briels judgement: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62012CC0521&from=EN>

- 6.7.158. The Applicant [REP1-007, REP2-003 and REP2-031] stated that *S. spinulosa* reef is ephemeral and opportunistic so can be expected to recover/recolonise within the range of natural variation. It considered that, once the disturbance has ceased, *S. spinulosa* could once again settle and form reef aggregations, including on cable protection, therefore the recovery potential of the SAC would not be limited. It noted [REP8-064] that post-construction surveys at Thanet Offshore Windfarm found a wider distribution of reef aggregation categorised as moderate patchy growth and dense growth compared to pre-construction surveys; less damage to reef where recorded (partially attributed to reduction in bottom fishing activities as a result of OWF presence); and that although there was a small decline of reef shortly after construction, these were found to be recovering five years after construction.
- 6.7.159. The Applicant suggested [REP3-004] that if reef has recovered to such an extent that it is not possible to route two 30m swathes for Norfolk Vanguard and a further two for Norfolk Boreas through the 2 to 4km wide offshore cable corridor, then this would be an extremely large reef and the Applicant would propose that this would no longer require a restoration target. The Applicant considered that NE's position is disproportionate and inconsistent when NE also feel that micro-siting may not be possible due to significant recovery of reef following around 100 years of extensive and repeated commercial fisheries dredging. It considered that the same logic would apply to short term and localised cable installation activities and identified evidence referring to reef rather than individuals [REP2-004].
- 6.7.160. Furthermore, the Applicant cited studies supporting the assertion that cable protection is suitable habitat for Annex I reef communities [REP2-003 and REP8-064] and maintained that *S. spinulosa* reef would provide the same benefits in terms of biodiversity, regardless of what it is growing on [REP3-004]. The Applicant also highlighted [REP7-039, REP7-059 and REP8-064] that the large priority area within the proposed Defra byelaw area extensively tracks existing pipelines and that *S. spinulosa* is found on an existing pipeline within the SAC. It considered that any reef, regardless of what it is growing on, would have the same effect on biodiversity and cited publications which state *S. spinulosa* reef is not sensitive to habitat change and that substrate is not the critical factor for *S. spinulosa* recruitment.
- 6.7.161. The Applicant noted that NE was seeking complete avoidance of Annex I reef. It explained that in the unlikely event there is not sufficient space to do so, the HHW SIP would require the route through reef which would result in the least temporary disturbance to be subject to further assessment and agreement with the MMO in consultation with NE that the HHW SIP provides the necessary mitigation. The Applicant considered that if avoidance is not possible, cable installation works would be a localised and temporary disturbance to a large reef. If this could not be agreed, construction could not commence and the onus would be on the Applicant to consider alternative solutions in consultation with NE and the MMO. If a solution cannot be agreed, the Applicant would need to

consider a DCO variation application or a Marine Licence application. [REP7-039 and REP7-064].

- 6.7.162. At the close of Examination, the SoCG between the Applicant and NE [REP9-046] showed a number of matters not agreed in relation to impacts to reef; NE considered that micro-siting may not be possible and that it had limited confidence in the ability of reef to recover and it continued to advocate that reef should be avoided and that cable protection would result in permanent loss of habitat. However, it agreed that the Outline HHW SIP [REP7-026] and then superseded by [REP9-028] combined with Condition 9(1)(m) of Schedules 11 and 12 allows a conclusion of no AEoI to be made at the consent determination stage.

Operational phase impacts

- 6.7.163. In relation to the operational phase, the Applicant's HRA Report [APP-045] explains that the maximum disturbance area for cable reburial activities within the SAC has been estimated as 100,000m² per cable over the life of the project (6.8% of the total area of the SAC). It considers that *S. spinulosa* is most frequently found in disturbed conditions and shows good recoverability to disturbance and the area affected would be a very small extent of the total area of the SAC. Therefore, the Applicant concludes no AEoI.
- 6.7.164. However, NE noted that reef could be repeatedly impacted during construction and then again by cable repair/reburial during operation, which would limit the reef's ability to recover due to repeated impacts [REP2-036 and REP8-104]. It advised that operation and maintenance activities should either be excluded from within the site (with the option to apply for separate Marine Licence at a later date) or be sufficiently restricted as repeated operations and maintenance activities could result in continued disturbance and prevent recovery of Annex I reef. It also highlighted the potential for reef to establish across the cable corridor post-installation which could be affected during operation and maintenance cable remediation activities [RR-106].
- 6.7.165. The Applicant explained that any maintenance works would be localised (less than 0.001% of the total SAC area (1,468km²) at any one time) and less than that of construction, which the reef would have already been shown to recover from [REP4-040 and REP8-064]. The Applicant also agreed that cable protection would not be deployed during operation and maintenance, save in relation to cable protection already deployed which may be moved or extended to the extent assessed in the ES [REP7-040]. Furthermore, the Applicant noted [REP8-064] that the HHW SIP outlines the process for agreeing maintenance activities with the MMO in consultation with NE to ensure there is no AEoI.
- 6.7.166. At the close of Examination, and as already noted above in this Chapter, NE had agreed that the HHW SIP combined with Condition 9(1)(m) of the Transmission DMLs allows a conclusion of no AEoI to be made at the consent determination stage [REP9-046].

In-combination effects

- 6.7.167. The Applicant's in-combination assessment was restricted to Norfolk Boreas as no other projects/plans are considered to have the potential to affect the HHW SAC. The Applicant's assessment [APP-045] notes that installation of the Norfolk Boreas export cables would likely follow that of Norfolk Vanguard with no temporal overlap. The spatial footprint of installation works for both Norfolk Vanguard and Norfolk Boreas together is likely to be double that of Norfolk Vanguard alone as a worst-case scenario; although some elements of the seabed preparation may overlap and would therefore reduce the overall combined footprint.
- 6.7.168. In relation to sandbanks, the Applicant concludes that there would not be enough time for sandwaves levelled for Norfolk Vanguard to migrate into the area to be levelled for the Norfolk Boreas project; therefore, there should be no additional impact on the sandbanks due to the in-combination effect of both projects.
- 6.7.169. With regard to reef, the Applicant's HRA Report explained that the worst case scenario reflects reef extending across the full width of the offshore cable corridor, but nowhere else beyond the corridor. It considered that in reality, if reef has extended across the cable corridor, it would likely be a section of a much larger reef and therefore the proportion of temporary disturbance would be significantly smaller.
- 6.7.170. The Applicant [APP-045 and REP8-064] concluded there would be no AEoI from Norfolk Vanguard and Norfolk Boreas in-combination.
- 6.7.171. Although NE [REP1-088, REP2-036 and REP8-104] acknowledged that impacts would be temporary and spatially separate, it was concerned about the implications of the site being in unfavourable condition for 10+ years and that impacts occurring to the same sandbank from may hinder recoverability of the feature over a longer period.
- 6.7.172. At the close of Examination, the SoCG between NE and the Applicant [REP9-046] agreed that in-combination impacts with Norfolk Boreas must be considered when developing the HHW SIP. The Outline HHW SIP [REP9-028] requires consideration must be given to Norfolk Boreas to ensure mitigation solutions are compatible for both projects.

ExA conclusion

- 6.7.173. The SoCG between the Applicant and NE [REP9-046] showed agreement that the cable specification, installation and monitoring plan gives the MMO and their advisors the opportunity to input to the cable laying plan including the cable route and potential for micrositing.
- 6.7.174. We are satisfied that where micrositing can be achieved, there would be no AEoI to the reef feature of the HHW SAC.
- 6.7.175. NE agreed an AEoI can be excluded at the pre-consent stage. The MMO [REP9-045 and REP9-055] deferred the conclusions to NE in relation to AEoI, but it queried whether it is possible to rule out AEoI at the

consenting stage. The MMO considered that a worst-case scenario can be assessed as permission is not dependent on other projects. It had concerns with deferring assessment to post-consent as it would put increased and unwanted pressure on the regulator and stakeholders in trying to progress an already consented wind farm whilst still enforcing regulations. [REP6-030, REP7-071 and REP9-055].

- 6.7.176. In considering the worst-case scenario of reef developing across the cable corridor and micrositings not being possible, we consider the Applicant has provided a persuasive argument that should reef be unavoidable, this would indicate that reef does indeed have a high recovery rate and that reef cover would be of such an extent that the restore conservation objective would no longer be necessary. Should this be the case, we consider that a small temporary impact to the reef would not result in an AEoI and that reef would be able to quickly recover.
- 6.7.177. Similarly, we are satisfied that the small area of sandbanks to be temporarily affected by cable installation would be able to recover, such that there would not result in an AEoI from these activities.
- 6.7.178. NE's maintained position that cable protection is not appropriate with the SAC relates to both reef and sandbanks and is acknowledged. We welcome the Applicant's commitment through the Outline HHW SIP [REP9-028] to minimise the use of cable protection (from 10% to 5% of the cable length within the HHW SAC). We also note that Condition 9(1)(m) of the Transmission DMLs place a further duty on the Applicant to agree the need, type, sources, quantity, distribution and installation method of cable protection with the MMO, in consultation with NE, through the HHW SIP. With these measures in place, we consider that the impact to both reef and sandbanks of the HHW SAC has been sufficiently reduced to an extent that we do not consider the integrity of the site would be adversely affected.
- 6.7.179. We have based our conclusions on the best available scientific evidence which we consider points to a finding of no AEoI, but which lacks the confidence from the SNCB. We are mindful that the uncertainties regarding the precise cable route, the need for cable protection and the extent of reef at the time of construction makes the worst-case scenario potentially over precautionary. We consider that the submission of a Final HHW SIP based on [REP9-028] provides additional precaution to our conclusions of no AEoI as it provides a mechanism to assess and mitigate the impact of the Proposed Development to the HHW SAC based on the latest available information prior to construction, including pre-construction surveys. We are content that this would address impacts to both sandbanks and reef over the lifetime of the Proposed Development alone and in-combination effects with impacts from Norfolk Boreas which would also be considered as stipulated in the Outline HHW SIP.
- 6.7.180. The SIP approach does mean, as the Applicant has stated, that the entire project could not proceed if the MMO, in consultation with NE, do not agree that the HHW SIP provides such mitigation as is necessary. NE [REP9-046] has advised that this may indeed be the case should the

commitments presented in the Outline HHW SIP (including the 5% reduction of cable protection) be considered insufficient, in which case the Applicant would need to consider a DCO variation or a Marine Licence Applicant. As indicated by the MMO [REP8-102], this is not an ideal situation in terms of certainty for a developer, but is one that the Applicant has proposed.

- 6.7.181. In relation to NE's proposed amendments of Condition 9(1)(m) in regard to the need for the particle size composition of material to be disposed of being within 95% similarity to that of the disposal location, this was not contained in the Applicant's preferred DCO [REP9-007] nor in the ExA's Schedule of Changes to the dDCO [PD-017]. However, the ExA considers that it is necessary to specify this and consequently it has been included in the form of Condition 3(1)(g) of Schedules 11 and 12 of the ExA's rDCO. This is a matter which the SoS may wish to consult the Applicant on.

Southern North Sea SAC (SNS SAC)

- 6.7.182. The SNS is designated for harbour porpoise and the Proposed Development is located within both the SNS SAC winter and summer habitat areas. The SNS SAC was designated in February 2019, although it had previously been a candidate SAC. The HRA Report [APP-045] concludes there would be no AEoI on harbour porpoise of the SNS SAC from the project alone or in-combination with other projects.
- 6.7.183. Whilst NE agreed there would be no AEoI from the project alone [RR-106, REP1-049, REP3-051], it raised concerns with the in-combination assessment. WDC and TWT raised concerns about effects from the project alone and in-combination with other projects. These concerns are detailed below.

Mitigation measures

- 6.7.184. The Applicant proposed a Marine Mammal Mitigation Protocol (MMMP) to provide mitigation for the potential to kill or injure harbour porpoise during construction. The MMMP would detail the proposed mitigation measures to reduce the risk of any physical or permanent auditory injury during all piling operations, for example soft-start and ramp-up, mitigation zones and acoustic deterrent devices. The MMMP would be agreed with the MMO in consultation with the relevant SNCBs⁶⁶ and would be based upon best available information and methodologies. A draft MMMP was provided in [APP-037].
- 6.7.185. Whilst WDC and TWT raised concerns over effectiveness of soft-start piling to reduce potential effects on marine mammals [REP1-123 and

⁶⁶ Secured through Condition 14(1)(f) of the Generation Asset DMLs (Schedules 9 and 10) and Condition 9(1)(f) of the Transmission DMLs (Schedules 11 and 12) within the dDCO

REP1-124], NE confirmed that it considered that the proposed soft-start protocol would be fit for purpose [REP4-062].

- 6.7.186. WDC and TWT also had concerns regarding the effectiveness of some of the proposed noise mitigation methods and considered that proven noise reduction measures should be used [RR-013, REP1-123 and REP1-061]. WDC [REP1-124 and REP4-074] was concerned that the MMMP and SNS SAC Site Integrity Plan (SNS SIP) were little more than a commitment to use mitigation methods and only included mitigation from Joint Nature Conservation Committee (JNCC) guidelines, which had not been updated for a number of years and which it considered lack scientific evidence [RR-172, REP1-061 and REP4-074]. WDC recommended that the MMMP and SNS SIP include a commitment to using only proven mitigation measures and recommended the use of bubble curtains. It stated that without knowing which methods would be used it is misleading to conclude there would be no AEoI as there is no scientific evidence to back up this claim [REP1-124]. TWT [REP4-072] advised that more evidence is required to give confidence on the effectiveness of mitigation measures and that where evidencing is lacking, monitoring should be put in place.
- 6.7.187. The Applicant [REP1-007 and REP8-046] explained that it is not possible to provide further evidence at this stage as there has not yet been a need to adopt measures in windfarm construction to date, therefore they have not been proven deliverable. It considered the SNS SIP approach provides a framework for agreeing mitigation measures based on the best available information at the time.

Noise thresholds/limits

- 6.7.188. The Applicant assessed the effects of noise disturbance based on thresholds recommended by the JNCC and NE (2016) that:
- displacement of harbour porpoise should not exceed 20% of the seasonal component of the SAC area at any one time and/or on average exceed less than 10% of the average seasonal component of the SAC area over the duration of that season; and
 - the effect of the Proposed Development should be considered in the context of the seasonal components of the SAC, rather than the SAC as a whole.
- 6.7.189. NE [RR-106] considered that the best available metric to ensure noise generated from piling does not exceed that assessed is to include a maximum hammer energy within the design parameters on the DCO and the DMLs; the maximum hammer energies were therefore incorporated into the dDCO at D2 [REP2-018].
- 6.7.190. However, WDC and TWT did not agree with the SNCB guidance on noise management, stating that the area-based thresholds are not underpinned by evidence [REP1-061, REP1-062, REP1-123, REP4-072 and REP8-110]. Therefore, they did not agree with the Applicant's conclusions and considered that the spatial and temporal thresholds would be breached. Both parties requested that limits were placed on

noise levels during construction [RR-013 and RR-172]; TWT noted that this approach is based on scientific data and is used in Germany, the Netherlands and Belgium and should be applied to ensure consistency across the SNS [RR-172, REP3-063 and REP4-072].

- 6.7.191. NE [REP4-062] confirmed that the management approach has been agreed by the SNCBs and has been used by the Regulator in HRAs and within the current Review of Consents (RoC) process⁶⁷ and that it was content with its use in the assessment.

In-combination noise disturbance

- 6.7.192. The HRA Report [APP-045] assesses a worst-case scenario of five offshore wind farms using either single or concurrent piling at the same time. It identifies the potential for more than 20% of the SNS SAC summer and winter areas to be affected based on the maximum potential overlap for single and concurrent piling; or for more than 20% of the SNS SAC winter area to be affected. However, the Applicant considers it unlikely that concurrent piling would occur at all five sites assessed at the same time.
- 6.7.193. The Applicant proposed a SNS SIP to set out the approach to deliver any project mitigation or management measures to reduce disturbance to harbour porpoise from the in-combination effects of underwater noise with other plans or projects during the construction period. Construction would not be allowed to commence until the MMO is satisfied that the plan provides the necessary mitigation⁶⁸. An In Principle SNS SIP was provided in [APP-041].
- 6.7.194. NE [REP9-046] recognised that the worst-case scenario assessed by the Applicant is unrealistic, but that it does remain probable that two or more projects may wish to undertake noisy activities at the same time. It agreed [REP1-049] that the draft SIP provided an appropriate framework to agree mitigation measures and that the scope of the measures within the In Principle SIP [APP-041] were appropriate; although it noted that as there has not yet been a need to adopt these measures, they have not been proven to be deliverable [REP1-088]. It also considered [RR-106, REP2-036 and REP9-046] there remained a lack of clarity on how SIP conditions would ensure that mitigation would be put in place to prevent exceedance of the SNCB thresholds for disturbance and that a mechanism would need to be developed by the regulators to ensure continuing adherence to the SNCB thresholds as multiple SIPs are developed over time.
- 6.7.195. The MMO [REP1-084 and REP4-059] considered a SIP could be used to demonstrate how in-combination underwater noise impacts would be mitigated to ensure that it would not cause an adverse effect. However,

⁶⁷ Regarding the Southern North Sea SAC, required under regulation 33 of the Conservation of Offshore Marine Habitats and Species Regulations 2017.

⁶⁸ Secured through Condition 14(1)(m) of the Generation Asset DMLs (Schedules 9 and 10) and Condition and 9(1)(l) of the Transmission DMLs (Schedules 11 and 12) of the dDCO.

it stressed that this would require accurate project timetables and noted that there is currently no mechanism in place for a regulator to control the scheduling of piling operations [REP1-084]. At Deadline 7, it confirmed [REP7-071] that the SNS SAC regulation group had laid out terms of reference and advised that there would be stakeholder consultation on the proposed mechanism in quarter 3 of 2019, with an intention to provide the response in quarter 4 of 2019.

- 6.7.196. The MMO also explained [REP4-059] that it has enforcement powers to issue a stop notice or to vary, suspend or revoke a licence. It envisages that construction plans would be assessed by the Applicant in-combination with other projects to ensure there would be no breach of proposed thresholds prior to submission to the MMO. It advised [REP6-030 and REP7-071] that if the consent decision occurs prior to a mechanism being defined, it could vary the DML; however, the current SIP requirement is likely to be sufficient to allow any mechanism to be fully incorporated without need for variation.
- 6.7.197. The MMO [REP8-102] confirmed it believes the condition provides the best mechanism at this time to protect impedance of the conservation objectives. However, it noted the RoC process is not complete and that some mitigation may be required to change as a result; a matter recognised within the SIP.
- 6.7.198. The WDC and TWT agreed with the principle of a SIP, but did not consider the In Principle SNS SIP [APP-041] contained enough information to give certainty of no AEoI beyond reasonable scientific doubt. TWT [REP1-123] advised that more evidence is required to detail how effective the mitigation outlined in the In Principle SNS SIP would be, and that noise modelling should be undertaken to demonstrate the degree of noise reduction which could be achieved through mitigation. It expressed concerns that there are no mechanisms in place to ensure regulation and compliance of the SIP; that monitoring to understand the effectiveness of mitigation to be delivered through the SIP was not adequate; and that UXO clearance should be included in the DMLs and the SIP conditions due to a lack of baseline data on the number and location of UXO clearances [REP8-110].
- 6.7.199. The Applicant stated that the In Principle SIP format follows that agreed for other consented projects and is based on information currently available, however it confirmed that the final SIP would be updated based on the final design and taking into account best scientific evidence at the time [REP1-004, REP2-003, REP2-004 and REP7-058]. It noted [REP4-038] that the RoC has identified a SIP as the most appropriate mechanism to manage the mitigation of potential AEoI of the SNS SAC and provided an explanation of the options to manage in-combination effects and mitigation for harbour porpoise [REP4-038 and REP4-040]. It provided an updated SNS SIP [REP9-026] at D9 to take into account comments received from NE and the MMO.
- 6.7.200. By the close of Examination, NE and the Applicant [REP9-046] agreed the draft SNS SIP provides an appropriate framework to agree mitigation

measures for effects on the SNS SAC with SNCBs and the MMO prior to construction. They also agreed that a strategic mechanism is required from the Regulator and that the current requirement for a SIP is sufficient to allow any mechanism to ensure disturbance can be limited to an acceptable level to be fully incorporated without need for a variation. However, NE advised [REP8-104] that an AEoI from in-combination impacts cannot be ruled out until this mechanism is in place.

Monitoring

- 6.7.201. The Applicant proposed monitoring of the noise generated by the installation of the first four piled foundations of each piled foundation type to be installed in the event that driven or part-driven pile foundations are proposed.
- 6.7.202. NE [RR-106 and REP1-088] and the MMO [RR-186, REP3-046 and REP4-059] both recommended that the Applicant should cease piling if monitoring shows significantly different impacts to those assessed, until appropriate increased mitigation and/or monitoring can be agreed and implemented [RR-106 and REP2-037]; this was supported by the MMO [REP4-059]. WDC similarly advised that development should be halted if monitoring identifies negative impacts [REP1-124]. This concern was addressed by the Applicant with a revision to Condition 19(3) of the Generation Assets DMLs (Schedules 9 and 10) and Condition 14 of the Transmission DMLs (Schedules 11 and 12) [REP4-027].
- 6.7.203. TWT [REP8-110] was concerned this Condition would verify predictions of noise modelling but would not provide any information on the noise emitted during the lifetime of the construction period and that no conditions are included to monitor harbour porpoise activity during construction.

ExA Conclusion

- 6.7.204. At the close of Examination, a number of matters remained unresolved in relation to impacts on harbour porpoise of the SNS SAC. We note the residual concerns from WDC and TWT over the effectiveness of the Applicant's proposed mitigation. Nevertheless, we are satisfied that through the MMMP and SNS SIP, the Applicant will use the most appropriate measures for the Proposed Development based on best knowledge, evidence and proven available technology at the time of construction.
- 6.7.205. As discussed in the Marine Mammals Chapter of this Report, the Applicant responded to concerns from WDC [REP4-074] and NE [REP4-062] and amended the dDCO during the Examination to require the production of a SIP and MMMP in the event that piled foundations are used, rather than only in the event of driven or part-driven piles. The MMMP was also updated to reflect this [REP9-020]. However, we are concerned that the wording of the relevant Conditions still may not fully account for all possible future construction techniques. Consequently, for the sake of clarity we have proposed an amendment in our rDCO. See Section 5.2 and Table 9.2 of this Report for further details.

- 6.7.206. We also note WDC and TWT's concerns over the use of noise thresholds and limits. Whilst other countries may place noise limits on the construction phase, we agree with the views of the Applicant that at present there is a lack of evidence about how noise limits could be implemented effectively. We do not consider there to be a persuasive argument for us to depart from the advice of NE, as our SNCB, that its current approach is appropriate. Indeed, we enquired in [PD-012] as to whether there existed any further relevant scientific evidence or justification that casts doubt on the existing SNCB approach. No additional evidence was provided.
- 6.7.207. TWT has requested that UXO clearance be included within the DMLs, however, we are content the Applicant has assessed these impacts and that these activities would be the subject of a separate marine license application. We do not see any compelling reason for UXO clearance to be included in the DMLs.
- 6.7.208. In terms of effects on harbour porpoise of the SNS SAC from the Proposed Development alone, we note and agree with NE's advice that an AEoI from the project alone can be excluded.
- 6.7.209. In relation to in-combination effects, we acknowledge that noise from other developments are outside the Applicant's control. We have not been provided with any persuasive evidence that the in-combination effects assessed by the Applicant would result in an AEoI. However, we note the uncertainty regarding timescales for future projects and therefore the potential for construction times to overlap.
- 6.7.210. We are satisfied that the draft SNS SIP [REP9-026] and Condition 14(1)(m) of the Generation DMLs (Schedules 9 and 10) and Condition and 9(1)(l) of the Transmission DMLs (Schedules 11 and 12) provide the most appropriate mechanism to limit in-combination noise to an acceptable level. We accept that the SIP cannot be finalised until project design is determined but consider there to be sufficient detail on potential mitigation measures at this stage, whilst granting the Applicant a flexible approach until the extent and nature of mitigation becomes clear.
- 6.7.211. We consider that as the final project design evolves, it is likely that better scientific evidence may become available to influence later activities in a positive sense. It also includes a mechanism whereby should new scientific information indicate an outcome beyond that which was assessed in the AA, there should be a review of the position and potentially changes made to the Proposed Development.
- 6.7.212. We welcome the changes made by the Applicant during the Examination in relation to monitoring of underwater construction phase noise. In relation to TWT's suggestion to monitor noise over the entire construction period the ExA does not consider that this would be necessary at the outset. However, we note the procedures detailed in Table 4.4 of the Offshore In Principle Monitoring Plan (IPMP) [REP9-018] which requires survey programmes and methodologies for the purpose of monitoring to

be submitted to the MMO for its written approval. Furthermore, the results of the initial noise measurements must be submitted to the MMO within six weeks of the installation of the first four piled foundations. The Offshore IPMP contains the provision that if in the opinion of the MMO, in consultation with SNCBs, the assessment shows different impacts to those assessed in the ES or failures of mitigation then piling activities must cease until an update to the MMMP and further monitoring requirements have been agreed. Consequently, the ExA considers that this would provide an appropriate level of additional safeguarding in regard to construction noise monitoring.

Paston Great Barn SAC

Barbastelle bats

- 6.7.213. The HRA Report [APP-045] explains that approximately 11ha of habitat used by Barbastelles of the Paston Great Barn maternity colony is anticipated to be isolated by hedgerow removal during the construction phase. This represents approximately 0.6% of the home range of the Paston Great Barn maternity colony. The Applicant considers that once replanted hedgerows have reached maturity (expected to be 3-7 years following planting on completion of construction), they would provide an improved commuting and foraging habitat for bats. The Applicant concludes that following mitigation, these small-scale, temporary effects would not result in an AEoI.
- 6.7.214. However, NE [RR-106, REP1-088 and REP2-037] considered that there was insufficient information to assess the significance of the loss and severance of foraging and commuting habitat for Barbastelle bats over a construction period of at least seven years. It considered that the HRA Report did not recognise the heterogeneity of hedgerows and how they may be used by Barbastelle bats [REP1-049]. It requested more information about each hedgerow to be removed and woodland to be fragmented, plus an estimate of recovery timescales [RR-106]. NE also suggested a requirement for a mitigation plan prior to hedgerow removal and that hedgerows should be monitored for seven years or until they have reached the same or better quality than before they were removed [RR-106, REP2-036 and REP6-032].
- 6.7.215. The Applicant provided a clarification note [REP1-049] which confirmed that 130m of hedgerow within 5km of Paston Great Barn SAC would be temporarily removed during construction; 82m of which support foraging Barbastelle bats. The Applicant reiterated that detailed bat and hedgerow mitigation measures are captured within the OLEMS [APP-031] and secured through Requirement 24 of the draft DCO (Ecological Management Plan), which would require consultation with NE prior to discharge. Nevertheless, NE [REP2-036] advised that the development has the potential to affect the conservation objective to "*Maintain the presence, structure and quality of any linear landscape features which function as flight lines*".
- 6.7.216. The Applicant submitted an updated version of the clarification note [REP6-013] which included additional information regarding the extent of

available alternative foraging habitat, the location of habitat potentially temporarily fragmented from construction and the location of hedgerows temporarily affected during construction. Further to a review of the note, NE [REP6-032 and REP7-075] confirmed that it had withdrawn its concerns and agreed with the Applicant's assessment of no AEoI of the Barbastelle population of the Paston Great Barn SAC.

- 6.7.217. However, NE [REP6-032 and REP7-075] still advised that an OLEMS/EMP should include the improvement of hedgerows either side of the section to be removed and that the mitigation plan should be in place for 7 years or until hedgerow has fully recovered. The Applicant updated section 7.3.3 of the OLEMS [REP7-008], however NE [REP8-104] noted that a full hedgerow mitigation plan was not submitted, therefore it could not provide further comment.
- 6.7.218. Matters related to the Paston Great Barn SAC were noted as agreed in the final SoCG with NE [REP9-046].

ExA conclusion

- 6.7.219. On the basis that measures for hedgerow mitigation and monitoring have been adequately secured, we are content that an AEoI on Paston Great Barn SAC can be ruled out from the project alone and in-combination with other plans or projects.

Norfolk Valley Fens SAC and The Broads SAC

Changes to groundwater flow

- 6.7.220. The Applicant's assessment [APP-045 and REP7-035] explains that Booton Common Site of Special Scientific Interest (SSSI), one of the five component SSSIs of the Norfolk Valley Fens SAC, has a functional connection to the onshore project area. The qualifying features present at Booton Common are water-sensitive and reliant on the Blackwater Drain to maintain their structure and function. The proposed onshore cable route is not located within the Blackwater Drain, but trenched crossing techniques are proposed at two of its tributaries. Following construction at these locations, reinstatement of the trench would be conducted to the pre-construction depth of the watercourse and the dams removed. As water flow would be maintained and given the distance of these sites from Booton Common, the Applicant concludes that effects from trenching works at these locations upon the Blackwater Drain would be minimal.
- 6.7.221. The Broad Fen, Dilham SSSI is one of the 28 component SSSIs of The Broads SAC. The onshore cable route would cross the North Walsham and Dilham Canal approximately 9.9km upstream of The Broads SAC using trenchless crossing techniques. The Applicant concludes that as no work will take place within the watercourse, no potential effects are anticipated. [APP-045]
- 6.7.222. However, NE [RR-106] considered that there was insufficient evidence to assess impacts of changes in groundwater flow to the qualifying features

present at Booton Common SSSI (in relation to Norfolk Valley Fens SAC) and that no information was provided on the water supply mechanism for The Broads SAC. It advised that further information be obtained from the Environment Agency (eg WetMec data showing water supply mechanisms for all the component sites and/or EA's groundwater modelling) to undertake a detailed appraisal of groundwater effects at both Norfolk Valley Fens SAC and The Broads SAC.

- 6.7.223. The Applicant's first clarification note regarding groundwater dependent designated sites [REP1-049] confirmed that the Norfolk Valley Fens SAC and The Broads SAC are predominantly surface water fed, but also partly groundwater fed from the underlying chalk aquifer. It concluded that there is no direct pathway between construction works and the underlying chalk aquifer; therefore a detailed groundwater assessment was not considered necessary [REP1-007]. However, NE [REP1-088 and REP2-036]) noted WetMec data had not been provided and considered that there remained insufficient information to provide a substantive response.
- 6.7.224. NE [REP1-007 and REP4-040] also noted that the H3 cable route passes about 360m to east of Booton Common and that construction periods may overlap. As such, it suggested that the in-combination assessment for Norfolk Valley Fens SAC be revisited.
- 6.7.225. The Applicant's revised clarification note [REP6-013] included a conceptual model of groundwater flows using WetMec data with respect to Norfolk Valley Fens SAC (Booton Common SSSI component) and The Broads SAC (Broad Fen, Dilham SSSI component), to provide further clarity regarding groundwater flows for the site. The note explained that that the onshore cable trenching and trenchless crossing activities associated with the onshore project construction phase would remain at least 7m above the chalk aquifer at any point and would be separated from the chalk aquifer by the boulder clay aquiclude. As such, the Applicant concluded there is no pathway between the onshore project area and any of the designated sites. The Applicant did not consider that an in-combination assessment with H3 was required [REP1-007 and REP4-040].
- 6.7.226. NE [REP9-046] subsequently confirmed that it was satisfied with the information supplied and that the design of all watercourse crossings, diversions and reinstatement would be submitted to and approved by the relevant planning authority in consultation with NE, prior to the commencement of each stage of the onshore transmission works (as secured through Requirement 25 of the dDCO [REP9-007]). It agreed that there would be no AEoI on Norfolk Valley Fens SAC and The Broads SAC either alone or in-combination with H3.

ExA conclusions

- 6.7.227. We are content that an AEoI on Norfolk Valley Fens SAC and The Broads SAC from changes to groundwater flow can be ruled out from the project alone and in-combination with other plans or projects.

River Wensum SAC, Norfolk Valley Fens SAC and The Broads SAC

Sediment management and reinstatement/restoration

- 6.7.228. NE raised concerns about the level of detail within the CoCP regarding measures to safeguard the River Wensum SAC, Norfolk Valley Fens SAC and The Broads SAC in relation to sediment control and reinstatement of all work areas [RR-106 and REP1-088]. The Applicant responded with a note [REP6-013] to clarify its approach to onshore construction works within functional floodplains and identify mitigation measures to minimise the risk of sediment or pollutant release in the River Wensum and Penny Spot Beck. It clarified its approach to grassland reinstatement and captured these commitments in the outline CoCP [REP7-006].
- 6.7.229. The Applicant and NE [REP7-075 and REP9-046] subsequently confirmed it had withdrawn its concerns in relation to the River Wensum SAC. It agreed that the site-specific management plans required for each watercourse crossing (Requirement 25 of the dDCO) would include site specific details regarding sediment management and pollution prevention measures and would lead to no AEoI on the Broads SAC and Norfolk Valley Fens SAC.

ExA conclusion

- 6.7.230. We are content that the Applicant has demonstrated that its measures to control sediment and for reinstatement/restoration would not result in an AEoI on the River Wensum SAC, Norfolk Valley Fens SAC and The Broads SAC from the project alone and in-combination with other plans or projects. We are also satisfied that Requirement 25 of the dDCO provides adequate means to secure any necessary mitigation.

Broadland SPA and Ramsar site, Breydon Water SPA and Ramsar site and North Norfolk Coast SPA and Ramsar site

Non-seabird migrants – collision mortality

- 6.7.231. As noted in the screening section of this Chapter, the Applicant provided collision estimates for the Norfolk Vanguard project alone and cumulatively with the adjacent East Anglia THREE Offshore Wind Farm for non-seabird migrants in [REP3-038]. This was revised at Deadline 6 [REP6-022] in response to NE's comments [REP4-062].
- 6.7.232. [REP6-022] predicted collision mortality of no more than 1 individual per year and that background mortality would not increase by more than 1% and would therefore be undetectable against natural variation. The Applicant therefore concluded no AEoI of the SPA populations of Breydon Water SPA, Broadland SPA or North Norfolk Coast SPA from the project alone, or in-combination with East Anglia THREE.
- 6.7.233. NE [REP7-075] considered that a 99.5% avoidance rate for Bewick's swan was not appropriately precautionary and advised a 98% avoidance

rate. However, it noted that none of the predicted impacts (using the avoidance rates it considered to be appropriate) equated to 1% or more of baseline mortality for either the most recent 5 year mean site figures from WeBS or the citation figures (for the project alone or in-combination with East Anglia THREE). It therefore agreed an AEoI can be excluded from collision risk from Norfolk Vanguard alone for all relevant non-seabird migrant qualifying features for both the project alone and in-combination, notwithstanding some methodological issues [REP8-104].

ExA conclusion

- 6.7.234. We are content that an AEoI on Broadland SPA and Ramsar site, Breydon Water SPA and Ramsar site and North Norfolk Coast SPA and Ramsar site from collision mortality to non-seabird migrants can be ruled out from the project alone and in-combination with other plans or projects.

Broadland SPA and Ramsar site

Impacts to ex-situ habitats

- 6.7.235. As noted in Section 6.5 of this Chapter, the Applicant agreed to screening in a LSE from impacts to ex-situ habitats to swan and geese species of the SPA and Ramsar site.
- 6.7.236. Further to discussions with NE, the Applicant committed to undertaking an assessment of historic cropping patterns post-consent to support its original conclusions that qualifying swan and geese species of the Broadland SPA and Ramsar site are not present in the onshore project area's zone of influence. It confirmed that as an alternative to this assessment, or in the event that it cannot be concluded that qualifying swan and geese species of the Broadland SPA and Ramsar site are not present, then mitigation would be undertaken if intrusive works take place in the zone of influence over the winter period (October – March, inclusive). This mitigation would involve ensuring that land within the zone of influence has suitable feed for wintering birds and is maintained throughout winter, either through setting aside suitable land or through creating feeding areas by laying sugar beet crops within the Order limits or subject to landowner agreements. This approach was included in the OLEMS [REP9-014].
- 6.7.237. NE subsequently agreed that there would be no AEoI for features of the Broadland SPA/Ramsar swan and geese species [REP9-046 and [REP9-057].

ExA conclusion

- 6.7.238. We are content that an AEoI on Broadland SPA and Ramsar site from impacts to ex-situ habitats can be ruled out from the project alone and in-combination with other plans or projects.

6.8. CONSIDERATION OF ALTERNATIVES, IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST (IROPI) AND COMPENSATORY MEASURES

- 6.8.1. The ExA asked the Applicant, at the Environmental Matters ISH on 24 April 2019 and in its Rule 17 Request for Further Information [PD-018], what consideration had been given to the application of alternatives, compensatory measures and imperative reasons of overriding public interest (IROPI) under the HRA process, in relation to any of the features for which an AEoI has been identified or which remains uncertain.
- 6.8.2. The Applicant [REP7-039 and REP9-038] confirmed that it did not intend to submit any information as it considered that an AEoI could be excluded for all European sites. The Applicant was of the view that if there were unresolved matters after the Examination had closed, the Applicant would be asked to provide such information by the Secretary of State.
- 6.8.3. NE [REP8-104] advised that AEoI cannot be ruled out for several sites and recommended that the Applicant took into consideration alternatives, compensation and IROPI now rather than delaying to post-Examination.

6.9. SUMMARY OF ExA's CONSIDERATION OF HRA MATTERS

Introduction

- 6.9.1. We are satisfied that the Applicant has considered all European Sites that could potentially be affected by the Proposed Development. No additional European Sites were identified for consideration by any IP during the Examination.
- 6.9.2. As detailed in Section 6.5 of this Chapter, we recommend an AA is undertaken by the SoS for the sites and features detailed in both Tables 6.2 and 6.3 of this Chapter.
- 6.9.3. At the close of Examination, the Applicant remained of the view that an AEoI could be ruled out for all conservation features of all European sites. Our conclusions are summarised below.

Offshore ornithology

- 6.9.4. Taking into account the submissions received during the Examination, we recommend that the SoS can reach the conclusion of no AEoI to the Alde-Ore Estuary SPA, FFC SPA, Greater Wash SPA and the Outer Thames Estuary SPA from the construction, operation and decommissioning of the Proposed Development alone. These conclusions are dependent on the final DCO securing measures to minimise disturbance to RTDs in Condition 14(1)(d)(vi) of the Generation Asset DMLs and Condition 18 of the Transmission DMLs. We note that these conclusions are agreed by the Applicant, NE and the RSPB.

6.9.5. However, it is evident that disagreements remain in terms of in-combination effects. By the close of Examination, the Applicant had provided/updated the following in-combination assessments:

FFC SPA:

- gannet collision risk;
- gannet displacement risk;
- gannet combined displacement and collision risk;
- kittiwake collision risk;
- razorbill displacement risk;
- guillemot displacement risk;
- puffin displacement risk.

Alde Ore Estuary SPA:

- LBBG collision risk.

Greater Wash SPA:

- RTD displacement risks during construction and operation;
- little gull collision risk; and

Outer Thames Estuary SPA:

- RTD operational displacement.

6.9.6. We welcome the Applicant's efforts to reduce mortalities from the project alone and therefore in-combination with other plans or projects as a result of the changes to the Proposed Development. We understand that NE advised the Applicant to raise the draught height at the pre-examination stage. However, these changes were not submitted until late in the Examination, resulting in limited opportunity for us to fully scrutinise the resultant assessments and the positions of IPs.

6.9.7. As detailed above, we do not consider that we have been presented with sufficient information to agree there would be no AEoI to:

- LBBG of Alde-Ore Estuary SPA from in-combination collision mortality;
- kittiwake of FFC SPA from in-combination collision mortality;
- gannet of FFC SPA from in-combination collision and operational displacement mortality combined;
- razorbill and guillemot of FFC SPA from in-combination operational displacement mortality; and
- seabird assemblage of FFC SPA from in-combination collision mortality, in-combination operational displacement mortality, and in-combination collision and operational displacement mortality combined.

6.9.8. The above conclusions in relation to gannet, razorbill and guillemot would only apply when H3 is included in the assessment. These species also comprise part of the seabird assemblage of FFC SPA. However, because kittiwake is also part of the seabird assemblage, we conclude that an AEoI to the seabird assemblage of FFC SPA cannot be ruled out irrespective of whether H3 is included or not.

- 6.9.9. For the avoidance of doubt, we recommend that the SoS can reach the conclusion of no AEoI to the Greater Wash SPA and the Outer Thames Estuary SPA from in-combination effects.
- 6.9.10. The Applicant has not presented any information in relation to alternatives, IROPI and compensation. We consider that this information, and consultation on it with NE, is necessary in order for the SoS to grant consent for the Proposed Development.

Benthic habitats

- 6.9.11. In relation to the HHW SAC, we recommend that an AEoI can be excluded from the project alone and in-combination with other plans or projects subject to:
- pre-construction surveys being secured through Conditions 13(2)(a) of the Transmission DMLs (Schedules 11 and 12) in the final DCO;
 - the certification of the HWW SIP [REP9-028] and the inclusion of Condition 9(1)(m) of the Transmission DMLs (Schedules 11 and 12) within the final DCO;
 - the certification of the Offshore Operations and Maintenance Plan [REP9-016] and the inclusion of Condition 14(1)(j) of the Generation DMLs (Schedules 9 and 10) and Condition 9(1)(j) of the Transmission DMLs (Schedules 11 and 12) within the final DCO; and
 - inclusion of Condition 14(1)(g) of the Generation DMLs (Schedules 9 and 10) and Condition 9(1)(g) of the Transmission DMLs (Schedules 11 and 12) for a Cable Specification, Installation and Monitoring Plan within the final DCO.

Marine Mammals

- 6.9.12. We are satisfied that an AEoI of Humber Estuary SAC, Winterton-Horsey Dunes SAC and The Wash and North Norfolk Coast SAC and HHW SAC can be ruled out from the project alone and in-combination with other plans or projects. This is subject to the certification of the SNS SIP [REP9-026] and the MMMP [REP9-020], alongside the inclusion of Conditions 14(1)(f) and 14(1)(m) of the Generation Asset DMLs (Schedules 9 and 10) and Conditions 9(1)(f) and 9(1)(l) of the Transmission DMLs (Schedules 11 and 12) within the ExA's rDCO.

Onshore sites

- 6.9.13. We recommend that an AEoI of all onshore European sites can be excluded from the project alone and in-combination with other plans or projects subject to the certification of the OLEMS [REP7-008] and the CoCP [REP9-010] and the inclusion of Requirements 20 (Code of construction practice), 24 (Ecological Management Plan) and 25 (Watercourse crossings) within the ExA's rDCO.
- 6.9.14. For the avoidance of doubt, in relation to the features of the European sites which were not specifically addressed by the Applicant (see paragraphs 6.5.27 to 6.5.28 of this Chapter), we note that NE has agreed to no AEoI for these sites. We are content to apply this conclusion

to all relevant SPA qualifying features/Ramsar criterion that we consider should be screened in, but which were not specifically addressed in the Applicant's matrices or HRA Report.

Consultation

- 6.9.15. We note that NE [REP8-104] was of the view that the RIES does not adequately discharge the requirement for the Competent Authority to consult the relevant SNCB on its AA and then to have regard to the SNCB's advice. This is on the basis that the RIES did not draw conclusions where there is no agreement between the Applicant and NE, and as significant material relating to the issues was submitted at the same time as the publication of the RIES. We consider it is for the SoS, as the Competent Authority, to determine whether further consultation is necessary.

7. CONCLUSIONS ON THE CASE FOR DEVELOPMENT CONSENT

7.1. INTRODUCTION

- 7.1.1. The ExA has considered the issues that were raised by all IPs in their various representations. They were examined during the Hearings and through the ExA's written questions. The policy context and the ExA's findings on individual matters are set out in the preceding Chapters 4 to 6. The overall planning balance is summarised in Section 7.3 below.
- 7.1.2. In relation to the granting of development consent, the ExA has reached a number of conclusions, as set out in the following Sections. As a result of the findings which the ExA has made in relation to HRA matters in the field of offshore ecology, and their significance in terms of the overall decision-making process, it is appropriate to consider these matters first.

7.2. CONCLUSIONS IN RELATION TO HABITATS REGULATIONS

Offshore Ornithology

- 7.2.1. As discussed in Chapter 6, the ExA has concluded that we have not been presented with sufficient information to enable a conclusion that there would be no AEOI to:
- LBBG of Alde-Ore Estuary SPA from in-combination collision mortality;
 - kittiwake of FFC SPA from in-combination collision mortality;
 - gannet of FFC SPA from in-combination collision and operational displacement mortality combined;
 - razorbill and guillemot of FFC SPA from in-combination operational displacement mortality; and
 - seabird assemblage of FFC SPA from in-combination collision mortality, in-combination operational displacement mortality, and in-combination collision and operational displacement mortality combined.
- 7.2.2. The above conclusions in relation to gannet, razorbill and guillemot would only apply when H3 is included in the assessment. These species also comprise part of the seabird assemblage of FFC SPA. However, because kittiwake is also part of the seabird assemblage, we conclude that an AEOI to the seabird assemblage of FFC SPA cannot be ruled out irrespective of whether H3 is included or not.
- 7.2.3. In relation to some of the above findings, it has been necessary to make a distinction about whether to include the H3 effects in any assessment. This distinction had been made by SNCBs due to concerns they had with some of the ornithological data which had been submitted for that project. However, in terms of any in-combination assessment the ExA is obliged to consider all of the plans and projects that are currently operational and those which have been submitted for examination.

- 7.2.4. The Applicant has not presented any information in relation to alternatives, IROPI and compensation as confirmed in [REP8-074]. Consequently, as information regarding alternatives, IROPI and compensation is not available at this present time and on the basis that the ExA has concluded that an AEoI cannot be ruled out, then the ExA has no alternative other than to recommend to the SoS as the Competent Authority that the DCO should not be made pursuant to regulations 63 and 64 of the Habitats Regulations.

Conclusions on other Habitats Regulations Matters - Offshore Ecology

- 7.2.5. The ExA further concludes that, subject to the requirement to submit a final HHW SIP for approval, there would be an appropriate mechanism to ensure that there would be adequate mitigation to ensure that there would not be an AEoI on the HHW SAC. In order to approve the submitted HHW SIP the MMO would have to be satisfied that there would be no AEoI on the HHW SAC. Should the MMO, in consultation with NE, refuse its approval then the Proposed Development would not be able to proceed. This is a position which has been accepted by the Applicant.
- 7.2.6. In terms of the effect of the Proposed Development on the harbour porpoise feature of the SNS SAC, the ExA accepts the Applicant's argument that the effects of construction operations, from the project alone and in-combination, can be adequately mitigated through the submission of a final SNS SIP.

Other conclusions on non-HRA offshore ecology matters which go towards the final planning balance

- 7.2.7. In terms of the considerations concerning offshore ornithology at the individual species and EIA level the ExA concludes that the following moderate adverse effects (which are considered to be significant in EIA terms) are all matters which weigh against the Order being made:
- RTD operational displacement mortality (project alone and cumulatively);
 - guillemot and razorbill cumulative operational displacement mortality;
 - cumulative collision mortality to kittiwake and GBBG; and
 - cumulative collision and operational displacement mortality combined to gannet.
- 7.2.8. The consideration of cumulative effects on offshore ornithology is complicated by the fact that there are currently three applications for offshore windfarms, ie Norfolk Vanguard, H3 and Thanet Extension, all being considered at broadly the same time. These three applications need to be considered on their own merits and there are differences between these projects; for example, in terms of their locations and the number/size/layout of turbines proposed. In addition, it may well also be the case that there are some differences in the information that has been submitted for each Examination.

- 7.2.9. In terms of impacts on marine mammals and benthic ecology, the Examination primarily focussed on the harbour porpoise feature of the SNS SAC and the Annex I reef and sandbank habitats within the HHW SAC. However, there are other marine mammal species and areas containing Annex 1 reef and sandbanks that could potentially be affected by the Proposed Development, but which are not covered by the Habitats Regulations. In terms of the impact on these species and habitats, we have found there to be the potential for some harm to arise. However, such harm would be capable of being adequately mitigated through, for example, micrositing of the offshore cable and the measures that would need to be agreed in the final SNS and HHW SIPs, and in the final MMMP.
- 7.2.10. The ExA considers that the transboundary impacts in ecological terms of the Proposed Development would be acceptable but as the French Government did not respond to the updated screening matrices, this is a matter that the SoS may wish to pursue further.

Offshore Ecology matters and compliance with NPSs and national policy

- 7.2.11. The HRA sets out a specific statutory test to be applied to all assessments. Applying that test the ExA has concluded that AEoI cannot be ruled out for certain sites and features which, in turn, has led to no alternative other than a recommendation that the DCO should not be made.
- 7.2.12. NPS EN-1 confirms that, prior to granting a DCO, the ExA/SoS must consider under the Habitats Regulations whether the project may, either alone or in combination with other plans or projects, have a significant effect on a European site or on any site to which the same protection is applied as a matter of policy.
- 7.2.13. The ExA takes that view that the term AEoI in the Habitats Regulations is at least equivalent to a 'significant effect' in NPS EN-1. It follows therefore, that the finding that AEoI cannot be ruled out as set out above, translates to a finding that the ExA cannot be satisfied that there would not be a significant effect on a European site or any site which has the same protection. In addition to this, the ExA has concluded that there would be moderate adverse effects in EIA terms on certain identified matters pertaining to offshore ornithology.
- 7.2.14. We have made a finding that an in-combination AEoI cannot be ruled out in HRA terms. This means that the Proposed Development would not be in conformity with NPS-EN1. We have also concluded that there is a moderate adverse effect, which is considered significant in EIA terms. This also means that the Proposed Development would not be in conformity with NPS-EN1 in this regard.

7.3. CONSIDERATIONS IN THE OVERALL PLANNING BALANCE

- 7.3.1. As reported above, the ExA conclusion that an AEoI cannot be ruled out and the lack of information on alternatives, IROPI and compensation

leads the ExA to conclude that it cannot recommend that the DCO is made.

- 7.3.2. In circumstances where the SoS concludes that these matters should not preclude development coming forward then the ExA has considered all of the other material considerations in the following planning balance.

Introduction

- 7.3.3. The Principal Issues are set out at Section 4.2 of this Report and the ExA has made findings in relation to these matters.
- 7.3.4. The in-principle need for the development, in terms of the provision of renewable energy is accepted. There is a strong need case for renewable energy generation infrastructure when the tests in NPS EN-1 and NPS EN-3 are applied. The ExA acknowledges that the production of energy from a renewable source accords with NPS policy, provides a clear public benefit and weighs heavily in favour of the Proposed Development.
- 7.3.5. The ExA has set out its observations in relation to the consideration of alternatives and the provision of an offshore ring main. The development of an onshore ring main to facilitate the bringing onshore of electricity generated offshore is something which appears to require co-ordination between projects. As such it is not an alternative which can be considered within the confines of the examination of a single offshore wind farm project. The ExA is satisfied that the application process for this project has adequately described the reasonable alternatives which have been considered and disregarded and that the approach to the final selection is justified.

The Heritage Balance

- 7.3.6. The Proposed Development would lead to less than substantial harm, thus failing to preserve the setting of the Grade I Listed St Andrews Church, Bradenham. In addition, there would be less than substantial harm to, thus failing to preserve, the character and appearance of the CCA. Paragraph 5.8.15 of NPS-EN1 states that any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss.
- 7.3.7. In weighing this harm, the ExA concludes that the public benefits of the Proposed Development, including economic benefits and renewable energy generation including its climate change benefits, would be significant. When set against the less than substantial harm identified above, these public benefits would clearly outweigh the limited harm to heritage assets.

The Overall Planning Balance

- 7.3.8. The effect on the historic environment falls to be considered within the overall planning balance and the ExA has set out above its conclusions in relation to harm to heritage assets. The ExA further concludes that the

effects on the heritage assets and their significance, in this particular case, whereby there is localised and less than substantial harm should carry limited weight in the overall planning balance.

- 7.3.9. In terms of landscape effects there would be no significant effects upon landscape character or visual amenity other than for limited localised effects on visual amenity in the vicinity of the substation. Significant localised landscape character effects, as a result of the new substation and substation extension, would reduce to moderate after 10 years. Along the onshore cable route and at landfall any effects would be temporary and localised. Subject to the mitigation measures to be secured through the Requirements, the ExA concludes that proposal would accord with the policy requirements of NPS EN-1 and EN-3 and would not cause material harm to key characteristics protected by relevant development plan policies.
- 7.3.10. In terms of onshore and offshore heritage assets any impact on onshore and offshore archaeology would be adequately addressed and mitigated through the measures secured in the DCO. Other than those harmful effects set out above there would be no impact to the setting and associated heritage significance of the remaining onshore and offshore heritage assets, including Salle Park, Happisburgh Lighthouse and Cottages and Bradenham Hall. There are also potential benefits in terms of the proposed mitigation contributing to a greater understanding of the onshore archaeological and cultural heritage resource and enhancements to CCA. However, these attract limited weight in the wider context of the scheme.
- 7.3.11. In relation to highways and transport matters the ExA concludes that all transport and traffic effects could be satisfactorily dealt with via the mitigation measures secured by the various Requirements within the ExA's recommended DCO. In circumstances where the H3 Project proceeds, the current proposed Highways Mitigation Scheme for Cawston is unacceptable in the eyes of the ExA. However, the ExA accepts that there is a reasonable expectation that an appropriate mitigation scheme could come forward to address or alleviate the cumulative traffic impacts in Cawston. The ExA would strongly recommend that the SoS indicates that a revised mitigation scheme is submitted. The recommended DCO contains a Requirement to secure a revised scheme.
- 7.3.12. In terms of noise and vibration the ExA concluded that the Applicant has adopted an appropriate and proportionate approach to assessing the noise and vibration characteristics of the Proposed Development, in accordance with section 5.11.4 of NPS EN-1. Whilst the Proposed Development would result in minor adverse impacts to some receptors during construction, these impacts would be appropriately mitigated and minimised in accordance with section 5.11.9 of NPS EN-1 and therefore attract limited weight in the overall planning balance.
- 7.3.13. The ExA concludes that air quality matters have been adequately and approximately assessed. The ExA is satisfied that air quality objectives would not be breached and that predicted pollutant concentrations would

be below the air quality objectives at all considered receptors. Adequate and appropriate mitigation arising from dust would be secured by the AQMP as part of the final CoCP secured by R20. In light of the above, the ExA concludes that air quality matters do not weigh against the Order being made. On the basis of the evidence before it, the ExA is satisfied the EMFs that would be produced if the development were to go ahead would remain well within the ICNIRP exposure guidelines in compliance with Section 2.10 of NPS EN-5.

- 7.3.14. The ExA has carefully considered the concerns surrounding ground contamination, including those concerns around the previous air crash site. For the reasons set out in Section 4.9 the ExA finds that any adverse impact associated with contamination or ground conditions would be adequately and appropriately mitigated by the wording of R20 and R21 within the dDCO and supporting certified documents. The ExA also concludes that the Proposed Development accords with Section 5.5 of NPS-EN1 and would not give rise to significant impacts or effects on coastal change. The ExA concludes that the requirements of NPS EN-1 have been met in relation to the assessment of flood risk and water resources and that these are not matters which weigh against the Order being made.
- 7.3.15. In terms of socio-economic impacts, the ExA has welcomed the commitment to a Skills and Employment Strategy and acknowledges its strategic potential to inspire and develop a local workforce contributing to sustainable economic growth. These are benefits which weigh in favour of the Proposed Development. The ExA concludes that potential impacts on tourism have not been firmly established by a strong evidential link.
- 7.3.16. Having regard to the wider land use considerations the ExA concludes that the Applicant has adequately assessed the direct and indirect effects on the existing use of the proposed site and the use, or planned use, of land in the vicinity for other types of development in accordance with NPS EN-1. Where the Project would replace the best and most versatile agricultural land we find this is justified in light of the substantial public benefits. The ExA has found no robust evidence that particular agricultural practices contribute to the quality and character of the environment or the local economy which would justify other than little weight being given to the loss of poorer quality agricultural land (grades 3b, 4 and 5) where this would occur due to the Proposed Development.
- 7.3.17. The policy considerations relative to onshore ecological matters described above have been complied with and the Assessment Principles set out in Part 4 NPS EN-1 have been followed, giving appropriate weight to designated sites and the effects of the Proposed Development, assessed cumulatively with other development. The process of excluding alternatives that were considered, and the mitigation proposed would avoid significant harm to biodiversity interests and be in line with the Government's biodiversity strategy.
- 7.3.18. The potentially significant effects to designated sites, habitats and species identified by the Applicant would be subject to mitigation

measures. The updated OCoCP and OLEMS provide a satisfactory basis on which the final versions of those plans would be agreed post-consent and secured within the dDCO [REP9-007]. The significant adverse residual effects that would remain after mitigation to hedgerows and bats, whilst significant over a temporary period, would reduce to non-significant over time as replacement hedgerows mature.

- 7.3.19. With mitigation measures in place, the Proposed Development would have no greater than minor impacts in relation to onshore ornithology.
- 7.3.20. The conclusions of no AEoI on all onshore European sites reached by the Applicant are agreed with NE. The ExA agrees that these conclusions are appropriate, and we confirm those findings in Chapter 6 of this Report.
- 7.3.21. The ExA examined the effects of the proposal upon commercial fishing operations within the wind farm array and concluded that there would be a minor adverse impact on commercial fishing interests when taken as a whole. This impact would be exacerbated should the proposed EIFCA and MPA byelaw areas become designated as this would reduce the zones available for fishing within the overall area.
- 7.3.22. However, we are not persuaded that all fishing would necessarily be curtailed within this area, but that would depend on the skippers of the individual vessels. We also conclude that, with the mitigation provided, the Proposed Development would not give rise to an unacceptable impact on shipping and navigation. In considering the potential negative effects of the Proposed Development we acknowledge that in fact some matters that are negative in regard to one area of interest could prove to be beneficial to another. This has been referred to by NE [REP8-104].
- 7.3.23. The aviation or other defence interests potentially affected by the Proposed Development, including cumulative impacts, have been adequately assessed. In accordance with NPS-EN1 realistic and pragmatic solutions to any conflicts have been identified and secured within the dDCO [REP09-007].
- 7.3.24. Subject to the addition of the recommended Condition 9(1)(m) subsection in the DCO, the ExA considers that the Proposed Development complies with the requirements of NPS EN-3 and is acceptable in regard to marine physical processes. Consequently, there are no outstanding issues in relation to this particular issue which would justify the DCO not being made.

Overall conclusions on the general planning balance

- 7.3.25. The ExA has already set out its recommendation for the reasons that it cannot recommend that the DCO is made on the basis of the evidence presented. In the event that the SoS is satisfied that the information on alternatives, IROPI and compensatory measures has been provided or in circumstances where the SoS concludes that there is no AEoI and

consequently these matters should not preclude development coming forward, then the ExA has conducted a general planning balance.

- 7.3.26. Many of the principal issues have been resolved to the satisfaction of the ExA or are capable of resolution subject to the recommended changes to the DCO. Excepting the offshore ecology matters, the ExA concludes that, in relation to all other matters, the Proposed Development would be in accordance with NPSs and national policy objectives. When these matters are taken into account the ExA concludes that, in a general planning balance the benefits of the scheme in terms of the large-scale generation of renewable energy and its contribution to sustainable development objectives substantially outweigh the limited harms which have been set out above.
- 7.3.27. In circumstances where the SoS concludes that the HRA considerations are not a barrier to development, the conclusion of the ExA is that, for the reasons set out and summarised above, development consent should be granted, subject to the incorporation of changes it has recommended to the DCO, as discussed in Chapter 9 below.

8. COMPULSORY ACQUISITION AND RELATED MATTERS

8.1. INTRODUCTION

- 8.1.1. The Applicant seeks powers contained in its preferred dDCO [REP9-007] for the compulsory acquisition (CA) of land, rights over land and related matters including temporary possession (TP). The Applicant's intention is to assemble land in its ownership and associated rights all comprised within the Order Land which it considers necessary to construct, operate and maintain the Project.

8.2. LEGISLATIVE REQUIREMENTS

- 8.2.1. Under section 122 PA2008 a DCO may only authorise compulsory acquisition if there is a compelling case in the public interest for the land or interest to be acquired compulsorily, and the land or interest:

- is required for the development to which the development consent relates; or
- is required to facilitate or is incidental to that development; or
- is replacement land which is to be given in exchange for the Order Land under sections 131 or 132 PA2008.

- 8.2.2. Section 123 PA2008 requires the Secretary of State to be satisfied that:

- the application for the order granting development consent included a request for compulsory acquisition of the land to be authorised; or
- all persons with an interest in the land consent to the inclusion of the provision; or
- the prescribed procedure has been followed in relation to the land.

- 8.2.3. It is for the Applicant to justify its proposals and to show how the above tests are satisfied for each parcel of land in respect of which CA or TP powers are requested.

- 8.2.4. The Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land was published by DCLG in September 2013 (CA Guidance). It advises that the Applicant should demonstrate that the land or interest to be acquired is no more than is reasonably required (paragraph 11), and that the public benefit must outweigh the private loss (paragraph 13).

- 8.2.5. Factors to be taken into account in the decision whether or not to include a provision in the DCO authorising the CA of land include (paragraphs 8-10 of the CA Guidance) whether:

- there is a need for the project;
- all reasonable alternatives to compulsory acquisition, including modifications to the project, have been explored;
- the proposed interference with the rights of those with an interest in the land is for a legitimate purpose and necessary and proportionate;

- the Applicant has a clear idea of how the land to be acquired is to be used;
- there is a reasonable prospect of the requisite funds for compulsory acquisition becoming available; and
- the purposes are sufficient to justify interfering with the human rights of those with an interest in the land affected, with particular reference to Article 1 of the First Protocol of the European Convention on Human Rights (ECHR).

8.2.6. The CA Guidance also advises (paragraphs 17, 18) that:

- an application must be accompanied by a Funding Statement that explains how the CA is to be funded and includes as much information as is available about how the project as a whole is to be funded and the business case; and
- the Applicant should demonstrate that adequate funding will be available for CA within the statutory time period.

8.2.7. Paragraph 32 of the CA Guidance states further that the Applicant should submit with the application a Statement of Reasons (SoR) that justifies the CA powers to be sought, explains why there is a compelling case in the public interest and gives reasons for the creation of new rights.

Temporary possession

8.2.8. Paragraph 2 of Part 1 of Schedule 5 to PA2008 provides for TP powers to be contained in a DCO. The PA2008 and CA Guidance do not contain the same level of specification and tests to be met in relation to the granting of TP powers as for the exercise of CA powers, since TP powers do not seek to acquire or alter interests in land on a permanent basis.

8.2.9. The exercise of TP powers generally is provided for in the Neighbourhood Planning Act 2017 (NPA2017). In recognition of the greater extent to which TP is now sought by undertakers, and of the extended duration for which TP powers are requested, the NPA2017 enhances the rights of Affected Persons (APs) who are subject to TP.

8.2.10. The enhanced rights ensure that APs subject to TP benefit from notice and relevant compensation equivalent or proportionate to those rights already available to APs subject to CA. At the close of the Examination the relevant provisions of NPA2017 had not come into force. However in any event the exercise of powers contained in a DCO would have the potential for interference with human rights as noted above.

8.3. THE REQUEST FOR POWERS OF CA AND TP

8.3.1. In its Cover Letter to the Planning Inspectorate accompanying the Application [APP-001] the Applicant states it is:

"seeking authority within the Order to acquire compulsorily land and interests and other related powers to support the delivery of the Project".

8.3.2. Accordingly the Application includes a request pursuant to section 123 PA2008 for the Secretary of State to grant powers of compulsory acquisition.

8.3.3. The Applicant requested CA and TP powers set out in the dDCO [APP-005] for land and rights over land. In relation to rights over land, the request related to new rights and to the acquisition of existing rights.

The Application documentation and supplementary documents

8.3.4. The Application was initially accompanied by the following documents, updated and supplemented where indicated:

- dDCO [APP-005]
 - updated at D2 [REP2-017]
 - updated at D4 [REP4-027]
 - updated at D7 [REP7-003]
 - updated at D8 [REP8-003]
 - final version at D9 [REP9-007] (the Applicant's preferred dDCO)
- Explanatory Memorandum (Ex Memo) to the dDCO [APP-006].
 - revised at D2 [REP2-020]
 - revised at D4 [REP4-030]
 - revised in an additional submission [AS-041]
 - final version submitted at D8 [REP8-005]
- Statement of Reasons (SoR) [APP-008]
 - revised at D2 [REP2-022]
 - final updated version submitted at D8 [REP8-008]
- Funding Statement [APP-009]
 - revised at D8 [REP8-009]
 - supplemented with Applicant's annual report and financial statements [REP-010]
- Book of Reference (BoR) [APP-010].
 - revised at D2 [REP2-024]
 - revised at D4 [REP4-032]
 - final updated version submitted at D8 [REP8-010].

8.3.5. The Applicant submitted a Schedule of Compulsory Acquisition (SCA) [REP1-011], and later versions as follows:

- updated at D4 [REP4-034]
- updated at D6 [REP6-003]
- final updated version submitted at D8 [REP8-058].

8.3.6. In addition the Applicant, in response to the ExA's FWQ 22.6 submitted a List of all formal Objections to the granting of compulsory acquisition powers [REP1-010] (Appendix 22.1 Annex A) (List of Objections).

8.3.7. The relevant land plans submitted with the application were:

- Offshore Land Plan [APP-013]
 - Onshore Land Plan [APP-012]
 - Special Category Land Plans [APP-014]
 - Onshore Crown Land Plan [APP-021]
 - Offshore Crown Land Plan [APP-022]
- 8.3.8. The Special Category Land Plans [APP-014], Onshore Crown Land Plan [APP-021] and Offshore Crown Land Plan [APP-022] remained unaltered at the close of the Examination.
- 8.3.9. Updates to the Offshore and Onshore Land Plans were submitted at D2 [REP2-011] and at DL4 as follows:
- (Part 1 of 4 – Sheets 1-12 [REP4-022])
 - (Part 2 of 4)– Sheets 13-26 [REP4-023]
 - (Part 3 of 4 – Sheets 27-40 [REP4-024])
 - (Part 4 of 4 – Sheets 41–42 [REP4-025])
- 8.3.10. The Land Plans distinguish among the following categories of interests and rights to be acquired thus:
- Permanent freehold acquisition (shaded yellow)
 - Permanent freehold acquisition (shaded red)
 - Acquisition of permanent new rights for access only (shaded green)
 - Temporary rights (shaded blue)
- 8.3.11. At the close of the Examination, the most up-to-date versions of the relevant application documents referred to above were as follows:
- The Applicant’s preferred dDCO [REP9-007]
 - Ex Memo [REP8-005]
 - SoR [REP8-008]
 - Funding Statement [REP8-009]
 - BoR [REP8-010]
 - SCA [REP8-058]
- 8.3.12. The above documents set out the land and rights sought to be acquired together with the justification for their inclusion in the DCO and the basis on which compensation would be funded. The revisions to the dDCO are dealt with more fully in Chapter 9. There were also changes to the Application which are described below within this Chapter.
- 8.3.13. The SoR [REP8-008] states that:
- "Negotiations are underway with each of the affected parties at the landfall, along the cable route and at the substation site, and the Applicant continues to seek agreement with all relevant parties. It cannot yet however be anticipated that all of the interests in the Order Land will be acquired within a reasonable commercial timeframe and as a result the compelling case in the public interest for the promotion of the Order, so as to permit the Project to proceed is, it is submitted, in existence and the private interests of the relevant landowners should not take precedence over the compelling public interest."*

- 8.3.14. The position at the end of the Examination is therefore that the Applicant seeks CA powers within its preferred dDCO [REP09-007] for both land and rights over land. In relation to rights over land, the request relates both to new rights and to the acquisition of existing rights.

Description of CA and TP powers sought

- 8.3.15. Articles 18 (CA of land) and 20 (CA of rights) of the dDCO contain the operative provisions relating to CA. Schedules 6 and 8 set out the several plots in the Order Land in which, respectively new rights may be compulsorily acquired, and of which possession may be taken temporarily. Schedules 6 and 8 set out the purpose for which the rights may be acquired or possession taken.

- 8.3.16. The relevant Articles in the Applicant's preferred dDCO [REP09-007] are:

- 18. Compulsory acquisition of land
- 19. Time limit for exercise of authority to acquire land compulsorily
- 20. Compulsory acquisition of rights
- 21. Private rights
- 22. Application of Compulsory Purchase (Vesting Declarations) Act 1981
- 23. Application of Part 1 of the Compulsory Purchase Act 1965
- 24. Acquisition of subsoil or airspace only
- 25. Rights under or over streets
- 26. Temporary use of land for carrying out the authorised project
- 27. Temporary use of land for maintaining authorised project
- 28. Extinguishment of private rights and restrictive covenants relating to apparatus removed from land subject to temporary possession
- 29. Statutory undertakers
- 30. Recovery of costs of new connections
- 42. Crown rights
- 43. Protective provisions

- 8.3.17. The following schedules to the Applicant's preferred dDCO [REP09-007] are relevant

- *Schedule 3 – Public Rights of Way to be temporarily stopped up;*
- *Schedule 4 – Streets to be stopped up;*
- *Schedule 6 – Land in which only New Rights etc., may be acquired;*
- *Schedule 7 – Modification of compensation and compulsory purchase enactments for creation of new rights;*
- *Schedule 8 – Land of which temporary possession may be taken*
- *Schedule 16 – Protective provisions*

- 8.3.18. Article 22, dDCO [REP9-007] applies the Compulsory Purchase (Vesting Declarations) Act 1981 with modifications. The normal statutory time period of five years for the exercise of CA powers would remain unaltered.

- 8.3.19. It should also be noted that Section 158 PA2008 would give the Applicant statutory authority to override easements and other rights.

TP Powers

- 8.3.20. The Applicant seeks TP powers to construct and maintain the Project under Articles 26 and 27. The land sought to be used temporarily is shown in blue on the Onshore Land Plans [REP4-022], [REP4-023], [REP4-024] and [REP4-025]. The plots are also listed in Schedule 8 dDCO [REP9-007] and described in the BoR [REP8-010] as subject to TP.

Summary

- 8.3.21. The Applicant sought CA powers within the original application [APP-001]. The requirements of section 123(2) PA2008 are therefore satisfied in respect of land (including new rights over land) over which CA was sought in the application.
- 8.3.22. Within its preferred dDCO submitted at D9 [REP9-007] the Applicant seeks CA powers for both land and rights over land, including additional land and rights. We discuss later in this Chapter the request for CA powers in respect of additional land as defined in Regulation 2(1) of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (as amended) (the CA Regulations). The requirements of sub-section (4) of section 123 PA2008 (the "prescribed procedure") are satisfied in respect of the additional land and rights.

8.4. THE PURPOSES FOR WHICH THE LAND IS REQUIRED

- 8.4.1. The SoR [REP-008] states at Paragraph 7.9 that:

"the Applicant's purpose in acquiring the Order Land compulsorily, if required, in accordance with the provisions of the 2008 Act, is to secure the lands and rights required to construct and then operate the Project within a reasonable commercial timeframe."

- 8.4.2. The purposes for which particular land and rights over land are required are described in the dDCO [REP9-007], the SoR [REP8-008] and the BoR [REP8-010]. CA and TP powers are sought only over the Order Land shown on the Onshore Land Plans [REP4-022][REP4-023][REP4-024][REP4-025].

- 8.4.3. The key onshore components of the Project are described in the SoR [APP-008]:

- the landfall site with associated transition bays to connect the offshore and onshore electrical cables;
- up to four cables for Norfolk Vanguard and up to four additional ducts for Norfolk Boreas;
- an onshore project substation to the east of the existing Necton National Grid substation;
- Extension works at the existing Necton National Grid substation and overhead line replacement works;

- landscaping and tree planting around the location of the onshore project substation, the existing Necton National Grid substation and other project elements;
- surface water management apparatus and works at the onshore project substation and the National Grid substation; and
- associated access tracks, running tracks, temporary site compounds and mobilisation areas

8.4.4. Documents submitted with or provided during the Examination that elaborate on the purposes for which CA and TP powers are sought include:

- ES Appendix 4.6 - Identification of Onshore Cable Corridor [APP-198]
- ES Appendix 4.7 - Cable Relay Station Location [APP-199]
- ES Appendix 24.4 - Cable Pull and Jointing Calculations and Access Routes [APP-259]
- ES Figure 4.8 - Onshore Cable Route [APP-366]
- Appendix 11.1 – Cable Route Info Sheet [REP1-018]
- D6 Submission - Figures showing the landfall HGV access route and the cable crossing point with Hornsea Project Three [REP6-005]
- D7 Submission - Technical Guidance Regarding Interaction between Cables and Parallel Assets [REP7-050]
- ES Chapter 5 - Project Description [APP-329]

The Order Land

8.4.5. The interests in the Order Land are described in the BoR [APP-010] and Land Plans [REP4-022, REP4-023, REP4-024 and REP4-025]. The numbers and letters indicated on the Land Plans are cross-referenced to the BoR [APP-010].

8.4.6. The SoR [APP-008] explains that the purpose of including land even where agreement has been reached is so that if minor interests such as easements, rights of way, or restrictive covenants are discovered that have not previously been negotiated away, powers are available to override those interests. Minor interests may be outstanding and not waived and would need to be extinguished or overridden by statutory process. The DCO would entitle the beneficiary of an interest to compensation but not to prevent the scheme from proceeding. Thus inclusion of a required interest in the BoR would assist if a negotiated agreement becomes difficult to enforce.

8.4.7. The key reasons why, as stated in the SoR [APP-008] different types of interest are required for different purposes of the Project are:

- **Freehold title** is sought where permanent control of the land is required or the interference with interests of existing owners would make it inappropriate to acquire a lesser interest. This applies in the location of the onshore substation, its associated compound and permanent landscaping.
- **Permanent new rights** are sought to install ducting, fibre optic cables and cables for the Project and ducting for Norfolk Boreas, and

access for installation and maintenance of the onshore infrastructure and associated works. This type of acquisition is proposed for most of the Order Land, comprising the onshore cable route and associated rights of access. The Applicant would acquire permanent rights only after TP is taken of the surface and subsoil of the relevant parts of the Order Land, and construction of the relevant part of the Project is complete.

- 8.4.8. For some plots cable installation is not required (as the cables and ducts will not need to be installed in these plots) but access to the onshore cable route is necessary. This would be mostly along existing routes. The Applicant has considered the location of existing farm gates and entrances to select entry points to the cable route easement from the public highway. For some points temporary running tracks would be required to facilitate cable pulling. The running track would be temporary but permanent rights of access are sought to use the same route for maintenance during the operational period and to secure a route for decommissioning. This would include the right to improve existing access routes and to lay down temporary hard standing.
- 8.4.9. Other than the rights of access detailed above there would be limited interference with the surface of the Order Land along these routes during operation.
- 8.4.10. Schedule 6 to the dDCO [REP9-007] sets out the Plots in the Order Land in which new rights may be acquired. In each case the right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project is specified and then particularised according to the type of works being undertaken which are:
- landfall;
 - access tracks
 - full cable rights
 - crossings required to be undertaken by trenchless crossing
 - minor crossings including highway
 - minor crossings including highway required to be undertaken by trenchless crossing
 - major crossings (railway, dual carriageway)
 - balancing pond works
 - connection into cable sealing ends
 - overhead line alterations
- 8.4.11. The individual plots according to their required purpose are:

a. Landfall Plots

01/01, 01/02, 01/03, 01/04, 01/05, 01/06, 01/07, 01/08, 01/09, 01/10, 01/11, 01/13, 01/17, 01/18, 01/19, 01/20, 02/01, 02/02, 02/03

b. Access tracks

Plots 01/14, 01/15, 01/16, 02/06, 02/07, 02/08, 02/10, 02/15, 02/17, 02/20, 03/03, 03/12, 04/04, 05/02, 05/05, 05/09, 05/11, 06/06, 06/08,

06/09, 06/11, 06/13, 07/02, 07/05, 07/07, 07/08, 07/12, 08/03, 08/04, 08/06, 08/12, 09/06, 09/09, 09/10, 09/13, 09/14, 10/07, 10/08, 10/09, 10/10, 11/02, 11/04, 11/07, 11/08, 11/11, 11/15, 12/01, 12/07, 12/09, 13/01, 13/04, 13/06, 13/07, 13/12, 14/01, 14/06, 14/11, 14/13, 14/16, 14/19, 14/22, 14/24, 15/08, 15/10, 15/12, 15/14, 16/01, 16/02, 16/04, 16/06, 16/07, 16/11, 16/14, 17/06, 18/06, 18/07, 18/09, 18/10, 18/11, 18/12, 19/01, 19/02, 19/03, 19/06, 19/08, 19/09, 20/04, 20/05, 20/08, 20/11, 20/18, 21/04, 21/05, 21/07, 21/09, 21/12, 21/13, 21/14, 21/15, 21/16, 22/02, 22/08, 22/09, 22/10, 22/11, 22/16, 23/02, 24/02, 24/03, 24/06, 24/07, 24/13, 24/14, 24/15, 24/17, 24/18, 25/01, 25/03, 25/05, 26/02, 26/04, 26/05, 26/06, 26/08, 26/10, 26/11, 26/13, 27/02, 27/04, 27/06, 27/13, 28/04, 28/05, 29/05, 29/07, 29/09, 29/10, 29/12, 30/02, 30/03, 30/04, 30/05, 30/06, 30/10, 30/11, 31/02, 31/03, 31/04, 31/05, 32/02, 32/03, 32/06, 32/09, 32/12, 32/13, 32/14, 32/15, 33/02, 33/03, 33/04, 33/12, 34/03, 34/04, 34/08, 34/09, 34/10, 34/11, 34/13, 35/11, 35/12, 36/02, 36/05, 36/06, 36/08, 36/09, 36/10, 36/11, 36/14, 36/15, 36/16, 36/17, 36/21, 37/05, 37/13, 37/14, 38/02, 38/03, 38/05, 38/06, 38/08, 38/12, 39/04, 39/05, 39/06, 39/07, 39/15, 39/16, 40/02, 40/03, 41/08, 41/10, 41/11, 41/13, 41/16, 41/22

c. Full cable rights

Plots 01/12, 02/04, 02/05, 02/09, 02/12, 02/14, 02/18, 02/21, 02/22, 02/23, 03/01, 03/02, 03/04, 03/05, 03/07, 03/08, 03/11, 03/13, 04/01, 04/02, 04/03, 04/05, 04/08, 04/10, 04/12, 05/01, 05/04, 05/06, 05/08, 05/10, 06/01, 06/03, 06/05, 06/14, 07/01, 07/04, 07/06, 07/10, 08/02, 08/08, 08/13, 08/17, 08/20, 08/23, 09/03, 09/07, 09/08, 09/12, 09/16, 10/02, 10/05, 10/14, 10/16, 10/17, 11/01, 11/05, 11/06, 11/09, 11/12, 11/14, 12/02, 12/04, 12/06, 13/02, 13/08, 13/10, 13/11, 13/13, 14/02, 14/05, 14/07, 14/09, 14/15, 14/20, 14/27, 15/02, 15/05, 15/07, 15/13, 15/15, 16/03, 16/08, 16/09, 16/10, 16/13, 17/01, 17/02, 17/03, 17/04, 17/07, 18/01, 18/04, 18/05, 18/08, 18/13, 18/14, 19/04, 19/07, 20/01, 20/03, 20/07, 20/10, 20/17, 20/20, 21/01, 21/08, 22/01, 22/04, 22/06, 22/07, 22/12, 22/13, 22/14, 22/15, 23/01, 23/05, 23/06, 23/08, 23/09, 23/11, 23/13, 23/14, 24/01, 24/04, 24/08, 24/11, 24/19, 25/02, 25/06, 25/07, 26/01, 26/03, 26/07, 26/09, 26/14, 26/15, 27/01, 27/07, 27/09, 27/11, 27/15, 27/16, 28/01, 28/03, 29/02, 29/08, 29/13, 30/01, 30/07, 30/08, 30/12, 31/01, 31/07, 31/09, 31/11, 31/13, 32/01, 32/05, 32/07, 32/08, 32/11, 33/01, 33/08, 33/14, 33/16, 34/01, 34/07, 35/01, 35/04, 35/05, 35/07, 35/16, 36/01, 36/04, 36/07, 36/12, 36/13, 36/18, 36/20, 37/09, 37/16, 37/18, 37/22, 38/01, 38/04, 38/09, 38/11, 39/01, 39/02, 39/09, 39/10, 39/12, 39/13, 40/01, 40/04, 40/11, 40/12, 40/14, 40/20, 40/23, 41/03, 41/14, 41/15

d. Crossings required to be undertaken by trenchless crossing

Plots 08/19, 35/13, 37/01, 37/07.

e. Minor crossings including highway

Plots 02/11, 02/13, 02/16, 02/19, 03/06, 03/09, 03/10, 04/09, 04/11, 05/03, 05/07, 06/02, 06/04, 06/10, 07/03, 07/09, 08/05, 08/07, 08/15, 08/21, 09/11, 09/15, 10/01, 10/15, 11/03, 11/10, 11/13, 12/03, 12/05, 13/05, 13/09, 14/03, 14/04, 14/12, 14/26, 15/11, 16/05, 16/12, 17/05,

18/02, 19/05, 20/02, 20/06, 20/09, 20/19, 21/03, 22/03, 22/05, 23/03, 24/05, 24/16, 25/04, 26/12, 27/05, 27/10, 27/14, 28/02, 29/11, 30/09, 31/06, 31/08, 31/12, 32/04, 32/10, 33/09, 33/11, 33/15, 34/05, 34/06, 35/06, 35/15, 36/03, 37/11, 37/17, 37/19, 37/21, 38/07, 39/03, 41/05

f. Minor crossings including highway required to be undertaken by trenchless crossing

Plots 08/10, 10/11, 12/10, 14/18, 27/08, 28/08, 35/03, 35/09.

g. Major crossings (railway, dual carriageway)

Plots 10/04, 15/03, 15/04, 23/07, 24/10, 33/06, 37/02, 37/08, 37/20

h. Balancing pond works

Plots 41/23, 41/24, 41/25

i. Connection into cable sealing ends

Plot 41/33

j. Overhead line alterations

Plots 40/26, 40/27, 40/31, 40/33a, 41/01a, 41/28, 41/30b, 41/30c, 41/30d, 41/40

- 8.4.12. The OCR over which rights to install cables, fibre optic cables and ducts are sought, would have a width of 45m, reflecting the space required for these installations including ducts for electrical cables for Norfolk Boreas.
- 8.4.13. Schedule 8 dDCO [REP-007] lists Plots scheduled for TP powers. It includes plots scheduled for later permanent acquisition of new rights, and plots available for temporary possession only. Where use of land is required only temporarily the affected land is shown coloured blue on the Onshore Land Plans [REP4-022, REP4-023, REP4-024 and REP4-025].
- 8.4.14. Powers of TP of land are sought for two purposes:
- during construction, where plant, equipment and other apparatus will need to be laid down but no cables or other apparatus are proposed to be installed, TP only is required.
 - where cables, fibre optic cables and ducts are to be installed, prior to any permanent rights to retain, operate, and maintain them being acquired by agreement or CA. This would allow the Applicant to complete installation works and micro-site apparatus before committing to acquire permanent rights. The aim would be to reduce the land affected by permanent rights and therefore the impacts on landowners.
- 8.4.15. The dDCO includes provisions relating to the acquisition of Crown Land, Special Category Land and land belonging to statutory undertakers. The case for acquisition of these interests is dealt with further below.

8.5. HOW THE CASE FOR CA AND TP WAS EXAMINED

- 8.5.1. The Examination considered the following issues relevant to CA and TP powers:
- nature and physical extent of the rights requested, and their duration;
 - consideration of alternatives and design flexibility/whether all the Order Land is required for the Project;
 - phasing of the construction of the Project;
 - impact on agricultural operations;
 - whether the TP powers are no more than are reasonably necessary, and are proportionate in terms of land required and duration; and
 - consideration of a change to the application.
- 8.5.2. SoCGs from various parties were requested after the Preliminary Hearing in the Rule 8 Letter [PD-007]. Of particular relevance to the matters considered in this Section were the severally submitted SOCGs between the Applicant and each of CG, EA, NG, NFU, Network Rail Infrastructure Limited (Network Rail), Anglian Water (AW), Orsted Hornsea Project Three.
- 8.5.3. The final version of the Applicant's Statement of Commonality of SoCGs submitted at D9 [REP9-037] noted that for the relevant SoCGs only that with NFU contained outstanding matters relating to CA and TP, in respect of land use and agriculture.
- 8.5.4. Written questions were issued to the Applicant and other parties [PD-008]. The questions covered the following matters:
- additional land required as set out in the Change Report [AS-009];
 - updates to all outstanding objections;
 - exploration of reasonable alternatives to use of CA/TP powers;
 - access to land, negotiations with landowners and other affected persons for acquisition of the necessary land, rights and TP;
 - powers to take Crown land;
 - steps taken to identify outstanding interests in the Order Land;
 - how the route options shown on Works Plans (2.4) and described in Work Nos. 7A to 7D) would be taken forward given the uncertainty imposed upon the landowners; protective provisions (the subject of Article 29 and Schedule 16 dDCO [REP9-007]) with undertakers;
 - correlation of issues highlighted in the NFU/LIG representations on behalf of clients who own or lease land affected by the Proposed Development, to relevant Plot numbers in the BoR;
 - whether new rights and restrictions over railway land could be created without serious detriment to Network Rail's undertaking;
 - National Trust and its inalienable land;
 - funding and consideration of claims for blight;
 - locations where a 45m maximum working width of the cable route during construction is required, with a 20m width being required permanently for the majority of the route (SoR [APP-008]);
 - extent of CA sought and negotiations with Statoil or its successor offshore transmission owner (OFTO);

- mitigation works for temporary works and buildings authorised to be constructed under Article 26(1)(b) dDCO [REP9-007];
- private rights over land that may cease to have effect subject to CA, or be suspended and temporarily unenforceable where TP powers are exercised over land under Article 21 dDCO [REP-007];
- acquisition of plots for "cable logistics";
- Open Space land comprised in the beach and foreshore at Happisburgh and part of the Marriott's Way long distance path;
- closure of access to Open Space land (8.13 of SoR [REP8-008]) where affected by the installation of apparatus, and when access should remain open;
- temporary diversion routes for lengths of PRoW to be stopped up;
- permanent access routes (paragraph 7.7.10 SoR [REP8-008]);
- whether open space, when burdened with the rights sought in the Order, would be no less advantageous than it was before (the test in section 132(3) of PA2008);
- trenchless crossing and use of HDD;
- numbers of converter stations; and
- access to alternative dispute resolution techniques for those with concerns about CA of their land.

8.5.5. Further written question issued on 27 February 2019 [PD-012] covered the following additional matters:

- engagement with Happisburgh REACT regarding holiday lets;
- timings of different parts of construction for the Proposed Development and Norfolk Boreas;
- post-construction liaison between Applicant and landowners subject to restrictive covenants, to carry out agricultural related activities;
- intended use of compound site/mobilisation units;
- when the running track would be removed after the 150m sections of ducting have been reinstated; and
- details of construction of the different cables at the crossing point, with the Orsted development in two phases, the Proposed Development and the proposed Norfolk Boreas project.

8.5.6. A CAH was held on 28 March 2019 to consider the CA and TP provisions sought for the DCO, whether the land was required for the proposed development or required to facilitate or be incidental to it; and whether there was a compelling case in the public interest to include the provisions in the DCO. The agenda [EV-021] also considered:

- outstanding objections and progress with negotiations;
- amendments to land rights at National Grid existing substation and proposed changes to the Order Limits;
- impacts on farming land and interests;
- APs wishing to make oral representations;
- special position of Crown Land, NT Land, and Public Open Space;
- alternatives and design flexibility;
- funding;
- statutory Undertakers and Protective provisions; and
- Human Rights and Public Sector Equality Duty (PSED).

- 8.5.7. At the CAH the ExA asked the Applicant to confirm that the DCO excludes the application of a compensation provision or any modification of such a provision beyond what is necessary to enable that provision to be applied. The Applicant confirmed at D6 [REP6-015] that Schedule 7 to the dDCO, retained in the preferred dDCO [REP9-007], modifies relevant CA legislation in relation to compensation, principally in relation to material detriment from new rights over land.
- 8.5.8. A written summary of the oral case presented at the CAH was submitted by the Applicant at D6 [REP6-015]. The Applicant submitted an updated SCA at D6 [REP6-003].
- 8.5.9. The ExA made Rule 17 Requests for Further Information to the Applicant related to CA matters, in Questions 2.1 to 2.5 [PD-018]. These were responded to on 30 May 2019 at D8 [REP8-074]. The questions related to resource implications of implementing the Project; consent letter from the Crown Estate Commissioners; Associated Development; and the additional submissions of Castle Farms and Peggy Carrick, represented by LIG/NFU, dated 17 May 2019 [AS-051].
- 8.5.10. In addition to the list of objectors at Annex A in [REP1-010] the Applicant updated the SCA submitted at [REP1-011] to provide details of progress in acquiring by agreement the land and interests identified in the BoR. The Applicant's most recent version of the SCA submitted at D8 [REP8-058] reflects where the Applicant and parties were in terms of negotiations by the close of the Examination.

8.6. EXAMINATION OF THE APPLICANT'S CASE FOR CA POWERS AND RELATED MATTERS

- 8.6.1. In this section we consider the Applicant's case for CA powers and related provisions set out in the preferred dDCO [REP9-007]. We consider whether the land is required for the Proposed Development or is required to facilitate or is incidental to it, and whether there is a compelling case for the inclusion of such powers in the public interest. In particular we set out:
- the case for Associated Development in relation to the taking of CA powers for a future project;
 - the Applicant's requests to change the Application and include additional land;
 - funding and related matters;
 - the objections and representations made in respect of the powers being sought;
 - the position of statutory undertakers and other bodies;
 - crossing with Hornsea Three cable route near Reepham;
 - matters outstanding at the end of the examination; and
 - considerations in respect of the Human Rights Act 1998 (HRA1998) and the Public Sector Equality Duty (PSED).

8.7. ASSOCIATED DEVELOPMENT AND PROVISION FOR A FUTURE PROJECT

8.7.1. The Applicant asserted that all the onshore land was Associated Development as defined in the Planning Act 2008. The ExA was concerned to establish whether this was correct in connection with the proposed taking of CA powers in the dDCO for a future project, namely Norfolk Boreas. The issue of whether it is appropriate to take CA powers for a future project is determined in accordance with the relevant legislation and guidance.

8.7.2. Associated development is defined in section 115(2) PA2008 as development which is associated with the principal development.

8.7.3. The ExA considered the revised DCLG Guidance on Associated Development Applications for Major Infrastructure Projects (April 2013) (AD Guidance). Associated Development Principle 5(iv) states that the following issues should be considered in relation to whether overcapacity infrastructure is capable of being associated development:

- whether a future application is proposed to be made by the same or related developer;
- the degree of physical proximity of the proposed application to the current application;
- the time period within which a future application is proposed to be submitted;
- whether impacts of planned future generating stations would be reduced, and
- need for overcapacity.

8.7.4. Paragraph 5 (iv) also states:

*"Associated development should be **proportionate** to the nature and scale of the principal development. **However**, this core principle should not be read as excluding associated infrastructure development (such as a network connection) that is on a larger scale than is necessary to serve the principal development **if that associated infrastructure provides capacity that is likely to be required for another proposed major infrastructure project.**" [Emphasis supplied]*

8.7.5. Footnote 3 to paragraph 5 (iv) states:

*"For example, in the case of an application for an offshore generating station, **the SofS may consider it appropriate for a degree of overcapacity to be provided** in respect of the associated transmission infrastructure, **so that the impacts of one or more other planned future projects which could make use of that infrastructure would be reduced by taking advantage of it.**" [Emphasis supplied]*

8.7.6. A further criterion in the AD Guidance, paragraph 5 (i), states:

"Associated development should either support the construction or operation of the principal development or help address its impacts."

- 8.7.7. The ExA note that the Norfolk Boreas proposed development would be the subject of an application from the same Applicant as in the Proposed Development. Furthermore, a high degree of physical proximity would exist between the schemes and the onshore cable ducts to accommodate Norfolk Boreas would be laid along the same route as the onshore cables for the Proposed Development. In addition, it had been expected that the Norfolk Boreas application would be made within a reasonable timescale and in fact was received by the Planning Inspectorate on 11 June 2019.
- 8.7.8. Taking all these matters into account we are satisfied that the particular future provision that is made in the dDCO for the laying of ducts to facilitate the Norfolk Boreas project, is “associated development” for the purposes of section 115(2) PA2008.

8.8. REQUEST TO CHANGE THE APPLICATION AND INCLUDE ADDITIONAL LAND

The Change Report

- 8.8.1. On 12 December 2018 the Applicant lodged a post-submission Change Report [AS-009] outlining minor changes to the offshore electrical platforms; onshore cable route accesses; cable route; and National Grid tower locations.
- 8.8.2. Documents considered in relation to this matter included:
- Onshore Land Plans updated for D2, dealing with section 51 advice and the Change Report
 - Shakespeare Martineau on behalf of NG Comments on the Change Report [REP1-115]
 - MMO Response to the Change Document and Errata [REP1-085]
 - D4 Submission - Substation Access Briefing Note [REP4-036]
- 8.8.3. Other plans updated at D2 due to the Change Report were: Works Plan [REP2-012], Access to Works Plan [REP2-013], Plan showing public rights of way to be temporarily stopped up [REP2-014], Plan showing streets to be temporarily stopped up [REP2-015], Important Hedgerows Plan [REP2-016] and Outline Access Management Plan [REP2-026].
- 8.8.4. In its comments [REP1-115] on the Change Report, NG at paragraph 89 stated that it requested the amendment to permit a permanent right to be acquired for two sections of the overhead line which would be repositioned as a result of the new power locations (Figure 8), to ensure that all necessary rights are available for the overhead lines as they sit within the land owners’ interests. Therefore, the land for acquisition of permanent rights, shown on Land Plan 41, to allow for the overhead lines should be extended to the full extent of the land owners’ interests.
- 8.8.5. Relating to Figure 7, NG notes that Works Plan 41 Dec 2018, Rev 08 correctly shows these amendments rather than those contained within the Change Report [AS-009]. It shows dotted lines to demarcate the lateral limits of deviation, along the width of the yellow land for the

acquisition of permanent new rights as shown on the plan on page 53 of the Change Report [AS-009].

- 8.8.6. At D2 updated Works Plans and Land Plans were submitted and a revised dDCO [REP2-017] with amended wording at Article 4 to allow for the undertaker to:

"deviate laterally from the lines or situations of the existing 400kV overhead line from Walpole to Norwich Main to be modified as part of Work No.11A - (i) to any extent not exceeding 25 metres either side of the existing overhead line as shown by the limits of deviation relating to that work on the works plan."

The Minor Change Request

- 8.8.7. The Applicant also submitted at D4 a Minor Change Request: Amendment to land rights sought at the existing National Grid Substation [REP4-035] for amendment to land rights sought at the existing National Grid Substation.
- 8.8.8. The request reflects NG's desire that the acquisition of permanent land rights for Work No.11A in the dDCO (the overhead line modification and associated limits of deviation) should be extended beyond the overhead line modification area associated with Work No.11A to cover the remainder of the overhead line crossing the affected landowner's land.
- 8.8.9. The Applicant consulted with the affected landowners in order to obtain consent to this change and to include CA powers over this additional land. The signed consent letter indicating the landowners' agreement to inclusion in the DCO of provisions authorising CA of the land was attached as part of [REP4-035]. The Applicant stated the proposed change was limited to a change to the land rights sought, rather than the area of land, there were no physical works associated with the change and therefore no potential for any associated environmental impacts.

ExA's decision on the Change Report and Minor Change Request

- 8.8.10. The Change Report [AS-009] and Minor Change Request [REP4-035] are also referred to in Chapter 2 of this Report. The ExA considered these proposed changes and the consent provided by the landowners, and concluded that they did not constitute a material change to the application. It issued a Procedural Decision [PD-014] that the changes would be examined as part of the Application.

8.9. FUNDING AND RELATED MATTERS

- 8.9.1. The Application was accompanied by a Funding Statement [APP-009] revised at D8 [REP8-009] to explain how the acquisition of the land and interests envisioned in the dDCO would be funded. Also submitted as annexes to [REP8-009] were Accounts for Vattenfall Wind Power Limited 2016-2017 and 2017-2018, and the pro forma Funding Agreement between Norfolk Vanguard Limited and Vattenfall AB (the Parent Company).

- 8.9.2. The Funding Statement [REP8-009] confirms that the Parent Company would put the Applicant in funds to enable it to meet all liabilities for compensation arising from the acquisition of land and rights, the creation of new rights and from statutory blight where compensation is appropriately and reasonably claimed.
- 8.9.3. Guidance related to procedures for the compulsory acquisition of land (September 2013) states that the funding statement should provide as much information as possible about the resource implications of implementing the project for which the land is required. The Funding Statement [APP-009] stated that the Parent Company had substantial net assets as well as a positive track record in the field of renewable energy development and was therefore able to provide the required funding for the Project. The reported fixed assets for 2016/2017 state a total of £270,162,000, however the capital-intensive nature of a project of this scale would require significant funding beyond the assets identified in the funding statement. No costings were given for the cost of the Project, but it was said that *"as a result of the Company's experience and reputation, funds are likely to be available"* (para 3.7 [APP-009]).
- 8.9.4. Consequently, the Applicant was requested by the ExA [PD-018] to supply information that demonstrated the costs of the Project and how the necessary funds for its construction would be secured, explaining what funding would come from within the company group, the Swedish State and any outside person or body. Any key potential risks inherent in procuring the necessary funds to construct the project should also be explained.
- 8.9.5. In [REP8-074] the Applicant replied that the completed Funding Agreement provides the necessary financial security with the company being the overall parent company - Vattenfall AB (publ), 100 per cent owned by the Swedish state. Vattenfall AB (publ) funds all of its UK wind farms via the immediate parent company of the Applicant, Vattenfall Wind Power Ltd. Vattenfall Wind Power Ltd then funds the UK wind companies with equity and long-term debt. The Applicant accepts that the Project brings a higher inherent risk of funding the whole project on the balance sheet. Vattenfall AB (publ) is monitoring, and would continuously monitor, its funding situation including considering opportunities to use investment partners or project finance. Investment decisions are made on the basis of available funding opportunities. In terms of the actual costs, given the size of the project, it is likely that this would be constructed in phases, thereby allowing funding to be staged. However, it also states that:
- "In addition, the highly competitive nature of the Contracts for Difference (CfD) bid process and with it the associated commercially confidential nature of the process is also a reason not to indicate the likely cost of the project at this time."*
- 8.9.6. The Applicant has publicly stated that the Project is a multi-billion pound infrastructure project and considers there are no specific risks in procuring the necessary funds to construct the project other than those that would apply in the ordinary course of project finance or securing

investment for offshore windfarms or other renewable projects, and to the extent that the Applicant would seek any external investment or funding beyond balance sheet funding. The Applicant would not seek to implement the DCO or exercise powers pursuant to it until a Final Investment Decision is made which would require the funding of the project to be secured.

- 8.9.7. There is no provision in the estimate of compensation for claims under LCA1973 Part 1 as the Applicant does not consider that any such claims would arise. No landowners are scheduled in the BoR [REP8-010] as falling into this category. In terms of the costs included in the funding total, a contingency has been applied to the total land compensation figure and the final number reflects a worst-case scenario in a number of aspects. Therefore, should a claim ever arise it would likely be minor in value and covered within the Property Cost Estimate which assumes that all interests are acquired using CA powers.

8.10. OBJECTIONS AND REPRESENTATIONS MADE BY AFFECTED AND INTERESTED PERSONS

- 8.10.1. Several objectors were represented by the National Farmers Union (NFU) and the "Vattenfall Agents" (agents acting for NFU members and their clients). The agents represented were Savills (UK) Ltd (Savills), Strutt & Parker, Bidwells, Irelands, Brown & Co and Cruso & Wilkin (known as the Land Interest Group (LIG)). The mode of representation on behalf of these affected landowners was not always consistent as between the NFU and LIG, however for all relevant purposes the representations can be taken to be made by both the NFU and LIG, hence the use of "NFU/LIG" in this Report where appropriate.
- 8.10.2. Several land interests submitted a standard representation as drafted by NFU (the Outline Representations). An example can be found in the RR submitted by NFU at [RR-193]. These submissions were either by the landowners themselves or by a Land Agent on their behalf. The owner of the land on which it is proposed to site the converter station was not represented by the NFU/LIG and did not submit a representation, however discussions took place separately between the owner and the Applicant.
- 8.10.3. Annex A in [REP1-010] sets out the list of all relevant representations which contained an objection to the use of CA powers over their land. Included in the table are those who submitted the standard NFU representation and who own or are tenants of land where there are sought rights of permanent access, shown shaded green on the Land Plans.
- 8.10.4. In most cases therefore it can be seen for whom NFU/LIG was acting. However, there were several clients of theirs who wished to remain anonymous and the NFU & LIG D7 submission - Further information requested by the Examining Authority [REP7-073] discloses no more than that LIG was representing 57 clients of which 36 are NFU members, so there were 36 NFU members all individually being represented by a

land agent who are part of LIG. Clearly this inhibited consideration of how the CA and TP proposals would impact on affected persons unless, which has occurred for the most part, they and their land interests are identified.

- 8.10.5. Two other representations were submitted referring to objections to the CA of their land, Network Rail and the National Trust (NT). These parties were also included in the table in [REP1-010]. The position regarding these two bodies is set out separately in this section and in the section below dealing with matters outstanding at the close of the Examination.
- 8.10.6. It is convenient to list each of the 33 Objections in order below, grouped to clarify where through their respective agents they adopted the Outline Representations only, or where in addition specific points were raised on their behalf.

Outline Representations only (Objections Nos 1 to 15)

- A W Ditch and Son [RR-146];
- Albanwise [RR-147];
- Bradenham Hall Farms [RR-149];
- Church Farm (Gimingham) Ltd [RR-150];
- G F de Feyter and Partners [RR-152];
- G T Cubitt [RR-153];
- Mr P Bunting [RR-161];
- Mrs P Carrick [RR-165];
- Trustees of Stinton Hall Trust being Sir David Chapman, Grant Picher, Michael Dewing and William Edwards [RR-173];
- C Siely [RR-176];
- G Hales and Mrs P Riches [RR-181];
- L Padulli [RR-185];
- Mr and Mrs M Jones [RR-189];
- Mrs P Hinton [RR-190]; and
- National Trust [RR-191].

Network Rail Infrastructure Limited (Objection No 16) [RR-192]

- 8.10.7. Addleshaw Goddard LLP on behalf of Network Rail aired concerns as to manner in which rights over Plot 10/04 and any other railway property are carried out including terms which protect Network Rail's statutory undertaking and agreement that CA powers would not be exercised in relation to such land; the carrying out of works in the vicinity of the operational railway network to safeguard Network Rail's statutory undertaking, and the inclusion of protective provisions in the DCO for its benefit.

Outline Representations only (Objections Nos 17 to 29)

- NFU [RR-193];
- P Mutimer [RR-195];
- The National Trust [RR-202];
- Trustees of Salle Park Trust being Sir David Chapman, Grant Pilcher, Michael Dewing and William Edwards [RR-203];
- Bawdeswell Farms Ltd [RR-225];

- David Hampson [RR-230];
- Dillington Hall Estate [RR-233];
- Farnham Farms Limited [RR-236];
- Lucy Keane and Matthew Keane [RR-246];
- Mark, Dorothy, Marilyn and David Howell [RR-248];
- Mills & Reeve Trust Corporation and Alexander Gavin Angell Lane – Objection [RR-250];
- Trustees of the Bawdeswell Settlement being David Gurney, David Brown, Kate Paul, William Barr [RR-265]; and
- Gurloque Settlement [RR-266].

Mrs A Green – (Objection No 30 [RR-158])

8.10.8. Concerns were expressed as to the OCR proposed to be laid through client's property; the construction corridor would be within 50m of residential property creating substantial disturbance including to horse livery business during construction and at least 2 years after the scheme has been completed. Negotiations were ongoing to amend the route of the cable through arable fields. The Applicant had advised the OCR was to avoid archaeology although at the present time they have not been able to confirm the significance of the archaeology. The access to the construction corridor was through the front drive of the residential property and not practical. Negotiations were ongoing in this regard. The route sterilised the land for future development.

8.10.9. The affected Plots, 02/20 and 02/21 are owned by Anne Judith Green (pages 17, 18 BoR [REP8-010]). The SCA [REP8-058] confirms that Heads of Terms (HoTs) have been agreed for acquisition of permanent rights and limited to rights relating to access, and discussions are underway to agree the wording of the option agreement and deed of easement.

Mrs A Jones – (Objection No 31) [RR-163]

8.10.10. The current proposed access was not physically possible due to the levels between the road and the field as well as the presence of an oak tree.

8.10.11. The affected land is Plot 27/16 in the BoR [REP8-010] near to the River Wensum drilling location. It was requested to amend the route to reduce the height of drill location and reduce length of drill in this land holding. The Applicant responded that landowners would be given an access point across the cable corridor and haul route, as long as there are no concerns from an HSE perspective [REP1-004]. Subsequently an agreement was reached with the affected landowners to amend the cable route and address these concerns [REP1-004]. This is addressed in the Change Report [AS-0093]. Formal HoTs for an option agreement have been agreed and signed by both parties and discussions are underway to agree the wording of the Option and Deed documentation: SCA [REP8-058].

Christopher S Wright – (Objection No 32) [RR-177]

- 8.10.12. Bidwells on behalf of Christopher S Wright made several objections that were outstanding at the close of the Examination. These are dealt with in the next Section of this Report.

Mr Robert Clabon – (Objection No 33) [RR-252]

- 8.10.13. Brown and Co on behalf of Mr Clabon referred to concerns relating to the potential sterilization of land with potential to be developed for housing and or employment/commercial use. The planning situation in North Norfolk remains highly fluid and under review. The timing of this infrastructure project may result in competing development interests being sterilized due to being at an earlier stage of the development consent process.
- 8.10.14. Formal HoTs for an option agreement have been issued by the Applicant and negotiations are ongoing. The Applicant is confident that the necessary land and rights can be acquired by agreement.

Additional Submission (Objection No 8) Peggy and John Carrick and Castle Farms [AS-051] [RR-165]

- 8.10.15. Savills made a late submission that although Peggy and John Carrick, as owners and IPs were consulted in relation to land that was affected by the cable route, John Carrick had no recollection of being consulted on the access route, and Savills did not receive copies of s.42 and s.56 notices in respect of the proposed access, nor had Castle Farms as occupiers.
- 8.10.16. This was a dispute concerning the proposed access route included in the BoR Plots 30/04 30/05 and 30/06. As it was outstanding at the close of the Examination it is considered further in the next section of this Report.

NFU/LIG Outline Representations

- 8.10.17. The Applicant's engagement with landowners focussed around HoTs for an Option for an Easement, acquisition and lease of land. Negotiations took place with the Land Interest Group (LIG), led by Savills and the National Farmers' Union (NFU), with whom over 40 rounds of communications with the Applicant were held, leading up to the issue of formal HoTs. A Landowner Information Pack [APP-121] was provided to explain how the ducting and cable-pull through of underground cable corridor between landfall and connection to the National Grid would be undertaken.
- 8.10.18. The NFU and LIG's holding position remained that no meaningful negotiations had taken place in regard to the site for the converter substation and the access routes and therefore a compelling case for CA could not as yet be made.
- 8.10.19. Matters covered in the Outline Representations, in which a request was made to attend the CAH and make further representations, were:

- design and appearance of proposed siting of substation near to the NG substation at Necton;
- construction and funding;
- cumulative impact;
- jointing bays and link boxes;
- field drainage;
- soils;
- flood issues;
- dust/irrigation;
- access routes to the order limits; and
- access to land and the haul road.

8.10.20. The Applicant prepared a Position Statement to explain its understanding of the position between itself and the NFU/LIG at D9 [REP9-033]. As the Applicant noted the NFU did not provide official comments on the changes made by the LIG, but it is understood, and the ExA accept, that the changes are reflective of discussions between the LIG and the NFU.

8.10.21. Subject to “new” areas of disagreement identified below, and the ongoing negotiations over HoTs, by the close of the Examination the NFU/LIG had agreed several matters of concern initially expressed to the Applicant. Most of these matters are the subject of amendments to the CoCP, and reference should be made to the latest version of the OCoCP [REP9-010]. A more detailed response to these concerns is included within [REP9-033] at Appendix A. The agreed matters are summarised below:

- reinstatement of field drainage would be likely to be reinstated as part of the subsoil reinstatement process as each 150m section is being completed;
- 85% of cable route length has now been surveyed as to existing above ground drainage, and details requested from landowners to develop a SWDP to be included in the CoCP and secured by DCO Requirement 20;
- the SWDP would include details of how surface run off water from the haul road or construction compounds would be managed to assuage flood concerns;
- full records of soil condition would take place pre- and post-construction and details of soil management during construction and access routes would be supplied by the appointed contractor; and
- dust would be controlled and the effect on irrigation would be minimised through mitigation measures regarding air quality set out in the CoCP.

8.10.22. The Position Statement [REP9-033] also took account of what it termed “new” areas of disagreement raised by NFU/LIG on 6 June 2019 (Savills on behalf of NFU/LIG D9 Submission [REP9-056]). In [REP9-056] Savills highlighted areas that it considered were still outstanding. We deal with these points below in Section 8.14.

8.11. STATUTORY UNDERTAKERS AND PROTECTIVE PROVISIONS

- 8.11.1. Section 138 PA2008 Act is engaged by Article 29 of the dDCO which would permit CA of land or rights of undertakers or enable the Applicant to extinguish or relocate the rights or apparatus of statutory undertakers. Such powers may only be included if the SoS is satisfied the extinguishment or removal is necessary for the Project.
- 8.11.2. The effect of section 127(5) and (6) PA2008 is that an order granting development consent may include provision authorising the compulsory acquisition of a right over statutory undertakers' land by the creation of a new right over land only to the extent that the right can be purchased without serious detriment to the carrying on of the undertaking, or any detriment to the carrying on of the undertaking, in consequence of the acquisition of the right, can be made good by the undertakers by the use of other land belonging to or available for acquisition by them.
- 8.11.3. Article 43 of the dDCO [REP9-007] gives effect to Schedule 16 (protective provisions). The details of these provisions were the subject of representations from the statutory undertakers and discussions took place between them and the Applicant to close down areas of disagreement. Below we summarise the position at the close of the Examination as regards undertakers who made representations.

Anglian Water Services Limited (AW)

- 8.11.4. AW made representations [RR-222] and entered into a SoCG initially submitted in January 2019 [REP1-035]. Further Written Representations were made by AW on 16 January 2019 [REP1-064]. A further iteration of the SoCG was submitted at D4 [REP4-004] and the most recent version of the SoCG was sent at D8 [REP8-081].
- 8.11.5. AW discussed with the Applicant the wording of protective provisions for the benefit of AW to be included in dDCO (Schedule 16, Part 6). Its concern related to locations where construction works would cross with AW assets and apparatus. The dDCO provides a mechanism for the Applicant to submit details for AW's approval where its apparatus is likely to be so affected. This was to be discussed further, however the wording of Schedule 16, Part 6 was recorded as appropriate and adequate, and therefore agreed with AW in the SoCG at D8 [REP8-081].

Cadent Gas (Cadent)

- 8.11.6. Cadent submitted representations [RR-072, REP1-116, and REP3-040], a Response to ExA's Written Questions [REP1-117] and a SoCG with the Applicant [REP1-038], updated for D4 [REP4-012]. Also at D4 Cadent submitted a Response to ExA's Further Written Questions [REP4-075]. The SoCG was further updated at D5 [REP5-005] with the most recent SoCG sent at D8 [REP8-086].
- 8.11.7. Cadent stated [RR-072] that as a licensed gas transporter it has low or medium, intermediate and high pressure (major accident hazard) gas

pipelines and associated below or above ground apparatus located within the order limits which are affected by works proposed. Its rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or in close proximity to the order limits should be maintained at all times and access to inspect such apparatus must accordingly not be restricted.

- 8.11.8. Following conclusion of contractual terms, the parties reached agreement on the Protective Provisions to be included in the dDCO submitted at D8. Cadent withdrew its objection on 23 May 2019 by Letter of Withdrawal [REP8-096].

East Anglia THREE Limited (EATL)

- 8.11.9. EATL is a subsidiary of Scottish Power Renewables. The EATL consented project will comprise offshore wind turbines and electrical platforms, offshore and onshore export cables, and associated development relating to electrical transmission works for its construction and operation and the transmission of power to the NG.
- 8.11.10. The location of the OWF sites for the Project and EATL project is shown in Chapter 5 Project Description Figure 5.1 of the Application [APP-329]. The SoCG with the Applicant sent at D1 [REP1-039] and updated at D4 [REP4-007], states the two parties will keep each other informed on the progress and status of individual project developments including dialogue over layout, design, and proximity arrangements between NV East and EATL. A Co-operation Agreement between the parties is stated to provide sufficient detail to govern the proximity of apparatus and interaction between Norfolk Vanguard Ltd and EATL. Accordingly, EATL and the Applicant do not consider protective provisions in the DCO are necessary.

Environment Agency (EA)

- 8.11.11. The EA made representations [RR-117], [REP1-071], [REP2-035], [REP2-035], an Additional Submission [AS-001] and a Response to ExA's Written Questions [REP1-072]. It made a SoCG with the Applicant submitted at D1 [REP1-041], updated at D4 [REP4-009]. The most recent SoCG was sent at D8 [REP9-044]. EA Flood Zone maps are submitted by the Applicant at [APP-547].
- 8.11.12. The Applicant proposes a scheme for each watercourse crossing, diversion and reinstatement, including site specific details general arrangement and mitigation. This scheme will be submitted to and, approved by the relevant planning authority and secured via the dDCO. The Applicant states [REP9-044] that works in or near main rivers are covered by the Protective Provisions for the protection of the EA and drainage authorities.
- 8.11.13. The SoCG [REP9-044] notes that the protective provisions seek to disapply the requirement for secondary consent from the EA for any works within 8m of a main river. Table 11.1 of the CoCP updated on 6 June 2019 [REP9-010] sets out the additional licences or permits necessary prior to construction in relation to water resources and flood

risk. The EA highlights in [REP9-044] that secondary consents would be required for any works within 8m of a main river if agreement cannot be reached through the Protective Provisions.

National Grid Electricity Transmission PLC and National Grid Gas PLC (NG)

8.11.14. In its RR [RR-167] NG stipulated for protective provisions to be included in the DCO to ensure its rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus would be maintained and access to inspect and maintain such apparatus would not be restricted. NG described its apparatus within or in close proximity to the proposed Order Limits as:

- National Grid Electricity Transmission: High voltage electricity overhead transmission line (4VV (400kV) overhead line route - Norwich Main to Walpole 1- Norwich Main to Walpole 2) and a high voltage substation (Necton (400kV) Substation) within the onshore scoping area. These assets are an essential part of the electricity transmission network.
- National Grid Gas Transmission: High pressure gas transmission pipelines (feeder mains) from Bacton to, respectively Wisbech Nene West, Roudham Heath and Yelverton, above ground installations (AGIs) and a gas terminal located in or in proximity to the onshore scoping area. The transmission pipelines along with AGIs and terminals form an essential part of the gas transmission network.

8.11.15. In its written representations [REP1-118] NG formally objected to the acquisition of CA powers in the absence of suitable protective provisions being agreed within the dDCO [REP9-007]. NG explained that the onshore cable route would cross the feeder mains at Plots 10/12, 11/07 and 11/10, 6/05 and 5/08. The feeder mains operate at high pressure and is classified as a Major Accident Hazard Pipeline by the Health and Safety Executive (HSE). [REP1-118] sets out the regulatory framework under which NG has a statutory duty to act and the risks of insufficient property rights accruing to NG as a result of the proposed CA are spelled out.

8.11.16. NG's SoCG with the Applicant was submitted at D1 [REP1-048]. It made comments [REP1-115] on the Change Report [AS-009] and representations at D3 [REP3-050]. The SoCG, made in respect of NG's operations and protective provisions only, was updated at D5 [REP5-009] detailing where agreement was reached and where points were outstanding. The SoCG was finally updated at D8 [REP8-085] and a letter of withdrawal of the CA objection sent at D8 [REP8-103].

Network Rail Infrastructure Limited

8.11.17. Network Rail Infrastructure Limited made representations [REP4-014], and a Position Statement was submitted at D8 with an agreed form of protective provisions [REP8-072] to be included in the dDCO [REP9-007].

- 8.11.18. However, Network Rail maintains an objection to the DCO. The Project has the potential to affect assets owned and operated by Network Rail, namely the Norwich to Cromer railway line at north Walsham Plot 10/04 on the Land Plans [REP4-022], which the Applicant has committed to pass under by way of trenchless installation techniques. Network Rail's RR on 14 September 2018 [RR-192] preserved its position until not only protective provisions but associated commercial agreements were agreed. The outstanding position at the close of the Examination is recorded below.

Conclusion

- 8.11.19. We considered the need for extinguishment of rights and removal of apparatus under section 138(4) PA2008 in respect of all statutory undertakers, whether or not they made representations. The third party rights proposed to be extinguished, suspended or interfered with are detailed in BoR. Interference with these rights would be subject to the protective provisions set out in Schedule 16 dDCO [REP9-007]. We are satisfied that extinguishing such rights and removing apparatus would be necessary to carry out the Proposed Development. We therefore conclude that the requirements of section 138(4) PA2008 are satisfied.

8.12. CROSSING WITH H3 CABLE ROUTE NEAR REEPHAM

- 8.12.1. The SoCG submitted at D7 between the Applicant, Norfolk Boreas and Orsted Hornsea Three [REP7-032] shows at Figure 1 the geographic extent of the three projects, including the point of onshore cable overlap near Reepham, the access routes associated with the Main Construction Compound for H3, and the cable logistics areas proposed by the Applicant and Norfolk Boreas at The Street, Oulton.
- 8.12.2. The SoCG states that all parties would seek a tri-partite Option Agreement with the relevant land owner to acquire the rights necessary to construct, use and maintain the Proposed Development and that for H3, at the crossing point. The Option Agreement would provide for crop loss and severance compensation where the cumulative impact of projects in construction at the same time have increased impact to the landowner when compared to separate construction periods. If a voluntary agreement could not be achieved, it is agreed that CA of new rights and imposition of restrictive covenants could coexist for H3, the Applicant and Norfolk Boreas. The Co-operation Agreement would regulate the exercise of compulsory acquisition and temporary use powers
- 8.12.3. Orsted has engaged with the Applicant to consider the approach to protective provisions for the H3 DCO. The SoCG with Hornsea Three [REP7-032] submitted at D7, notes that an agreement would manage the coexistence of the projects, determine the method and design at the point of crossing such that one project would install using open cut, and one through HDD. Should H3 install using HDD, there would be a need for a corridor wider than the typical 80m width along the onshore export cable corridor at this location to accommodate the works. This accords with the approach adopted at some of the other technically complex HDD

crossings along the H3 onshore cable corridor route. The width at this crossing point is based on professional experience from previous offshore wind export cable installations by Orsted.

- 8.12.4. As set out in Volume 1, Chapter 3: Project Description of the Environmental Statement [APP-058]:

*"...detailed ground investigations will be undertaken should HDD be proposed to determine geotechnical data and thermal resistivity properties of the soil to assist with detailed cable route design. Notwithstanding this, the Applicant is confident the works can be carried out within the Order Limits as set out in the Order Limits and Grid Coordinates Plan (Onshore) [APP-010]. **The Applicant and Norfolk Vanguard Limited consider that the powers sought by the Applicant and Norfolk Vanguard Limited in their respective DCOs can co-exist.** The Applicant is currently in on-going discussions with Norfolk Vanguard Limited, the applicant for the Norfolk Vanguard project, with the aim of reaching a commercial agreement to manage the coexistence of the projects. The Applicant is engaging with Norfolk Vanguard to consider the approach to protective provisions for the Hornsea Three DCO."*

8.13. THE APPLICANT'S CASE IN RELATION TO SPECIAL CATEGORY LAND

Crown Land

- 8.13.1. As a matter of law the Crown's interest in land may not be acquired compulsorily, but an interest in land held otherwise than by or on behalf of the Crown may be acquired with the agreement of the appropriate body.
- 8.13.2. The Crown Estate made a RR [RR-012] in which it explained that it manages property and rights which are owned by Her Majesty in right of the Crown. This portfolio includes around half of the foreshore and almost the entire seabed out to 12 nautical miles around England, Wales and Northern Ireland. Under the Energy Act 2004 and the Energy Act 2008, the Crown Estate also manages the rights over the continental shelf to offshore energy generation and the rights to carbon dioxide and natural gas storage and transportation.
- 8.13.3. As far as concerns the Applicant's intention to construct operate and maintain the Proposed Development over land that is held by or on behalf of the Crown, it should be noted that it is the Crown Estate that has awarded the Applicant the right to develop the Project on land which includes Crown land. The Applicant holds an Agreement for Lease from The Crown Estate for the area of seabed to be occupied by the Project, and subject to obtaining the DCO it will issue a lease to the Applicant for construction of the Project.
- 8.13.4. At the landfall at Happisburgh South (Work Nos. 4A, 4B and 4C), Plots 01/01, 01/02, 01/03, 01/17 and 01/19 represent areas of sea and sea bed owned by the Crown and described in Part 4 of the BoR [REP8-010]

which makes clear that they are not intended to be subject to CA powers insofar as concerns interests held by or on behalf of the Crown. The land is shown separately on Crown Land Plans [APP-021] and [APP-022].

- 8.13.5. However, as CA of third-party rights over Crown land are sought, the ExA understands that consent under section 135 of PA2008 would be required from the Crown Estate Commissioners.
- 8.13.6. A Consent Letter from the Crown Estate Commissioners pursuant to section 135 PA2008 was received at D8 [REP8-076]. The Commissioners make clear that they disagree with any view that under s135(1) PA2008 a development consent order may only authorise the acquisition of third-party interests in Crown Land if the unconditional consent of the appropriate Crown body is obtained before the order is made. Without prejudice to that position **the letter gives consent to the compulsory acquisition of third-party interests** in Plots 01/01, 01/02, 01/03, 01/17 and 01/19 and for the purpose of section 135 PA2008.
- 8.13.7. The consent of the Commissioners was subject to amendments which it wished to see included in the DCO. These are included in the dDCO [REP9-007], referred to in Chapter 9 of this Report.

Highways England

- 8.13.8. Trunk roads and other highways owned by HE are no longer formally regarded as Crown land, but are treated similarly. HE's interests comprising the A47 and adjoining land at Plots 37/08, 37/19, 37/20 37/21, 41/12, 41/41, 41/42, 41/43, 41/44, 41/48 and 42/05 are therefore excluded from CA and the Applicant has negotiated separately with HE for the appropriate licences and, if necessary, property agreements.

Open Space Land

- 8.13.9. Part 5 of BoR [REP8-010] identifies plots which constitute "*special category land*" for the purposes of section 132 PA2008 that will be affected by the authorised project and the rights contained in the Order. For this Project open space, identified as such on the Land Plans comes within this category.
- 8.13.10. The Order Land includes potential open space land comprising the beach at Happisburgh South at Plots 01/04, 01/05, 01/06, 01/18 and 01/20; and the Marriott's Way long distance path at Plots 23/07 and 24/10 (the Open Space Land). The Open Space Land is shown hatched green on the Special Category Land Plan [APP-014].
- 8.13.11. The Applicant has taken a precautionary approach in treating the beach as public open space in order to prevent delay to the Project if it is subject to Special Parliamentary Procedure (SPP). Whether land is open space or not is a matter of fact. We agree with the Applicant's understanding that land being beach land does not prevent it from being open space. Access to the land by the public is not restricted and the possibility of use for public recreation cannot be ruled out.

- 8.13.12. The Open Space Land is owned by NNDC and Thales Information Systems limited (Plots 01/04), Thomas William Love (Plot 01/06), NCC (Plots 23/07 and 24/10), Ardeshir Naghshineh, Philip Thomas Brown, Katrina Ann Dexter, John Lloyd Cole, Tracey Crane, Peter Robin Bentley and Kathleen Mary Bentley (Plot 23/07), and Albanwise Limited (Plot 24/10). NNDC is also responsible for the management of the land in Plots 01/04 and 01/06 and has an interest in those plots as an occupier, they also are lessees of Plots 01/05, 01/06 and 01/18. NCC has an interest in Plots 01/04, 23/07 and 24/10 as highway authority. The Water Management Alliance and Norfolk Rivers Internal Drainage Board have rights in Plot 23/07 in respect of drainage
- 8.13.13. The Open Space Land is included in the DCO and BoR so that if minor interests such as easements, rights of way, restrictive covenants or similar interests are subsequently discovered to exist, powers are available to override such interests if not negotiated away. The dDCO [REP9-007] gives the beneficiary of such an interest a right to compensation for its acquisition or extinguishment.
- 8.13.14. We note that in the SoR [REP8-008] paragraphs 8.10 to 8.18 explain the proposed method of installation of cables and ducts at landfall and crossing the Marriott Way. The cables, fibre optic cables and ducts would be installed using trenchless techniques in each of the open space locations. The Open Space Land should not therefore be affected by the installation of the apparatus, and access should remain open throughout the construction period. No permanent surface installation works would be required within the Open Space Land.
- 8.13.15. In our consideration having regard to section 132(3) PA2008, the Open Space land, when burdened with the Order rights, would be no less advantageous than it was before to the persons listed as the freehold and leasehold owners, tenants and occupiers in the BoR [APP-010], any other persons entitled to rights over the beach, or the public. Consequently, we are satisfied that no exchange land would be required should the Open Space Land be included within the recommended DCO.

The National Trust for Places of Historic Interest Or Natural Beauty (NT)

- 8.13.16. NT owns land included within the Order Limits. The National Trust Acts provide for NT land to be declared inalienable, that is it cannot be sold or mortgaged and has protection against being compulsorily acquired without SPP being invoked.
- 8.13.17. Therefore in order to compulsorily acquire inalienable National Trust land, the DCO would have to be subject to SPP. The National Trust's interests in land comprise Plots 15/06, 15/07, 15/08, 15/09, 15/10, 15/12, 15/13, 15/14, 15/15, 16/02, 16/03, 16/04, 16/05, 16/07, 16/08, 16/09, 16/10, 16/11, 16/13, 16/14, 17/01, 17/02, 17/04, 17/06, 17/07 and 18/01, as well as, in respect of the subsoil, Plots 16/12, 17/05, and 18/02. It is also an occupier of Plot 17/03. The Applicant is currently negotiating the grant of the necessary interests by the National Trust and anticipates that this will be agreed in due course.

- 8.13.18. NT was represented by Savills (UK) Ltd in its RR [RR-191] but mostly made representations in its own behalf, initially at [RR-202], then in response to the ExA's Rule 6 letter [AS-011], and in its Written Representations and Summary of Written Representations [REP1-090]. It made a further Submission at D2 [REP2-033] and at D4 it responded [REP4-071] to the ExA's Further Written Questions [PD-012]. The Applicant submitted the National Trust Land Agreement Position Statement at D6 [REP6-017] which was updated at D8 [REP8-073].
- 8.13.19. The final updated SCA submitted at D8 [REP8-058] reflects that the Applicant is in ongoing discussions with the National Trust and also the three tenants who occupy the land included in the Order. Discussions moved to the Option Agreement which was being negotiated between NT's legal team and the Applicant's legal advisors.
- 8.13.20. The ExA raised the question of the special position of the NT at the CA hearing. We specifically drew attention to the fact that if no settlement were reached between the Applicant and NT as to the acquisition by agreement of NT's interests, then insofar as it comprised inalienable land it would be subject to SPP. The Applicant recognises as much in section 8 of the SoR [REP8-008].
- 8.13.21. Therefore, at the close of the Examination NT maintains a formal objection to the CA.

8.14. MATTERS OUTSTANDING AT THE END OF THE EXAMINATION

Christopher S Wright – (Objection No 32) [RR-177]

- 8.14.1. The Plots affected are 12/04, 12/06, 12/07, 12/08. The objection was that the cable depth should be increased to 1.75m on health and safety grounds; the route of the cable easement across his property be re-routed southwards to minimise disturbance, noise and dust which was stated would greatly affect Elm Farm house and buildings where he lives and adjoining residents. The proposed access routes to the easement strip were unacceptable as they infringed on the privacy and enjoyment of his property, and alternatives had been suggested.
- 8.14.2. The SCA [REP8-058] records that HoTs for an option agreement have been issued by the Applicant and negotiations are ongoing. The Applicant has made a number of attempts to contact the landowner and their agent. No further progress has been made despite these efforts.
- 8.14.3. Appendix 11.1 – Cable Route Info Sheet [REP1-018] refers to trenches excavated in approximate 150m lengths, lays ducts to a minimum depth of 1.05m within trenches and backfills. The precise depth of the cables that would be installed would depend on the type of location as referred to in detail in ES Chapter 5 - Project Description [APP-329]. Table 5.32 summarises the onshore cable route key parameters: burial depth would be 1.05m - 1.05m 'normal' agricultural, 1.2m 'deep ploughing' agricultural to top of duct target. Up to 20m at trenchless crossings. Paragraph 307 of [APP-329] indicates this minimum depth is equivalent

to the electricity distribution provider in the UK's standard depth (Engineering Construction Standard ECS 02-0019).

- 8.14.4. Paragraph 359 states that with trenchless methods, the depth at which the ducts are installed depends on the topology and geology at the crossing site. Typically, for a river crossing, HDD ducts would be installed 5m below the floodplain, and at least 2m below the river bed. A Flood Risk Activity permit under the Environmental Permitting Regulations 2010 would be applied for where required.
- 8.14.5. With regard to alternative routes the OCR has been chosen to minimise environmental impacts associated with the Proposed Development as detailed in Schedule of Responses to Relevant Representations and ES Chapter 25 Noise and Vibration [APP-349]. Mitigation measures are detailed in the OCoCP [REP9-010] gives details on air quality management control measures to be implemented which includes dust management. This document informs the final CoCP to be agreed with the relevant planning authority through Requirement 20 of the DCO.
- 8.14.6. No further details were provided as to how the Proposed Development would impinge on the privacy of the objector. In summary we find that there would be adequate safeguards in place as described such as would justify the acquisition of new rights over the plots in question for the purposes of laying the cables necessary for the implementation of the Proposed Development.

Network Rail

- 8.14.7. Network Rail confirmed in the Position Statement [REP8-072] that once the commercial agreement has been signed and completed it will notify the SoS or, in any event, as to progress made in this respect within three months of the close of the Examination.

National Trust

- 8.14.8. The Applicant and NT indicated in their Position Statement at D8 [REP8-073] that HoTs were signed in April 2019. A meeting was held between NT and the Applicant in April 2019 to discuss the form of Option Agreement and a Deed of Easement. The outstanding points appear to depend on points being discussed on the standard documentation with the Land Interest Group and their legal advisors. The Applicant anticipates that negotiations will be concluded, and the Option Agreement completed prior to the ExA's recommendation. The Applicant would notify the Secretary of State once that happens.
- 8.14.9. At the CAH the ExA urged the Applicant and NT to consider the importance of settling these matters before the close of the Examination. However, there remains at the close of the Examination an objection to the CA based on the inalienability of NT land.
- 8.14.10. The Applicant has retained the NT land in the BoR [REP8-010]. The NT has not expressed in terms how, despite the inalienability of its land, it might nevertheless agree with the Applicant a disposal of some interest

in it. We are, however, satisfied that as a result of the particular terms of the protection given to it in the NT Acts, leases of inalienable land are frequently granted and a variety of other forms of licences and agreements including easements of access ways over land.

- 8.14.11. The upshot is, had agreement been reached by the close of the Examination it would have been possible to exclude the NT land from the scope of the CA powers set out in the dDCO. If and when the SoS is notified that agreement with NT has been reached the SoS would have the option of so excluding this land if NT withdraws its objection and the Applicant clearly states a wish to exclude the land from CA.
- 8.14.12. In the absence of that scenario we advise that the current retention of NT land in the BoR means that if consent to the DCO is given, by virtue of s130(2) PA2008, the DCO becomes subject to SPP.

NFU/LIG

- 8.14.13. As referred to in the preceding section of this Report, there were several matters that remained unresolved or in dispute between the NFU/LIG and the Applicant. Reference is made to the Position Statement [REP9-033] and the D9 submission by Savills on behalf of NFU/LIG [REP9-056]. We summarise these points below:

- the earliest commencement date for onshore construction is unknown;
- a landowner client of NFU/LIG, Mr Carrick was not consulted with regard to the proposed route access until March 2019;
- whilst not acting for the landowner affected by the converter substation, NFU/LIG represents the landowner Mr Allhusen who would be affected by the adjoining Norfolk Boreas converter substation. This matter cannot be considered in isolation;
- concern over duration of the cable pull phase, which would be up to 4 years, understood by NFU/LIG to be a worst-case scenario and the cables for both schemes will be pulled at same time if the DCO and funding are in place, thereby reducing the impact on land operations and farm businesses;
- requests detailed drawings of the converter substation and to be consulted on detailed mitigation due to concern on the time it would take to screen the building due to height;
- mitigation provisions not all adequate due to the size and proposed location of the building;
- questions the method of site selection by physical factors on the ground rather than technical reasons;
- clarification needed as to Applicant seeking Contracts for Difference (CfDs) when it was believed the Project would be privately funded;
- waiting for information on the practicalities of the formation of the construction at the crossing point between Vattenfall and Orsted;
- need to understand why cable lengths cannot be specified such that link boxes are always located in field boundaries;
- requests location of access routes to be agreed by separate negotiation; and

- requires owners' consent to use of Type 1 hardcore when needed to construct the haul road.

8.14.14. Our assessment of these concerns which now follows, takes into account the Applicant's response at [REP9-033] and previous submissions referred to therein.

Commencement date

8.14.15. The earliest commencement date for pre-construction works such as surveys is 2020, and that for duct installation works and works at the onshore project substation is 2022. In our view these lead-in times provide an opportunity for the landowners who would be affected by the Proposed Development to finalise their arrangements with the Applicant over the legal and practical arrangements that access over their land would entail.

Peggy and John Carrick and Castle Farms

8.14.16. The Applicant states that Mr Carrick was consulted at the Section 42 consultation stage in October 2017 and served with Section 56 notices in August 2018, so was aware of the inclusion of the access within the Project Order Limits from at least October 2017. This is denied by the owners and their agents.

8.14.17. We have considered the additional representations made by Peggy and John Carrick and Castle Farms and Peggy Carrick, represented by LIG/NFU dated 17 May 2019 [AS-051], the Additional Submission [AS-062] from Savills on behalf of Mr Carrick and Castle Farms was accepted at the discretion of the Examining Authority before the Examination closed at 23:59 on 10 June 2019 and Savills on behalf of John Carrick D9 Submission [REP9-066].

8.14.18. The track in question is off the Woodgate Road, Swanton Morley. It provides access to the wedding venue at Hunters Hall and the caravan and camp site at Park Farm. There is no information as to how the proposed use of the track by the Applicant would affect the access required by patrons to access these businesses or how use of the access would impact on our client's businesses, or what mitigation is proposed to reduce the impact upon these businesses. Savills stated that the highway to the track is a small country road less than 4m wide and unsuitable for the large vehicles and heavy loads proposed. There were more suitable alternative routes that avoided Hunters Hall and Park Farm which have been suggested.

8.14.19. We considered these representations and made a FWQ [PD-018]. In its D8 Submission - The Applicant's Responses to the Examining Authority's Rule 17 Requests for Further Information [REP8-074], the Applicant identified the affected land on Sheet 30 of the Onshore Land Plans, the plots referred to relate to a proposed permanent right of access, over plots 30/04, 30/05 and 30/06 and the specific plots which would be shared with those using the wedding venue are 30/05 and 30/06.

- 8.14.20. The Applicant stated that the access would be likely to be in use for the purposes of cable pulling up to 10 weeks per annum for a maximum of two years for Norfolk Vanguard. Any one joint pit could be open for this extended period to allow its neighbouring joint pit to be opened and the cables pulled from one pit to the next, dependant on the level of parallel working being conducted. The Applicant understands that wedding dates would be confirmed in advance and it would be possible that through careful planning and liaison with the Agricultural Liaison Officer (ALO), the activities and use of the track can be programmed to minimise adverse impacts.
- 8.14.21. The impacts from the construction are likely to be temporary in nature during the cable pulling phases and therefore be unlikely to have a permanent impact on the value of the property interest. Due to the interested parties having an interest in land in relation to plots 30/04, 30/05, 30/06 they may not be eligible to submit a claim under S.10 CPA 1965 or part 1 LCA 1973. However, they may be eligible to submit a claim under the LCA1961, which would be considered in line with the compensation code, as covered in Articles 21 and 26 of the dDCO.

Norfolk Boreas

- 8.14.22. The Norfolk Boreas project would be subject to a separate DCO application. HoTs were issued to progress discussions in relation to land requirements on Norfolk Boreas convertor station.
- 8.14.23. It is not proposed that cables for the Proposed Development and for Norfolk Boreas be installed at the same time due to the feasibility of cable supply requirements and the technical need for close alignment with offshore installation works and associated energisation.

Site selection and design of substation

- 8.14.24. The detailed design and mitigation for the onshore project substation would be agreed post-consent and approved by the relevant planning authority. These matters were dealt with above in Chapter 4 of this Report where the ExA concluded that the dDCO makes appropriate provision to ensure that the final design of the substation and associated mitigation would be properly controlled through requirements in the recommended DCO.
- 8.14.25. The process of site selection and why Necton was chosen as the grid connection point has been considered at Section 4.4 of this Report. The connection point near Necton was fixed by NG with an input from the Applicant under a separate process. The Applicant's response to FWQ 2.1 [REP1-007] summarises the approach which started with a long list of potential locations. Longer transmission distances and locations which would not utilise existing/proposed infrastructure were eliminated on financial and environmental grounds. Final options were Norwich Main and Necton, the latter being the preferred location due to increased environmental and other implications for Norwich Main. The approach to the final selection of near Necton we found to be justified and adequate as satisfying environmental assessment regulations.

NFU/LIG concern re funding

- 8.14.26. The Applicant made clear in its responses [REP1-007] and [REP4-040] to WQ 19.4 [PD-008] and SWQ 20.135 [PD-012] that it intended to bid for a CfD at the earliest opportunity following an eventual successful decision to grant development consent. As regards the funding of the Project the Applicant has satisfied the ExA, as stated in [REP8-074] that there is a reasonable prospect of the requisite funds for CA becoming available. Also the Funding Statement [REP8-009] as supplemented by information in response to FWQ [PD-018] provides appropriate information about how the project as a whole is to be funded.

Crossing point at Oulton

- 8.14.27. The arrangements between the Applicant and Orsted H3 regarding the crossing point at Oulton have been considered in Section 8.12 above. It is clear from the SoCG with H3 [REP7-032] and the Applicant's response to WQ22.47 that the cable installation works would ensure that for example, if the first project installs the cables by way of open cut trench, that section of trenching will include enhanced thermal conductivity backfill to reduce any potential future thermal interactions with the second project. Furthermore, parties would share design specifications when known to help facilitate the design of the other party's cables at the point of crossing.

Link boxes

- 8.14.28. Cable lengths will be set at detailed design stage upon appointment of the cable contractor. As a result of the HVDC decision the number of link boxes would be no greater than 1 per circuit (up to 4 circuits for the Project and Norfolk Boreas) per 5km and link boxes would be sited "*so far as practicable within accessible field boundaries*".

Alternative access routes

- 8.14.29. The Applicant is discussing with a small number of parties preferred alternative access routes but it is recognised that accesses have been assessed individually and are secured within the Order Limits submitted as part of the application, and therefore are not able to be changed.

Haul road

- 8.14.30. The haul road would be provided using "appropriate materials to protect the ground as necessary, in co-ordination with the ALO".

Conclusion on outstanding NFU/LIG matters

- 8.14.31. The additional matters canvassed by the NFU/LIG have in our view been satisfactorily addressed by the Applicant. We conclude that in relation to the landowners represented by NFU/LIG, if the SoS is of the view that development consent should be granted, the use of CA and TP powers over the plots listed in the SCA [REP8-058] and BoR [REP8-010] would be proportionate and justified in the public interest as facilitating the Proposed Development.

N2RS

- 8.14.32. N2RS said that whilst landowners would be compensated, it is not clear how local residents and small businesses would be compensated for disturbance to quality of life or devaluation of property. N2RS considers that such parties should not be disadvantaged.
- 8.14.33. Concerns regarding property devaluation were responded to in the Applicant's Response to Relevant Representations [REP1-004]. All claims in relation to reduction in value to property would be assessed in line with the Compensation Code for which a useful set of Government guidance booklets is available on the Government web site.

8.15. HUMAN RIGHTS

- 8.15.1. The Applicant's consideration of Human Rights is set out in section 9 of the SoR [REP8-008] as it relates to:
- Article 1 of the First Protocol to the European Convention on Human Rights (ECHR) (peaceful enjoyment of possessions);
 - Article 6 of the ECHR (fair and public hearing); and
 - Article 8 of the ECHR (respect for private and family life, home and correspondence).
- 8.15.2. The Applicant's case was that the Order has the potential to interfere with the human rights of persons who hold interests in the Order Land through CA and TP provisions in the DCO. Such interference may be authorised by law provided the appropriate statutory procedures for making the Order are followed and there is a compelling case in the public interest for the compulsory acquisition and the interference with the Convention Right is proportionate. The DCO should strike a fair balance between the public benefit sought and the interference with the rights in question. The Applicant considers that there would be significant public benefit arising from the grant of development consent which is only likely to be realised if the Order included CA powers. The significant public benefits on balance outweigh the effects on persons who own property and rights within the Order Land. Those affected by CA may claim compensation under the Statutory Compensation Code and, through its parent company, the Applicant has the resources to provide such compensation. The requirements of compensation being payable for the acquisition of any interest are met. Therefore Article 1 of Protocol 1 is not contravened.
- 8.15.3. In accordance with Part 5 PA2008, the Applicant consulted persons in the categories under section 44 PA2008, which include owners of the Order Land and those who may be able to make claims either under section 10 CPA1965 or Part 1 LCA1973. No persons were identified in the latter category. All scheduled interests were able to make representations to the ExA and therefore the requirements of Article 6 are met.
- 8.15.4. We have considered human rights in relation to the Application as set out in the CA Guidance and focussing on the requirements of the ECHR Articles referred to above. We have considered the importance attached

to the existing uses of the land which is to be acquired, and the potential loss of Convention rights balanced against the public benefit that would be derived from the Project.

- 8.15.5. We found that the Applicant followed the statutory requirements in consulting on the Proposed Development, and in preparing and the submitting the Application. Those affected by the Project have had appropriate opportunities to make representations in writing and to be heard, including at OFHs and the CAH. Therefore, we are content that there has been no interference with Article 6 rights for a fair and public hearing.
- 8.15.6. Overall we are satisfied that inclusion of CA and TP powers in the Order would not constitute any unlawful interference with ECHR Rights and that but for the reasons and conclusions set out in Chapters 7 of this Report as to why we are unable to recommend that consent be granted, it would otherwise be appropriate and proportionate to make the recommended DCO including the grant of powers of CA and TP.

8.16. PUBLIC SECTOR EQUALITY DUTY (PSED)

- 8.16.1. In exercising our functions as an examining authority, we have had due regard to the PSED contained in section 149 of the Equality Act 2010, which sets out the need to eliminate unlawful discrimination, harassment and victimisation, and to advance equality of opportunity and foster good relations between people who share a protected characteristic and people who do not share it. Protected characteristics include age and disability.
- 8.16.2. In relation to the PSED the Applicant confirmed that as part of its diligent enquiry exercise no protected interests had been established.
- 8.16.3. There were no representations made by any parties directly in respect of the PSED. Several RRs did express concerns about possible impacts of the Proposed Development on human health. Generally, such issues have been considered in Chapter 4 of this Report, however a few RR's disclosed personal characteristics related to age or disability. These were the potential health impacts of the Project on:
- a young child [RR-038] (no further details provided);
 - an asthma sufferer [RR-049] with concerns over dust and disturbance from construction work that for the length of time proposed would leave her with a very poor quality of life;
 - concerns for children in general through EMF; and
 - RR from Patricia Lockwood [RR-114] who referenced human rights and proportionality in connection with the crash site (with which we deal in Section 4.9) but with particular reference to her personal circumstances and those of her mother.
- 8.16.4. We have considered each of these RR's carefully. Whilst the concerns are legitimately expressed and indeed, we sympathise with the circumstances of the individuals described, we have no evidence of any differentiated or disproportionate impacts on individuals or groups with

protected characteristics, that would not be experienced similarly by others who shared those characteristics.

8.17. SUMMARY OF CONCLUSIONS

Objections and representations to the use of CA and TP powers

- 8.17.1. We have considered the case for CA and TP powers to be contained within the recommended DCO. We conclude that the acquisition of the land and rights set out in the BoR and the subject of the various provisions on the DCO discussed above, are required in order to implement the Proposed Development. The ExA has taken into account the objections and representations made in relation to CA and TP but we consider that whether taken severally or in combination, they would not constitute a fundamental obstacle to the powers being included within the DCO should the SoS find that, notwithstanding the other matters referred to in this Report, the recommended DCO could be made.
- 8.17.2. We are satisfied that the position of statutory undertakers' land and interests would be adequately protected under Schedule 16 of the recommended DCO and conclude that the requirements of section 127(6) and section 138 PA2008 would be met if the DCO were granted.
- 8.17.3. We considered the Public Open Space included within the proposals for CA and TP and conclude that the land in question would be no less advantageous than it was before. We are therefore satisfied that the requirements of section 132(3) PA2008 would be met if the DCO is granted in the form we recommend. However, we draw attention to the position regarding NT which would require further consideration by the SoS.

Associated Development

- 8.17.4. We conclude for the reasons set out above that the provision within the Proposed Development of infrastructure works for the eventual Norfolk Boreas project, in the form of ducts to be laid to contain the cabling for that future project, meets the definition of associated development for the purposes of section 115 (2) PA2008.

Funding

- 8.17.5. The Applicant would be able to secure appropriate funds both for compensation to landowners and for the construction of the Proposed Development via its Parent Company, a Swedish state-owned undertaking with substantial net assets and a positive track record in the field of renewable energy development. We are satisfied that funding is likely to be available for claims for compensation by landowners, that the Project is soundly backed and there is no reason to believe that, if the Order is made, the Proposed Development would not proceed.

Human rights and PSED

- 8.17.6. We conclude that the inclusion of CA and TP powers would interfere with the right to peaceful enjoyment of possessions under Article 1 of the First

Protocol to the ECHR but that CA would be necessary to facilitate the Proposed Development's implementation because any infringement of ECHR rights would be proportionate and justified in the public interest, and would strike a fair balance between the public interest in the Project proceeding and the interference with the rights of those affected. We also considered the PSED but concluded there was no evidence that implementation of the Proposed Development would disproportionately affect persons who enjoy a protected characteristic, nor would there be any adverse effect on the relationships between such persons and persons who do not share a protected characteristic.

8.18. OVERALL CONCLUSION

- 8.18.1. Our overall conclusion in Chapter 7 on the case for development consent is that, for the reasons given consent should not be granted for the Proposed Development. Consequently, we are unable to conclude that there is a compelling case in the public interest as is required to be demonstrated to justify the inclusion of CA and TP powers.
- 8.18.2. However, the SoS may conclude otherwise, that is to say that development consent should be granted. We have examined the case for CA and TP on that basis and conclude that the Applicant has complied with the relevant legislation (including secondary legislation) and guidance relative to the inclusion of CA and TP powers in the DCO. But for the matters on which we have recommended against the Application we would otherwise have concluded that a compelling case had been made in the public interest for the DCO to include CA and TP powers to facilitate the Proposed Development.
- 8.18.3. The NPSs identify a national need for renewable electricity generating capacity. The need to secure the land and rights required, and to construct the Proposed Development within a reasonable commercial timeframe, represents a significant public benefit
- 8.18.4. In relation to CA and NT land, there is outstanding information required to the effect that agreement with NT has been reached that the NT land should be excluded from the scope of the CA powers set out in the DCO, unless the DCO is to be subject to SPP.
- 8.18.5. The commercial agreement between the Applicant and Network Rail is yet to be signed and completed, upon which event Network Rail has said it would communicate to the SoS withdrawal of its objection to CA of its land or in any event inform the SoS of the position within three months of the close of the Examination.
- 8.18.6. The private loss to AP's would be mitigated through the cable route selection, choice of the application land, the undergrounding of cables and the extent of the rights and interests proposed to be acquired.
- 8.18.7. The Applicant has explored all reasonable alternatives to the CA of land, rights and interests sought and there are no alternatives that ought to be preferred.

- 8.18.8. Adequate and secure funding would be available to enable compensation being made in accordance with the statutory provisions as amended by the DCO following the Order being made.
- 8.18.9. The proposed interference with the human rights of individuals would be for legitimate purposes that would justify such interference in the public interest and to a proportionate degree.

9. DRAFT DEVELOPMENT CONSENT ORDER AND RELATED MATTERS

9.1. INTRODUCTION

- 9.1.1. This Section of the Report describes the DCO as applied for and the changes made to it during the Examination. It sets out matters that remained in dispute at the end of the Examination, our recommendations on those matters and the resultant changes that would be made to the Applicant's preferred dDCO.
- 9.1.2. For the reasons set out in this Report at Sections 7 and 10 the ExA are unable to recommend that consent be granted for the Proposed Development. However, the Secretary of State, having considered all matters including any eventual further consultation deemed necessary, may nevertheless decide to grant such consent. In such circumstances and for the reasons set out below we recommend that the DCO be made in the form annexed at Appendix D.
- 9.1.3. The Applicant submitted the dDCO [APP-005] with the Application. Subsequent versions of the dDCO and accompanying Schedule of Changes were submitted at the following deadlines:
- D2: dDCO [REP2-017]; Schedule of Changes [REP2-019]
 - D4: dDCO [REP4-027]; Schedule of Changes [REP4-029]
 - D7: dDCO [REP7-003]; Schedule of Changes [REP7-038]
 - D8: dDCO [REP8-003]; Schedule of Changes [REP8-059]
 - D9: dDCO [REP9-007]; Schedule of Changes [REP9-041]
- 9.1.4. The Applicant provided a tracked changes version of the dDCO and Schedule of Changes. The Explanatory Memorandum [APP-006] was revised accordingly during the Examination with the final version submitted at D8 [REP8-005].
- 9.1.5. At the following ISH's the ExA asked questions about the dDCO and tested the Applicant's case for inclusion of certain provisions:
- ISH3, 7 February 2019: agenda [EV-010b], recording [EV-011],[EV-012];
 - ISH5, 28 March 2019: agenda [EV-025], recording [EV-018], [EV019]; and
 - ISH7, 25 April 2019: agenda [EV-034] recording [EV-035], [EV-036], [EV-037]
- 9.1.6. We also requested information about the dDCO in FWQs [PD-008], SWQs [PD-012] and Rule 17 requests [PD-018] [PD-019] [PD-020] [PD-021].
- 9.1.7. The ExA published a draft DCO Schedule of Changes [PD-017] on 9 May 2019. This was responded to by the Applicant at D8 in its Comments on ExA's draft DCO Schedule of Changes [REP8-065].

- 9.1.8. Several SoCGs recorded agreement or disagreement on the content and wording of the dDCO and many written submissions made during the Examination included comments on the dDCO. Our recommendations on the dDCO have taken into account all these submissions as well as the information received from the examination methods described above.

Rule 17 requests relevant to drafting of DCO

Continuous periods of operation

- 9.1.9. Applicant's assessment in "Consideration of potential impacts related to continuous periods of operation - Referred to in DCO Requirement 26(a) and 26(d)" [REP8-070] at D8.
- 9.1.10. The Applicant responded to FWQs Q13.6 and Q20.59 [PD-008] that essential activities at the onshore project substation and National Grid extension and trenchless crossings / cable pulling works along the cable route would be undertaken within the consented hours so far as possible but may need flexibility to continue beyond those hours.
- 9.1.11. A Construction Noise Management Plan (CNMP) will be included in the final CoCP, as required under Requirement 20 (2)(e) of the dDCO [REP9-007]. The assessment made [REP8-070] combined with the mitigation captured in the CoCP demonstrates that should works be required to extend beyond the consented working hours potential noise impacts at the nearest noise sensitive receptors can be mitigated such that residual impacts would be negligible. Therefore, the continuous periods of operation listed under DCO Requirement 26(a) such as concrete pouring, drilling, cable pulling; and 26(d) - trenchless crossing installation techniques, have been assessed for impacts associated with evening, weekend and night time working, and appropriate mitigation is captured within the OCoCP and secured through Requirement 20(2)(e).

Force majeure

- 9.1.12. Clarification was sought in a request for further information [PD-018] in relation to Conditions 13(1) of Schedules 9 and 10 and 8(1) of Schedules 11 and 12 (Force majeure). The Applicant in its response at D8 [REP8-074] confirmed that the purpose of this Condition is to report unauthorised deposits only. Although this Condition is a standard condition for offshore wind schemes and DMLs of this nature, the Applicant agrees that the Condition should be amended to provide clarity. The Applicant amended the dDCO D8 [REP9-007] accordingly and agreed this approach with the MMO.

9.2. THE DCO AS APPLIED FOR

- 9.2.1. The dDCO [APP-005] submitted with the Application would grant development consent for, and authorise the Applicant to construct, operate and maintain the Proposed Development together with all necessary and associated development. For the purposes of carrying out the Proposed Development the Applicant would be authorised by the DCO compulsorily or by agreement to purchase land and rights in land to use land, as well as to override easements and other rights. The dDCO [APP-

005] would also grant deemed marine licences (DMLs) for the marine licensable activities involved in the construction of the generating station and associated development.

9.2.2. The DMLs are incorporated within the DCO and references in this Chapter to the DCO or dDCO include the DMLs unless the context requires otherwise.

9.2.3. The dDCO was drafted in 7 Parts and 16 Schedules as follows:

- Part 1:
 - Articles 1 and 2 give the citation and commencement date of the DCO and interpretation provisions.
- Part 2:
 - Article 3 grants consent for the authorised development and the ancillary works within the Order Limits. Article 4 specifies deviation limits for Work No. 11. Article 5 permits the construct and maintenance of the authorised project and Article 6 enables transfer of the benefit of DCO provisions. Article 7 applies and modifies certain legislative provisions and Article 8 provides for a defence to statutory nuisance proceedings.

9.2.4. Part 3:

- Articles 9 to 13 enable street works for the authorised project, the temporary stopping up of public rights of way, temporary stopping up of streets, the formation and laying out of means of access, and consequential agreements between the undertaker and street authorities. Article 14 applies the New Roads and Street Works Act 1991 (NRSWA1991) when street works are undertaken or streets are stopped up.
- Part 4:
 - Article 15 permits discharge of water and works to watercourses. Article 16 gives authority to survey and investigate the land onshore and Article 17 provides for the removal of human remains.
- Part 5:
 - Articles 18 to 30 provide for the compulsory acquisition of land and rights, the temporary use of land, and the acquisition of rights in the subsoil or airspace only, including rights under or over streets. These Articles also apply compulsory purchase legislation with modifications, provide for private rights to be suspended, and enable new rights or restrictive covenants over statutory undertakers' land to be acquired subject to compensation for any necessary new connections.

- Part 6
 - Article 31 authorises the undertaker to operate the generating station and Article 32 gives effect to the deemed marine licences in Schedules 9, 10, 11 and 12.
- Part 7:
 - Article 33 applies landlord and tenant law to the leasing of or agreement for the construction, operation and maintenance of the authorised project. Under Article 34 the development consent granted is deemed to be a planning permission for operational land under TCPA1990. Articles 35 and 36 permit felling or lopping of trees and removal of hedgerows, and trees subject to tree preservation orders. Articles 37 to 42 provide for certification of plans, disputes under the DCO to be referred to arbitration, the procedure for approvals and discharge of Requirements, abatement of works abandoned or decayed, saving provisions for Trinity House and preservation of Crown rights. Article 41 gives effect to protective provisions set out in Schedule 16.
- Schedule 1
 - Parts 1 and 2: description of the authorised project and ancillary works
 - Part 3: Requirements
- Schedules 2 to 8
 - streets subject to street works and public rights of way, streets to be stopped up and access to Works (Schedules 2 to 5)
 - land in which new rights may be acquired (Schedule 6)
 - modification of compensation and compulsory purchase legislation for creation of new rights (Schedule 7)
 - land which may be used temporarily for the authorised project (Schedule 8)
- Schedules 9 to 12
 - DMLs for Generation Assets, Phase 1, DML for Generation Assets, Phase 2, DML for Transmission Assets, Phase 1, and DML for Transmission Assets, Phase 2 (Schedules 9 to 12)
- Schedules 13 to 16
 - removal of hedgerows (Schedule 13)
 - arbitration rules (Schedule 14)
 - procedure for discharge of Requirements (Schedule 15)
 - protective provisions (Schedule 16)

9.3. CHANGES DURING THE EXAMINATION

9.3.1. This section of the Report explains the main changes made to the dDCO during the Examination.

9.3.2. The structure of the DCO described earlier in this Report remained the same during the Examination. There were several minor changes,

corrections and drafting improvements which are set out in the Schedule of Changes [AS-040]. Subsequent versions of the Schedule were updated at D2 [REP2-019], DL 4 [REP4-029], D7 [REP7-038], D8 [REP8-059] and finally at D9 [REP9-041].

- 9.3.3. The numbering of various parts of the dDCO has changed with later iterations. Henceforth we use numbering from the recommended DCO (Appendix E) unless indicated otherwise.
- 9.3.4. Table 9.1 sets out the key changes made by the Applicant during the Examination, contained in the preferred dDCO [REP9-007], and which the ExA recommends should remain. The changes followed discussion at ISHs and in response to written questions and submissions from interested persons. We are satisfied that these changes are justified by the evidence we have examined and recommend they are included in the DCO if the development consent is granted.

Table 9.1: Changes made by the Applicant during the Examination

Provision	Change	ExA Comments
Text	Text	Text
Schedule 6	Plot 41/26 removed from Schedule 6 (referred to in Land Plans, sheets 40 – 42)	Updated to remove Plot 41/26 as this was included in Schedule 6 in error
Schedule 4	amended to add an unidentified private track within Work No.6	To align with its inclusion as shown on sheet 21a and 21b on sheet 21
Schedule 4	Amended to add new area of A47 124.33m long between '41q and 41r' to be stopped up	To align with its inclusion in Sheet 41 of the Works Plans
Article 35 and Schedule 13	Updated to include 3 categories of hedgerow: (1) potentially important hedgerows; (2) important hedgerows; and (3) hedgerows.	Assessments for some hedgerows will take place prior to commencement of development. It is therefore not yet clear whether these hedgerows will be "important hedgerows".
Schedule 1, Part 1	Total offshore disposal volume 51,207,566m ³ included which combines the transmission and generation DML values	Responds to MMO and NE

Provision	Change	ExA Comments
Schedule 1, Part 1 and Schedules 9 to 12 Part 3 1(f)	To include a total volume for drill arisings	Responds to MMO and NE
Schedules 9 and 10 Part 4 condition 14(1)(n); Schedules 11 and 12 Part 4 condition 9(1)(m)	New condition included to restrict the maximum hammer energy to the worst case scenario assessed in the ES	Responds to MMO
Schedules 9 and 10 Part 4, Condition 12(4) Schedules 11 and 12 Part 4, Condition 7(4)	Deadline for disposal return extended to 15 th of month following disposal period	Responds to MMO
Schedule 1, Part 3, Requirement 2(b) Schedules 9 and 10, Part 4, Condition 1(1)(b)	Maximum height of a wind turbine generator to the centreline of the generator shaft forming part of the hub has been revised from 200m to 198.5m in accordance with the parameters in ES.	Responds to MMO and NE
Schedule 1, Part 3, Requirement 5; Schedules 9 and 10, Part 4, condition 3; and Schedules 11 and 12, Part 4, condition 2	Updated to include the total area (in m2) of cable protection.	Responds to MMO
Schedule 1, Part 3, 11; Schedules 9 and 10, Part 4, 8(1)(g); and Schedules 11 and 12, Part 4, 3(1)(b)	Updated to include the total area (in m2) of scour protection	Responds to MMO
Schedules 9 and 10, Part 4, condition 8; and Schedules 11 and	The updated maximum areas for cable and scour protection and drill arisings to be reflected in the DML	To make clear that the other licence does not have a new maximum parameter (i.e. the amount will have been

Provision	Change	ExA Comments
12, Part 4, condition 3	conditions. The figure is the same for both generation DMLs, a separate figure is included and replicated across both transmission DMLs. The maximum areas are in the list of figures to be read together with the other licence for that respective class of asset.	reduced by the other phase for that class of asset).
Schedule 1, Part 3, 8(2); Schedules 11 and 12, Part 4 1(2)(c)	Updated maximum combined area for the foundations connected to the offshore electrical platform(s)	To align with parameter in ES
Article 2, Interpretation; Part 1 Interpretation' section of each of the DMLs (Schedules 9-12)	To include a definition of 'scour protection'	Responds to a question from the ExA, FWQ 20.116 [PD-008]
Article 2, Interpretation	The definition of 'maintain' is augmented and differentiated for the various purposes of ancillary works and as it appears in the DMLs	Responds to a question from the ExA FWQ 20.8 [PD-008]
Schedule 1, Part 3, 20(1)	The wording in the CoCP Requirement 20 has been updated	Responds to EA and question from the ExA FWQ 20.50 [PD-008]
Article 2, Interpretations	The definition of overhead line modification has been changed	Responds to changes to the overhead line search area and connected to the changes to NG overhead line search area in the Change Report [AS-009]
Article 4	Amended to allow for deviation limits to overhead lines	Responds to request from NG and FWQ 20.11

Provision	Change	ExA Comments
Article 6	Condition added that NG is consulted prior to consent being given to transfer of the benefit of any of the onshore infrastructure	Responds to request from NG
Article 28	Amended to make the extinguishment of private rights and restrictive covenants supporting NG's apparatus removed from the land, dependent on such rights being extinguished before giving up possession of the land, and to delete requirement to remove foundations	Responds to request from NG
Schedule 1, Requirement 8(1)(a)(b) Schedule 11 & 12, Part 4, 1(2).	Parameters updated from six to twelve driven piles per offshore electrical platform; and from three to five metres for pile diameters in the case of two or more pile structures	Change explained in Responses to FWQs Appendix 6.1 - Relationship Between Design Parameters in dDCO and ES (ExA; WQApp6.1; 10.D1.3).
Schedule 1, Part 1 (Work No. 7A – 7D)	Work No.7A – Work No.7D has been deleted	Change Report – a single route was agreed with landowners in relation to the previous Work No. 7A – Work No. 7D, removing need for route bifurcation
Schedule 14 (paragraph 7(2))	Confidentiality provisions amended to clarify that a party can disclose information in accordance with an obligation required by law	Responds to MMO concern that regulatory decisions should be publicly available and open to scrutiny
Schedule 6 and Schedule 8	Change Report Amendments to plots to reflect the updated Land Plans reflecting	Following discussions with landowners

Provision	Change	ExA Comments
	removal of plots that represented different options within the cable route where a single route has now been selected along Work No 7. Plots omitted in error also added	
Schedule 6	New right added for overhead line easements	To follow NG's standard wording for easements
Article 2; Article 37; Schedules 9-10 (Condition 14(1)(d)) and Schedules 11 and 12 (Condition 9(1)(d))	Outline Fisheries Liaison and Co-Existence plan added to be certified by the Secretary of State under Article 37	As a result of continued liaison and consultation with the MMO and fisheries stakeholders
Article 2 Schedule 1 (Work No.1 (a)), Part 3, Requirement 6(2); Schedules 9 and 10, Part 1, paragraph 1 and Part 4, condition 4(2)	Floating foundations have been removed from the Project Design Envelope	Following refinement of design options for this Project
Article 6(7)	The Secretary of State is removed from the arbitration provisions	The Applicant considered submissions following ISH3
Article 37(1)(x)	Outline Norfolk Vanguard Haisborough, Hammond, and Winterton Special Area of Conservation site integrity plan added	To ensure the plan is certified as referred to in condition 9(1)(n) of the Transmission DMLs
Article 38	Article made subject to saving provisions for TH, and MMO expressly excluded from arbitration provisions	Responds to TH and MMO
Schedule 1, Parts 1 and 3,	Total number of WTGs reduced from 200 to	Due to removal of 9MW turbine option

Provision	Change	ExA Comments
Schedules 9 and 10, Parts 3 and 4	180 and minimum WTG spacing increased	
Schedule 1, Part 3, requirement 12(1)	Lighting installed to address MoD safety requirements will be operational for life of the authorised development	Agreed with MoD prior to ISH3 and in response to ExA WQ 20.126
Schedule 1, Part 3, requirement 18(2)(d)	Hedgerows added to protection measures during construction period	Responds to NNDC and ExA Q20.121
Schedule 1, Part 3, requirement 20(1)	NCC added as consultee and for rights of way in relation to CoCP	Responds to NNC and ExA WQ 20.128
Schedule 1, Part 3, requirement 20(4)	To provide for a separate plan to approved for screening, fencing and site security works	Responds to Q20.128.
Schedule 1, Part 3, requirement 21(3)	To make pre-commencement works accord with the outline access management plan	Responds to ExA Q20.130
Schedule 1, Part 3, requirement 25(1)	Works involving watercourse crossings subject to prior consultation with NCC, EA and drainage authorities	Responds to NCC and ExA WQ 20.129
Schedules 6 and 8	Amendments to plots to reflect updated Land Plans and BoR	As a result of the Minor Change Request
Schedules 9 to 12 Part 1	To clarify that cable protection will be required where cables are not buried because they are approaching turbines or other infrastructure	For clarification

Provision	Change	ExA Comments
Schedules 9 and 10, Part 4, condition 9(11); Schedules 11 and 12, Part 4, condition 4(11)	New wording for notifying exposure to cables	To deal with comments from NFFO and to address ExA WQ 20.157
Schedules 9 and 10, Part 4, condition 15(3)-(6) Schedule 11 and 12, Part 4, condition 10(3)-(6)	Amended to provide an adequate and appropriate discharge mechanism under the DMLS	Responds to MMO, NE, and ExA Q.20.139 and in view of removal of MMO from arbitration
Schedules 9 and 10, Part 4, condition 19(3)	Amended to require cessation of piling if noise impacts differ from ES assessment or failures in mitigation	Responds to MMO and ExA WQ 20.140.
Schedules 11 and 12, Part 4, condition 9(1)(n)	Requires the submission and approval of a HHW SIP to secure mitigation associated with the HHW SAC in a single plan and via a separate condition in the transmission asset DMLs	Responds to NE and ExA Q.5.26
Schedules 11 and 12, Part 4, condition 14	Noise monitoring requirements enhanced	To reflect related changes made to Condition 19(3) of the generation DMLs
Schedule 15	Amendments to the procedure for discharge of requirements	Responds to NNDC
Schedule 1, Part 1	Passing places have been included in the description of development	Applicant has included them as they proposed as part of the highways mitigation to address cumulative impacts
Schedule 1, Parts 1 and 3	Updates to disposal figures; turbine spacing; cable protection volume and area; foundation	Due to removal of 9MW turbine option and removal of floating foundation

Provision	Change	ExA Comments
	footprints; scour protection;	
Schedule 1, Part 3, requirement 17	Requires remedial measures if Work 4C exposed due to landfall erosion	Responds to NNDC
Schedule 1, Part 3, requirement 32	Work 8A and Work 10A to be subject to operational drainage plan at Necton NG substation and the onshore project substation	Responds to NNDC
Schedule 1, Part 3, requirement 33	Provides for implementation of an approved Skills and Employment Strategy	As requested by NCC.
Schedules 9 and 10, Part 3 and Part 4	Figures updated to reflect removal of floating foundation and 9MW turbine, to capture the disposal site references,	Applicant change
Schedules 9 and 10, Part 4, condition 14(1)(d)(vi)	Requires mitigation to minimise disturbance to red-throated diver during operation and maintenance	RTD mitigation requested by NE
Schedules 9 and 10 Part 4, condition 15(4) Schedule 11 - 12 Part 4, condition 10(4)	Provisions for applications to MMO amended	Responds to MMO
Schedule 1, Part 3, Requirement 2(3) Schedules 9 and 10, Part 4, Condition (1)(3)	Apportionment of WTGs between NV East and NV West	To secure the additional mitigation in relation to offshore ornithological impacts by way of a revised turbine layout
Schedule 1, Part 3, Requirement 19	To allow replacement of a new species of trees as agreed with the RPA	To provide flexibility if species inappropriate for the area

Provision	Change	ExA Comments
Schedule 1, Part 3, Requirements	New requirement to ensure approved mitigation is in place before any adverse impact arises on the Primary Surveillance Radar (PSR) system at Cromer and NATS's related air surveillance and control operations	To secure mitigation in relation to impacts on the Cromer Primary Surveillance Radar
Schedules 9 and 10, Condition 15 Schedules 10 and 11, Condition 9	The design plan required by condition 14(1)(a) must be prepared and determined by MMO in accordance with the Development Principles	To reflect the Design Principles as agreed with the MCA
Schedules 9 and 10, Condition 22 Schedule 11-12, Condition 17	New condition to provide for reporting of cable protection	Responds to points raised by the MMO
Article 6	Extends period for SoS to decide on transfer of benefit of DCO to 8 weeks instead of 4 weeks	Responds to comments from ExA in our Schedule of Changes
Article 6	Amends transfer of benefit provisions to protect position agreed with NG and Cadent	Responds to NG and Cadent Gas
Schedule 1, Part 3, Requirement 3(1) Schedules 9 and 10, Part 4, Condition 1(3)	Amendment allows flexibility between minimum and maximum numbers of WTGs in NV East and NV West	Reflects ExA's suggested changes to the dDCO
Schedule 1, Part 3, Requirement 16(16); Schedules 6 and 8	Adds A1067 Road (Work No. 7) for which trenchless installation techniques must be used	Reflects traffic assessments and consultation with NCC.
Schedule 1, Part 3, Requirement 24(3)	Construction works within 5km of the Broadland SPA and	To reflect discussions with NE and to sign post mitigation for the SPA

Provision	Change	ExA Comments
	Ramsar site must be carried out in accordance with approved mitigation	
Schedule 1, Part 3, Requirement 26(5)	No crushing or screening works must take place at any time on any of the mobilisation areas, without the prior written consent of the relevant planning authority	Reflects suggestions from the ExA in the Schedule of Changes
Schedule 1, Part 3, Requirement 34	Amends mitigation provisions for Cromer Primary Surveillance Radar	Responds to NATS
Schedules 9 and 10, Part 4, 13(1); and Schedules 11 & 12, Part 4, 8(1)	Amends provision for notice of unauthorised deposits from vessels	Responds to ExA Schedule of Changes to reflect intention of parties
Schedules 11 and 12, Part 4, Condition 18	Restricts cable installation for Work No. 4A and Work No. 4B	Addresses concerns of NE to mitigate impact on red throated diver during cable installation
Schedule 16, Part 2, Part 3, Part 5	Protective provisions amended	Reflects agreement with NG, Cadent Gas and Network Rail
Schedules 9 and 10, Part 4, Condition 15(8) Schedules 11 and 12, Part 4, Condition 10(8)	Amends provisions for commencement of authorised scheme subject to MCA	Applicant agreed to adopt the MCA's preferred wording
Schedules 9 and 10, Condition 14(1)(e), and Condition 9(1)(e) of Schedules 11 and 12 – “distribution” of scour protection and cable protection	To provide for certainty in the Scour Protection and Cable Protection Plan the ExA proposed a change to the condition to define “distribution” to include quantities in respect of each structure comprised in the offshore works and	<p>The MMO agreed to the inclusion of this new sub-condition</p> <p>The Applicant has included the suggested wording within Condition 14(1)(e) (Schedules 9 and 10) and Condition 9(1)(e) (Schedules 11 and 12) of the DMLs submitted at D8</p>

Provision	Change	ExA Comments
	intended to be subject to scour and cable protection	

9.4. MATTERS OUTSTANDING AT THE END OF THE EXAMINATION

- 9.4.1. We now turn to matters concerning the content and wording of the DCO that were unresolved at the end of the Examination. Table 9.2 contains the substantive changes which the ExA recommends should be made to the Applicant's preferred dDCO [REP9-007]. The recommended DCO is at Appendix E.

Schedule 1 Part 3, stipulation for use of HVDC

- 9.4.2. At ISH1 the Applicant suggested that the key concern of local residents was the impact arising from the "physical manifestations" of the choice of HVDC, particularly in terms of the onshore station required. At ISH3 the Appellant submitted that it is the physical manifestations of the choice of HVDC, when compared with larger scale requirements of HVAC installation, that is secured by the DCO and therefore restriction to HVDC is achieved, there being no need for HVDC to be specified in the DCO.
- 9.4.3. NNDC made an argument for stipulating in the DCO that the Project should use HVDC at [REP3-055]. This was on the basis that the choice of transmission via HVDC drove the physical manifestations and so the shape of the DCO. Therefore, it was reasonable to include a reference to HVDC within the DCO.
- 9.4.4. The term HVDC is not defined in the DCO and all parties acknowledge that the choice of HVDC has been important to the DCO process. However, as NNDC implicitly accept in [REP-055] no type of transmission other than HVDC is capable of being implemented through the infrastructure. Moreover, there are cables which are required to be HVAC both at the turbine point and where the energy is fed into the National Grid. Therefore, the ExA consider it would be impractical and a possible hostage to fortune to draft changes to any of the technical or detailed elements of the works, or to impose a general requirement that may be open to misinterpretation.
- 9.4.5. NNDC proposes a fallback position if it is not deemed appropriate to secure the choice of HVDC in the DCO, namely to record within the Report that a change to HVAC would necessarily be a material amendment. We have had regard to the Applicant's Response to NNDC's LIR [REP1-099] for the reasons there set out (pp 4-5; section 4).
- 9.4.6. NNDC welcomes the Applicant's confirmation of this at ISH1 that there is *"no possible way it could be argued that a change to HVAC would amount*

to a non-material change to the DCO.” In light of those submissions, the ExA can confidently record those matters in its Report.

Requirement 16(9) – appearance of electrical equipment

- 9.4.7. NPC at D7 [REP7-076] made what we regard as a sensible suggestion to add a requirement that the finishes of the equipment be approved. Whilst the Applicant correctly notes in its D8 Comments on D7 Written Submissions [REP8-062] that a further level of design would cover issues such as the colour and material selection for structural components, the preferred dDCO does not deal specifically with Work 10A.
- 9.4.8. The ExA therefore recommends a further revision to R16(9) to include a requirement for the appearance of the works comprised in Work No. 10A to be approved by the relevant planning authority prior to construction.

Requirement 16(17) - additions to trenchless crossings

- 9.4.9. The Applicant responded to NCC’s request for additional trenchless crossings at the A1067 and B1149 in its Technical Note [AS-047]. By D8 the Applicant had committed to the trenchless crossing of the A1067 and the matter was resolved with the inclusion of the A1067 in the list in R16 [REP8-060].
- 9.4.10. As to the B1149 the dispute was unresolved at D9. The parties’ positions are set out in the SoCG [REP9-047], the D9 Position Statement on unresolved traffic matters [REP9-032] and the letter from NCC at [REP9-060]. NCC insisted that trenchless crossing be used although we have noted that R21 would ensure that no onshore transmission works would commence until a TMP has been submitted to, and approved by, the relevant planning authority in accordance with the highway authority, ie NCC. We found at Section 4.7 of this Report that the tight geometry involved, the rigid nature of loads and other limitations justified a firm recommendation that the B1149 is included in the list of trenchless crossings in R16.
- 9.4.11. However, by the time that the SoS considers her decision in this matter, she may have made a decision on the H3 application for a DCO. Given that the AILs are only associated with the H3 project and the current Proposed Development does not require the movement of AILs, if the H3 Project is not approved, the need to utilise a trenchless crossing of the B1149 would be superfluous. The above recommendation is therefore predicated on the basis that the H3 DCO is made and development commences.
- 9.4.12. In addition, we considered in Section 4.5 of this Report whether Colby Road (Church Road), north of Banningham (Work No 5) requires a trenchless crossing method due to the potential for the loss of roadside trees resulting in a significant effect on landscape character and visual amenity. The magnitude of change in this locality and the loss of such a distinctive canopy is such that the ExA concluded that the location should be added to the list of trenchless crossings.

- 9.4.13. The final position as between NNDC and the Applicant was set out in the latest SoCG [REP8-088] at D8 in which NNDC maintained its position as described above. In order to gain access an opening would be required of some 15m width in the hedgerows either side of Colby Road. Whilst a trenchless crossing would not remove the need to open a gap in the hedgerow and micro-siting the cable route would retain as many trees as possible, the Applicant could not guarantee the avoidance of the loss of the 3-4 trees identified by NNDC as of particular significance. Loss of any trees here would have a significant effect, as agreed within the Applicant's LVIA [APP-353] and it is accepted that it is not possible to replace trees within the gap as this would be above the operational cables. We therefore recommend the inclusion of the Colby Road location in the list of trenchless crossings.

Requirement 19(2) –replacement period in landscaping scheme

- 9.4.14. NNDC in its D3 submission [REP3-055] requested a ten-year rather than a five-year replacement planting period under requirement 19 (2). NNDC had adopted a similar position in relation to H3 and said it was standard practice for NNDC to impose a ten-year replacement planting period condition on major developments where landscaping was an important element of the proposal. Several precedents were provided including planning decisions where a ten-year period was imposed [REP3-055].
- 9.4.15. In its final position within the SoCG [REP8-088] at D8 the Applicant appeared to commit to ten years of post-planting maintenance for replaced trees within the area of NNDC, subject to landowner agreement. However, it also stated as regards the wording of Requirement 19 that five years was a standard timeframe for hedgerows, most defects would occur in the first five years and plants that survive the first five years are then robust and well established. Ongoing maintenance beyond five years was not therefore necessary. Notwithstanding that position we were persuaded by the evidence submitted by NNDC in terms of growth rates and recommend that an amendment should provide for a ten-year replacement planting period.

Requirement 20(2)- further noise attenuation measures

- 9.4.16. NNDC requested that Requirement 20(2) be amended to include, for construction noise and vibration, the use of low noise reversing warnings on vehicles and temporary acoustic barriers. The Applicant agrees with the principle of this change but considers that the detail is better placed in the OCoCP. The Applicant updated the OCoCP submitted at D8 to include a preference for the use of "*low noise reversing warnings*" within the suite of best practical means identified for minimising noise impacts, referred to in D8 Submission - Applicant's Comments on Deadline 7 Written Submissions [REP8-062].
- 9.4.17. On balance the Panel consider its proposed change to the dDCO should remain in the interests of certainty: for example low noise reversing warnings can alleviate stress that would otherwise be caused by the use of older mechanisms with high pitched sounds that are significantly intrusive. It would be for the RPA to determine in each case whether

these further measures should be implemented for a particular location of the works.

Requirement 21(2) – timing of traffic management measures

- 9.4.18. In Section 4.7 of this Report we considered how the traffic management measures comprised in the TMP, Traffic Plan, and AMP should relate to the timing of construction work. We concluded that owing to the importance of the transport mitigation measures envisaged, these plans should be in place prior to commencement of the relevant stage of works. Consequently, we recommend an amendment to Requirement 21(2) to give effect to our findings.

Requirement 26 – continuous periods of operation

- 9.4.19. The ES does not consider continuous periods of operation for which the preferred dDCO would permit construction work for essential activities, other than at landfall, nor does it consider the impact of onshore transmission works requiring trenchless installation outside of the normal working hours. On this basis the ExA proposed the omission of Requirement 26(2)(a) and (d). NNDC supported the amendments.
- 9.4.20. The Applicant refers to its D8 Deadline 8 Submission "Consideration of potential impacts related to continuous periods of operation - Referred to in DCO Requirement 26(a) and 26(d)" [REP8-07]. NNDC's position is also set out at in the SoCG with NNDC [REP8-088]. Perceived advantages for night working at landfall would be shorter total construction duration in the area reducing this timeframe from 20 weeks down to 14 weeks and reduced risk of drill failure from continuous working. It may also be necessary to complete works in a continuous period dictated by for example concrete curing requirements, or unforeseen issues in the cable pulling process.
- 9.4.21. However, NNDC have serious concerns regarding sleep disturbance and adverse impacts from construction activities 24 hours a day such that the 20-week construction period using standard construction working hours would be preferable. Should there be a technical need for 24-hour working at landfall NNDC needs to be satisfied that the Applicant has demonstrated effective enhanced mitigation to reduce noise to minimum levels.
- 9.4.22. The assessment in [REP8-070] with mitigation captured in the CoCP persuades the Applicant that potential noise impacts at the nearest noise sensitive receptors can be mitigated such that residual impacts would be negligible. This mitigation would be secured in the OCoCP and secured through Requirement 20(2)(e) of the dDCO. Accordingly, Requirement 26(2)(a) and (d) can be retained as in the Applicant's preferred dDCO [REP9-007].

Requirement 26(4) – non-standard construction hours

- 9.4.23. In Section 4.12 we found that to avoid non-standard construction hours having unacceptably adverse impacts full details of the works, including type of activity, timing and duration, vehicles types and movements and

proposed mitigation, should be approved by the relevant planning authority prior to commencement of those works. We recommend a change to the preferred dDCO to give effect to our conclusions on this matter.

Requirement 27 – control of noise during operational phase

- 9.4.24. The noise rating level of the proposed substation would be controlled and monitored by R27 of the dDCO and requires a scheme for monitoring compliance with the noise rating levels to demonstrate that the appropriate noise levels have been achieved during operation of the Proposed Development. In Section 4.12 we concluded that the results of the monitoring should be submitted to the relevant planning authority and in the event that emissions exceed the stated level, the ExA considers that the monitoring scheme should also include details of any remedial works and a programme of implementation. We therefore recommend the additional wording to R27(3) to secure this.
- 9.4.25. In addition, whilst the Applicant considered that noise levels during maintenance would be no greater than operational noise, in order to ensure that noise limits during maintenance periods are properly controlled, we recommend an amendment to the wording of R27 (1) and (2) to make it apply also during maintenance.

Requirement 34 - tourism and associated business impact mitigation strategy

- 9.4.26. The ExA suggested this change which addressed concerns raised by NNDC at D7 [REP7-080]. The change would require that no part of Work No. 4C or Work No. 5 within the District of North Norfolk may commence until a tourism and associated business impact mitigation strategy has been submitted to and approved in writing by NNDC.
- 9.4.27. The case made by NNDC is discussed at Section 4.8 of this Report. However, we considered the Applicant's strong opposition to this amendment made in response to our suggested change. We reflected on the Applicant's comments in the SoCG with NNDC [REP8-088] submitted at D8 and the position statement in support of its case that a tourism mitigation strategy is not necessary, appropriate or reasonable for this project. For the reasons set out earlier in Section 4.8 we have concluded that NNDC has not made out its case that a mitigation strategy is justified on the evidence. Therefore, we do not recommend any change to the preferred dDCO [REP9-007] in this respect.

Schedules 9 to 12, Part 5 – procedure for appeals

- 9.4.28. Background: There is a statutory process for appeals against licensing decisions set out in s73 MCAA2009 and regulations made under that section. Currently the refusal of a marine licence, or grant subject to conditions, is subject to a statutory appeal procedure. However, there is no statutory right of appeal in relation to decisions made by the MMO on an application for the discharge of DML conditions. Any challenge to a

refusal to discharge a DML condition, or a failure to make a decision, is by way of judicial review.

- 9.4.29. The Applicant maintains that it is essential to have an external and independent appeals process connected to a refusal or non-determination under the DMLs. It argues that judicial review is not an appropriate mechanism for challenging a decision or non-determination under a DML. The Applicant explained this in more detail in a position statement with the MMO at [REP9-030].
- 9.4.30. Throughout the Examination the Applicant's view was that the MMO should be subject to arbitration explained in the summary of the Applicant's oral case at ISH 5 [REP6-014]. Following ISH the MMO set out its views in post hearing submissions [REP3-046].
- 9.4.31. Notwithstanding its maintained position, the Applicant was keen to agree a pragmatic solution which it considered would be workable for the Applicant and the MMO. Therefore, the Applicant removed the MMO from arbitration in return for the deemed discharge provision in the DMLs. The MMO maintain that this is not acceptable and that the deemed discharge conditions in the DMLs should be removed.
- 9.4.32. TH continued to express concerns about the basis for introducing the procedure in its submission at D8 [REP8-124] in relation to the ExA Schedule of Changes to dDCO issued on 9 May 2019 [REP7-038]. TH states that the ExA in its report on Tilbury 2 – Proposed Termination at Former Tilbury Power Station DCO, accepted an argument by the MMO that once a DML is granted nothing in the PA2008 suggested that an applicant for a DCO should be treated any differently from any other marine licence holder, and that the MMO's ordinary powers should therefore be maintained. TH points out that strict time limits on the process for appeals would be imposed and is concerned that its expert view may not be properly considered within these timeframes for decisions by the MMO on discharge of conditions where TH is a consultee. TH repeated these submissions at D9 [REP9-064].
- 9.4.33. MMO set out its position in response to the ExA Schedule of Changes to the dDCO. This submission is at [REP8-102] and it is a full exposition of the MMO's views.
- 9.4.34. The preferred dDCO [REP9-007] no longer contains a deemed discharge provision⁶⁹ albeit that this was on the basis of the appeal procedure set out in Part 5 of Schedules 9 to 12 dDCO [REP9-007] being retained. However, in our view there are, in any event, dangers in a deemed discharge process given the importance of the matters to which it would apply and given the need to arrive at a properly considered decision. The ExA concludes that deemed discharge would not be appropriate in any circumstances.

⁶⁹ In Condition 15 of Schedules 9 and 10 and Condition 10 of Schedules 11 and 12

- 9.4.35. The SoS is referred to the joint position statement between the Applicant and the MMO in relation to the arbitration, appeal, deemed discharge process and timescales which was provided at D9 [REP9-030]. This document comprehensively sets out the respective positions of the parties.
- 9.4.36. ExA Reasons: the dispute between the MMO and TH on the one hand and the Applicant on the other appears to be part of an ongoing debate between the MMO, as regulator, and applicants/developers regarding the appropriate mechanism for discharge of the DML conditions. There is no statutory right of appeal in the form of a designated appeal process on the charge of DML conditions, the only remedy is judicial review. MMO and TH want that position to remain unchanged in the DCO.
- 9.4.37. The short version of the Applicant's current position is that the MMO should be excluded from arbitration but only on the basis that there is a bespoke appeal mechanism included in the DMLs for the refusal/non-determination of DML conditions. This position is reflected in the Applicant's preferred dDCO.
- 9.4.38. The longer version of the Applicant's position is the suggestion of a series of alternatives. The Applicant's first preference is for the inclusion of an appeal process for non-determination/refusal based on a modified version of the 2011 Regulations. Second preference is the inclusion of arbitration provisions which expressly apply to DMLs, third preference is deemed approval of DMLs and fourth preference is deemed refusal of DMLs.
- 9.4.39. The ExA has carefully considered the arguments put forward by all parties. In particular, the joint position statement of the MMO and the Applicant and the submissions of the MMO at D8 have been helpful. As a matter of principle, it is acknowledged that it is the purpose of a DCO such as that being applied for, to adapt such provisions as are necessary and appropriate to facilitate the Project whilst protecting the interests of stakeholders.
- 9.4.40. The Applicant's arguments in support of a bespoke process relate to the importance of timely decision making during the construction process. It contends that there is no certainty that the MMO would discharge the conditions in a timely manner. If the timeframes for discharge were extended beyond the agreed period this could have a significant knock-on effect to the construction programme, providing uncertainty and risk for construction contracts and also for the timely delivery of the project.
- 9.4.41. The MMO and TH contend that in giving this particular applicant a bespoke appeal process it would place them in a different, and potentially more advantageous position than an applicant for a marine licence direct from the MMO under MCAA2009. The MMO state that the current provisions work satisfactorily for all recipients of marine licences and there is no justification for amendment to the arrangements. When asked the MMO confirmed that it had never been subject to judicial review

procedures and it had an internal escalation procedure in place currently as set out in [REP8-102].

- 9.4.42. The ExA concludes that there must be evidence such as to justify adapting existing provisions regarding the discharge of conditions on DMLs by the MMO in the exercise of its regulatory function. There is no evidence before the Examination that there have been previous delays occasioned by the MMO in the exercise of these functions so as to cause material harm or economic loss to any marine licence holder. In the context of this particular Applicant there is no substantive evidence of any potential delays to support an adaptation to existing procedures to address such perceived deficiencies. To do so would place this particular Applicant in a different position to other licence holders.
- 9.4.43. In coming to this view the ExA has had regard to other projects which have the benefit of made DCOs and to other projects currently undergoing examination and which have been brought to the ExA's attention. The ExA's conclusions above appear to be consistent with the findings in other cases.
- 9.4.44. The ExA's recommended DCO and the Applicant's preferred DCO both contain an obligation on the MMO, unless otherwise agreed in writing with the undertaker, to use reasonable endeavours to determine an application for approval under Condition 14 and Condition 9 of Schedules 9 and 10, and 11 and 12 respectively, as soon as practicable and in any event within a period of four months. We conclude that this provides a reasonable timeframe in which an objective and considered decision can be made.

Part 4 Condition 9(11) of Schedules 9 and 10 – Notice of damage to the Project

- 9.4.45. The change proposed was to require notice to be given also in the case of exposure to cables. The Applicant points out that requirements relating to cable exposure are set out in Condition 9(12) of Schedules 10 and 11 and Condition 4(12) of Schedules 11 and 12, and it is not appropriate to repeat this in Condition 9(11) and 4(11) respectively which would then be in conflict. The Applicant has, however, included reference to the Kingfisher Information Service of Seafish within the dDCO submitted at D8 [REP8-003].
- 9.4.46. We agree with the Applicant's comments and no longer propose a change to the dDCO.

Part 4 Condition 9(12) of Schedules 9 and 10, and Condition 4(12) of Schedules 11 and 12 – notice of cable exposure

- 9.4.47. The MCA, supported by the MMO requests that the undertaker must notify mariners within three days, instead of five, following receipt of the last report from the periodic burial survey. The Applicant explained in its comments at D8 [REP8-065] that there is no precedent or justification for a three-day notice period although it agrees with sending copies of the notices to the MMO and the MCA.

- 9.4.48. The preferred and recommended versions of the dDCO retain reference to "days" without qualification or definition by which is understood any continuous period of 24 hours. However, for some activities the expression "business day" is used. We consider that it would be appropriate to clarify for the purposes of notice being given of exposure of cables, that this should be done within 3 business days or 5 days, whichever is the sooner. A consequential amendment is also recommended to give effect to the change, to insert the definition of "business day" in the general interpretation provisions in Article 2.

Conditions 14(1) and 9(1) of Schedules 9 and 10, and Condition 9(1) of Schedules 11 and 12 - lighting and marking plan and operation and maintenance programme

- 9.4.49. The MCA made clear in its D7 submission [REP7-072]) that it would expect to see a Lighting and Marking Plan and Operation and Maintenance Programme being pre-construction plans to be submitted as part of the DMLs. The amendment specifies the submission of a lighting and marking plan, and an operation and maintenance programme to be approved by the MMO.
- 9.4.50. In its SoCG with the MCA at D8 [REP9-049] The Applicant explained that it does not consider this change is necessary because there are adequate provisions already included in the DMLs to cover both lighting and marking as well as an operation and maintenance plan. We note that for example a Lighting and Marking Plan would be developed as standard post consent by the Applicant. However, there is no provision for such plans to be specifically submitted at the pre-construction stage. We consider there is force in the MCA's argument that these matters should be the subject of agreement at the pre-construction stage and therefore recommend the change to add sub-paragraphs (n) and (o) to Condition 14(1) of Schedules 9 and 10, and Condition 9(1) of Schedules 11 and 12.

Condition 15(5) of Schedules 9 and 10, and Condition 10(5) of Schedules 11 and 12 – timeframes for discharge of conditions

- 9.4.51. The ExA's changes are intended to revert to the 4-month period throughout all the discharge timeframes within Condition 15 (of Schedules 9 and 10) and Condition 10 (of Schedules 11 and 12). The Applicant adopted this timeframe within the dDCO submitted at D8.
- 9.4.52. The MMO does not agree with the amendment from the 6 months to 4 months timescale for determination and believes this should still be 6 months with the ability to agree in writing with the Applicant shorter timescales as required. The MMO made further comments in previous responses summarised in Appendix 1 [REP7-071]. The MMO maintains that it requires 6 months to review and consult on all discharge documentation but would always try to process documentation in a short a period as possible.
- 9.4.53. We consider that all timeframes for discharge of conditions in this area should be consistent. Four months appears to be a well-established timeframe for offshore wind farm schemes that in our view appropriately

balances the expedient discharge of relevant DML conditions whilst allowing a reasonable period of time for consideration by the MMO and relevant consultees. We note that four months has not proved to be adequate for MMO on occasions in the past, however there is no compelling reason advanced why TH should not be able to engage with the process and supply considered and expert consultation responses within this time frame. The recommended DCO allows for exceptions where "otherwise agreed in writing with the undertaker".

- 9.4.54. A special position is put forward by the MMO in relation to the final version of the SNS SIP [APP-041] to be produced not less than 4 months prior to construction starting. Underwater noise is a challenging aspect of the Project this project and we note that seasonal restrictions are not regarded as appropriate mitigation here since areas of the windfarm are within 26km of summer and winter areas of the SNS. Of itself however this would not prevent submission of the plan within four months of the projected commencement date. We see no reason why early engagement with the MMO should not be possible in order to invoke the tailpiece to Condition 15(5) of Schedules 9 and 10 if circumstances require it.

Condition 15(8) of Schedules 9 and 10, and Condition 10(8) of Schedules 11 and 12 – Compliance with MCA Guidelines

- 9.4.55. As the Applicant explains in its comments at D8 [REP8-065], the Applicant did not consider that there was any justification to warrant a departure from previous precedent and the Applicant put forward a suggested compromise at D8. Notwithstanding this, the Applicant has since discussed the matter with the MCA and agreement was been reached on the wording to be included in the DCO. The Applicant has updated the DCO, submitted at D9, accordingly [REP9-007]. As the text refers to "all MCA recommendations as appropriate to the authorised scheme" we do not therefore consider that further changes are necessary to this condition.

Part 4, Condition 18 of Schedules 9 and 10, and Condition 13 of Schedules 11 and 12 – Bathymetric survey

- 9.4.56. The MMO supported an amendment requested by HistE to include in pre-construction monitoring a high-resolution full sea floor coverage swath-bathymetry survey to include 100% coverage.
- 9.4.57. The Applicant explains in its comments at D8 [REP8-065], that it does not consider that this change is necessary as there is sufficient detail already provided in the Outline Written Scheme of Investigation (offshore) [APP-030]. We agree and consider that it is not necessary to include this level of detail in the DCO.

Part 4, Condition 20 of Schedules 9 and 10 and Condition 15 of Schedules 11 and 12 - Bathymetric survey

- 9.4.58. The MMO supported an amendment requested by HistE that would require a post-construction bathymetric survey to monitor the

effectiveness of archaeological exclusion zones potentially impacted by construction works and related provisions.

- 9.4.59. The Applicant maintains that this requirement is already suitably secured in the DMLs by virtue of the In-Principle Monitoring Plan that is required under Condition 14(1)(b) of Schedules 9 and 10 and Condition 9(1)(b) of Schedules 11 and 12 of the DCO). We agree and consider that it is not necessary to include this level of detail in the DCO.

Other minor amendments

- 9.4.60. We have identified further amendments that are minor in nature such as typographical errors, now reflected in the recommended DCO. These are:

- Schedule 4, discrepancy in spelling of Metres (Meters) Where "meters" occurs in Schedule 4 replace with "metres"

- 9.4.61. The following Table contains our recommended changes to the Applicant's preferred version of the dDCO [REP9-007]:

Table 9.2: DCO Provisions Recommended to be Changed

Provision	Recommended change	EXA comments
NB: text which is recommended to be deleted from the Applicant's preferred dDCO [REP9-007] is struck through (like this) and text which is recommended to be added is underlined (<u>like this</u>).		
Contents Page	Delete: Part 5- Procedure for Appeals	See reasons in this Chapterddd
Article 2 Interpretation	Add: <u>"business day" means a day other than Saturday or Sunday which is not Christmas Day, Good Friday or a bank holiday under section 1 of the Banking and Financial Dealings Act 1971</u>	To give effect to changes to the notification period to mariners of exposed cables, in Condition 9(12) of Schedules 9 and 10, and Condition 4(12) of Schedules 11 and 12
Article 2 Interpretation, and Paragraph 1 of each	"the 2011 Regulations" means the Marine Licensing (Licence Application	Change consequent upon removal of procedure for appeals in Part 5 of each of

Provision	Recommended change	EXA comments
of Schedules 9, 10, 11 and 12	Appeals) Regulations 2011(k)	Schedules 9,10, 11 and 12
Requirement 16(9)	After "10A" add: <u>(The external appearance of which shall have been approved by the relevant planning authority prior to commencement of its construction)</u>	See reasons in this Chapter
Requirement 16(17)	Add: <u>(t) Colby Road (Church Road), north of Banningham (Work No 5)</u>	Loss of roadside trees and trenchless crossing method at Colby Road (Church Road) north of Banningham
Requirement 16(17)	Add: <u>(u) In circumstances where the Hornsea Project 3 DCO is made and development of the Hornsea Project 3 commences, there shall be trenchless crossing of the B1149 (Work No. 6).</u>	See reasons in this Chapter
Requirement 19(2)	Delete: five and add <u>ten</u>	See reasons in this Chapter
Requirement 21(2)	Amend: The plans approved under paragraph (1) must be implemented upon <u>prior</u> to commencement of the relevant stage of the	Ensures mitigation measures are in place prior to commencement of works

Provision	Recommended change	EXA comments
	onshore transmission works	
Requirement 21	Add (4) 'In circumstances where the Hornsea Project 3 DCO is made and development of the Hornsea Project 3 commences, and notwithstanding the requirement of sub-paragraph (a) of paragraph (1) above, the submitted traffic management plan shall include, in respect of Link 34 as referred to in the Environmental Statement, revised details of a scheme of traffic mitigation which shall be submitted to, and approved in writing by, the relevant planning authority, in consultation with the highway authority.	For the reasons set out in Chapter 4.7
Requirement 26 (4)	Wording should be amended to: Save for emergency works, the timing and duration <u>full details, including but not limited to type of activity, vehicle movements and type, timing and duration and any proposed mitigation,</u> of all essential construction activities under paragraph (2) and	The Requirement only requires the timing and duration of essential activities undertaken outside consented hours to be specified.

Provision	Recommended change	EXA comments
	undertaken outside of the hours specified in paragraph (1) must be agreed with the relevant planning authority in writing in advance, and must be carried out within the agreed time.	
Requirement 27 Sub-heading	Amend: Control of noise during operational phase <u>and during maintenance</u>	See reasons in this Chapter
Requirement 27 (1) and (2)	Wording amended to: Additional wording to read: (1) The noise rating level for the use of Work No. 8A <u>and during maintenance</u> must not exceed 35dB LAeq, (5 minutes) at any time at a free field location immediately adjacent to any noise sensitive location. (2) The noise rating level for the use of Work No. 8A <u>and during maintenance</u> must not exceed 32 dB LLeq (15 minutes) in the 100Hz third octave band at any time at a free field location immediately	

Provision	Recommended change	EXA comments
	adjacent to any noise sensitive location.	
Requirement 27 (3)	Wording amended to: ...operations, and six months after Work No. 8A is at full operational capacity. <u>Such measurements shall be submitted to the relevant planning authority no later than 28 days following completion to confirm the rating level of operational noise emissions do not exceed the levels specified in paragraphs (1) and (2), including details of any remedial works and a programme of implementation should the emissions exceed the stated levels.</u>	Additional wording to ensure remedial measures if noise exceeds stated levels.
Condition 9(12) of Schedules 9 and 10, and Condition 4(12) of Schedules 11 and 12	Delete ' five days ' and replace with ' <u>three business days or five days whichever is the sooner</u> '	See reasons in this Chapter
Condition 14(1)(f) of Schedules 9 and 10, and Condition 9(1)(f) of Schedules 11 and 12.	In the event that piled foundations <u>or any other construction method that may have an impact on marine mammals, such as vibro-piling or 'blue hammer',</u> are proposed to be used, a marine mammal	Other construction techniques may also have an impact on marine mammals

Provision	Recommended change	EXA comments
	mitigation protocol, in accordance with the draft marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals and following current best practice as advised by the relevant statutory nature conservation bodies	
Condition 14(1)(m) of Schedules 9 and 10, and Condition 9(1)(l) of Schedules 11 and 12.	In the event that piled foundations <u>or any other construction method that may have an impact on marine mammals, such as vibro-piling or 'blue hammer',</u> are proposed to be used, the licensed activities, or any phase of those activities must not commence until a site integrity plan which accords with the principles set out in the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that the plan, and which the MMO is <u>satisfied would</u> provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the	Other construction techniques may also have an impact on marine mammals

Provision	Recommended change	EXA comments
	extent that harbour porpoise area protected feature of that site.	
Condition 9(1)(m) of Schedules 11 and 12.	<p>(m) The licensed activities, or any phase of those activities must not commence until a. A site integrity plan which accords with the principles set out in the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation Site Integrity Plan has been submitted to the MMO and and which the MMO (in consultation with the relevant statutory nature conservation body) is satisfied that the plan would provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that sandbanks and sabellaria spinulosa reefs are a protected feature of that site.</p>	

Provision	Recommended change	EXA comments
Condition 3(1)(g) of Schedules 11 and 12	<p>Add a subsection (g) with the following wording:</p> <p>"Disposal activities within the Haisborough, Hammond and Winterton Special Area of Conservation Site must not take place until the undertaker has confirmed that the particle size composition of the disposal material is within 95% similarity to the particle size composition of the seabed at the disposal location"</p>	As discussed in Section 4.20, to ensure that the particle size composition of material to be disposed of matches as far as possible that of the existing material in location where it is to be disposed.
Condition 14(1) of Schedules 9 and 10, and Condition 9(1) of Schedules 11 and 12	Add " <u>(n) a lighting and marking plan (o) an operation and maintenance programme</u> "	See reasons in this Chapter
Schedules 9 and 10 Condition 15; and Schedules 11 and 12, Condition 10	(6) Where the MMO fails to determine an application for approval under condition 14 within the period referred to in sub-paragraph (5) or refuses the application for approval, the undertaker may appeal to the Secretary of State in accordance with the	Responds to removal of procedure for appeals

Provision	Recommended change	EXA comments
	procedure in Part 5 of this licence. (7) (6)... or approved following an appeal under sub-paragraph (6) above...	
Schedules 9 to 12, Part 5	Delete the whole of Part 5 in each of Schedules 9,10,11 and 12	Responds to removal of procedure for appeals

9.5. OTHER CONSENTS

- 9.5.1. Neither the Applicant nor any other party has submitted for consideration any completed or draft planning obligation under TCPA1990 or related undertaking or agreement.
- 9.5.2. The Proposed Development if granted consent, would be subject to other consents including those set out in Section 1.8 of this Report. The implications of these consents have been considered. Without prejudice to the exercise of discretion by other decision-makers and save as referred to elsewhere in this Report, we are unaware of any obvious impediments to the delivery of the Proposed Development arising from the need for these consents to be obtained.

9.6. CONCLUSIONS

- 9.6.1. We have considered all the iterations of the dDCO submitted by the Applicant. We have identified the several changes made during the course of the Examination, detailed in Table 9.1, and we agree with those changes. A number of matters were unresolved at the end of the Examination. We have discussed these in this Chapter with reference to our reasoning in other Chapters where appropriate. Our recommendations on further amendments to the dDCO are summarised in Table 9.2.

10. SUMMARY OF FINDINGS AND CONCLUSIONS

10.1. INTRODUCTION

[The numbers in square brackets in this section refer to earlier paragraphs within this Report]

10.1.1. Before summarising the findings of the ExA it may be useful to highlight areas of outstanding concern or matters which the ExA has advised that the SoS may wish to pursue further. These include:

- The transboundary effects of the Proposed Development in ecological terms given that the French Government did not respond to the updated screening matrices. [7.2.10]
- In circumstances where the H3 Project proceeds, the current proposed highways mitigation scheme for Cawston is unacceptable in the eyes of the ExA. However, the ExA accepts that there is a reasonable expectation that an appropriate mitigation scheme could come forward to address or alleviate the cumulative traffic impacts in Cawston. The ExA would strongly recommend that the SoS indicates that a revised scheme would be required in these circumstances and makes the DCO as recommended in this regard. [7.4.12]
- The issue of whether the SoS, as Competent Authority, needs to determine whether further consultation is required in regard to AA. [6.9.14]
- In relation to CA and National Trust land, there is outstanding information required to the effect that agreement with NT has been reached that the NT land should be excluded from the scope of the CA powers set out in the DCO, unless the DCO is to be subject to SPP.
- In relation to Network Rail, the commercial agreement with the Applicant is yet to be signed and completed, upon which Network Rail has said it would formally withdraw its objection to CA of its land.
- The Applicant undertook to inform the SoS within three months of the close of the Examination as to progress with the NATS radar mitigation commercial agreement upon which formal withdrawal of NATs' objection is dependent.
- There are additional Requirements/Conditions or revisions to Requirements/Conditions which were not contained within the draft Schedule of Changes and provisions which were in the draft Schedule of Changes and which have been removed [PD-017]. These are contained in Table 9.2.

Summary of Findings

10.1.2. That s104(1) of the Planning Act 2008 has effect for this application and the ExA concludes in summary that:

- In the context of s104(2)(a), the in-principle need for the development in terms of the provision of renewable energy is accepted. There is a strong need case for renewable energy generation and the Proposed Development would bring significant public benefits. Reasonable alternatives have been considered and the final selection of the site for the onshore substation is justified. [7.4.5]
- In the context of s104(4) in relation to HRA there is insufficient information to enable the ExA to reach a positive conclusion that there would be no AEoI to:
 - LBBG of Alde-Ore Estuary SPA from in-combination collision mortality;
 - kittiwake of FFC SPA from in-combination collision mortality;
 - gannet of FFC SPA from in-combination collision and operational displacement mortality combined;
 - razorbill and guillemot of FFC SPA from in-combination operational displacement mortality; and
 - seabird assemblage of FFC SPA from in-combination collision mortality, in-combination operational displacement mortality, and in-combination collision and operational displacement mortality combined.
- For the avoidance of doubt, even if the H3 DCO is not made, the ExA nevertheless considers that there is insufficient information to enable the ExA to reach a positive conclusion that there would be no AEoI to: LBBG of Alde-Ore Estuary from in-combination collision mortality; to kittiwake of FFC SPA from in-combination collision mortality; and to the seabird assemblage of FFC SPA as it includes in-combination collision mortality to kittiwake.
- The Applicant has not presented any information in relation to alternatives, IROPI and compensation as confirmed in [REP8-074]. The inability to rule out AEoI under the Habitats Regulations for the aforementioned sites and features, and the lack of any information in relation to alternatives, IROPI and compensation means that the ExA concludes that to agree to a plan or project in these circumstances would be a breach of the Habitats Regulations.
- Subject to the requirement to submit a final HHW SIP for approval, there would be an appropriate mechanism to ensure that there would be adequate mitigation to ensure that there would not be an AEoI on the HHW SAC.
- The effects of construction operations on the harbour porpoise feature of the SNS SAC, from the project alone and in-combination in terms

of HRA, and cumulatively in terms of EIA, can be adequately mitigated through the submission and approval of a final SNS SIP.

- In the context of s104(3) and (7) the following moderate adverse effects, which are considered significant in EIA terms, are all matters which weigh against the Order being made: RTD operational displacement mortality (project alone and cumulatively); guillemot and razorbill cumulative operational displacement mortality; cumulative collision mortality to kittiwake and GBBG; and cumulative collision and operational displacement mortality combined to gannet.
- Any potential harm to other marine mammal species and areas containing Annex 1 reef and sandbanks could be adequately mitigated.
- There would be less than substantial harm to heritage assets including St Andrews Church and the CCA. The public and economic benefits of the scheme clearly outweighs this harm. There would be no impact to the setting and associated heritage significance of all remaining other onshore and offshore heritage assets. [7.4.7 and 7.4.10]
- There would be no significant effects upon landscape character or visual amenity other than for limited localised effects on visual amenity in the vicinity of the substation. Significant localised landscape character effects as a result of the new substation and substation extension would reduce to moderate after 10 years. Subject to the mitigation measures to be secured through the requirements, the proposal would not cause material harm to key characteristics protected by relevant development plan policies.
- Subject to the outstanding matter in relation to Cawston (outlined in paragraph 10.1.1. above) all highway and traffic effects could be satisfactorily dealt with via the mitigation measures secured by the various Requirements in the ExA's recommended DCO.
- Air quality matters have been adequately assessed. Air quality objectives would not be breached. Adequate and appropriate mitigation arising from dust would be secured by the Requirements in the ExA's recommended DCO.
- Any issues with ground conditions or contamination would be satisfactorily remediated in accordance with Requirements secured in the recommended DCO.
- Any potential impacts on tourism have not been firmly established by a strong evidential link.
- Any loss of best and most versatile land is justified in light of the significant economic and public benefits of the Proposed Development.

- There would be no AEoI from the Proposed Development on onshore European sites with the mitigation in place. The conclusions of no AEoI on all onshore European sites reached by the Applicant are agreed with NE. The ExA agrees that these conclusions are appropriate.
- Through mitigation and consideration of alternatives, the harm identified to biodiversity in designated onshore sites would be avoided. Any harm to habitats or species and their habitats would be limited but will weigh against the proposal in the final planning balance.
- There would be a minor adverse impact on commercial fishing interests when taken as a whole. This would be exacerbated by the designation of proposed areas which would be closed to fishing.

10.1.3. In relation to the application for CA and TP powers within the recommended DCO, the ExA in summary concludes, as set out below, that:

- the NPSs identify a national need for renewable electricity generating capacity;
- the need to secure the land and rights required, and to construct the Proposed Development within a reasonable commercial timeframe, represent a significant public benefit;
- the private loss to those affected is mitigated through the cable route selection, choice of the application land, the undergrounding of cables and the extent of the rights and interests proposed to be acquired;
- the Applicant has explored all reasonable alternatives to the CA of land, rights and interests sought and there are no alternatives that ought to be preferred;
- adequate and secure funding would be available to enable compensation within the statutory period following the Order being made; and
- the proposed interference with the human rights of individuals would be for legitimate purposes that would justify such interference in the public interest and to a proportionate degree.

10.1.4. Due to an inability to rule out AEoI in terms of the Habitats Regulations and the lack of information on alternatives, IROPI and compensation, the ExA recommends that consent should not be granted for the Proposed Development. In these circumstances the ExA is unable to conclude that there would be a compelling case in the public interest as is required to be demonstrated to justify the exercise of CA and TP powers.

10.1.5. However, if the SoS concludes that development consent should be granted, the ExA has examined the case for CA and TP on this basis and concludes that the Applicant has complied with all relevant legislation

and guidance. In these circumstances the ExA concludes that there would be a compelling case in the public interest for the CA powers sought in respect of the Order Land shown on the Land Plans (as amended) and that the Proposed Development would comply with s122(2) and s122(3) of PA2008.

10.2. OVERALL CONCLUSIONS

Principal Conclusion

- 10.2.1. Sub-section 104(3) PA2008 provides that the SoS must decide any application for an order granting development consent in accordance with any relevant NPS, except to the extent that one or more of subsections (4) to (8) applies. Sub-section 104(5) PA2008 applies if the SoS is satisfied that deciding the application in accordance with any relevant NPS would lead to the breach of any duty imposed on the SoS by or under any enactment.
- 10.2.2. The starting point for this analysis is the recognition that, there is insufficient information to rule out AEoI and information regarding alternatives, IROPI and compensation is not available at this present time. The Habitats Regulations require that a Competent Authority must in effect agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the sites concerned. In our view to agree to a plan or project in these circumstances would constitute a breach of the Habitats Regulations. As such we consider the exception outlined in subsection (5) of s104 PA2008 applies.
- 10.2.3. Given our findings in relation to HRA and having regard to the provisions in subsection (5), the ExA concludes that we have no alternative other than to recommend to the SoS that the DCO should not be made. In circumstances where the H3 Project DCO is not made, the ExA's conclusions that an AEoI cannot be ruled out would still remain for the reasons set out above. The ExA would still recommend that the DCO is not made in this scenario.

Circumstances in which the SoS concludes that HRA matters are satisfactory

- 10.2.4. However, the SoS may conclude that HRA matters have been satisfactorily addressed and either there would be no breach of the Habitats Regulations or the HRA considerations would not be a barrier to development. In those circumstances the test to be applied is that set out in section 104(3) PA2008. The SoS must decide whether the application is in accordance with any relevant NPS.

Accordance with NPSs

- 10.2.5. The principal issues have been set out previously and examined, these encompass those matters raised in the LIRs. The Examination has had regard to NPSs and marine policy documents and all other relevant legislation and guidance.

- 10.2.6. Many of the principal issues have been resolved to the satisfaction of the ExA or are capable of resolution subject to the recommended changes to the DCO. The ExA have concluded that the current Highways Mitigation Scheme in relation to link 34 in Cawston would be insufficient to address the combined traffic impacts with H3 Project and has recommended a revised scheme in the event that the H3 Project commences development. An amended Requirement is set out in the recommended DCO to secure this. The less than substantial harm to heritage assets is outweighed by the significant public benefits having regard to the provisions of The Infrastructure Planning (Decisions) Regulations 2010.
- 10.2.7. There would be moderate adverse effects to some bird species (significant in EIA terms) which are matters which weigh against the development.
- 10.2.8. There would be limited adverse effects to species and habitats on onshore designated sites. There would be some limited localised effects on visual amenity in terms of landscape considerations which would moderate after 10 years and a loss of best and most versatile land and a minor adverse effect in terms of commercial fishing. All other harmful effects would be satisfactorily mitigated by the adoption of the measures secured in the DCO. These matters weigh against the development but, given their localised nature and limited effects, the ExA attributes limited weight to them in the planning balance.
- 10.2.9. There is an in-principle need for the development which would make a significant contribution to renewable energy objectives and provide up to 1,800MW of renewable energy. It would also bring economic public benefits by providing jobs at all phases of the development. These are matters which attract significant weight in the overall planning balance.
- 10.2.10. When these matters are taken into account, the ExA concludes that, in a general planning balance, the strong policy support for renewable energy generation and the benefits of the scheme in terms of the large-scale generation of renewable energy and its contribution to sustainable development objectives, substantially outweigh the limited harms which have been set out above. When considered as a whole the ExA concludes that the Proposed Development would be in accordance with all of the relevant NPSs.

Compulsory Acquisition

- 10.2.11. If the SoS concludes that development consent should be granted, the ExA has examined the case for CA and TP on this basis and concludes that the Applicant has complied with all relevant legislation and guidance. In these circumstances the ExA concludes that there would be a compelling case in the public interest for the CA and TP powers sought in respect of the Order Land shown on the Land Plans (as amended) and that the Proposed Development would comply with s122(2) and s122(3) of PA2008.

Conclusions if the SoS finds the HRA position is satisfactory

- 10.2.12. In circumstances where the SoS considers that the exception in subsection 104(5) is not engaged, and subject to the adoption of the recommended DCO, the conclusion of the ExA is that, for the reasons set out and summarised above, development consent should be granted, subject to the incorporation of changes it has recommended to the DCO, as discussed in Chapter 9 above.

10.3. RECOMMENDATION

- 10.3.1. For all of the above reasons, and in the light of its findings and conclusions on important and relevant matters set out in this Report, the ExA, under the Planning Act 2008 (as amended), recommends that the Secretary of State for Business, Energy and Industrial Strategy does not make the Norfolk Vanguard Offshore Wind Farm Order.
- 10.3.2. In the event that the Secretary of State concludes that it is appropriate to make the Norfolk Vanguard Offshore Wind Farm Order, the ExA recommends that the Secretary of State makes the Order in the form recommended at Appendix D.

APPENDICES

APPENDIX A: The Examination

APPENDIX B: Examination Library

APPENDIX C: List of Abbreviations

APPENDIX D: The Recommended DCO

APPENDIX A: THE EXAMINATION

The table below lists the main events that occurred during the Examination and the procedural decisions taken by the Examining Authority

Date	Examination Event
10 December 2018	Preliminary Meeting held at The Dukes Head Hotel, 5 - 6 Tuesday Market Place, Kings Lynn
10 December 2018 (evening)	Open Floor Hearing (OFH1) held at The Dukes Head Hotel, 5 - 6 Tuesday Market Place, Kings Lynn
19 December 2018	Issue by the ExA of: <ul style="list-style-type: none"> • Examination Timetable • The ExA's Written Questions
9 January 2019	Notification by the ExA of hearings
16 January 2019	Deadline 1 Deadline for receipt by the ExA of: <ul style="list-style-type: none"> • Comments on Relevant Representations (RRs) • Summaries of all RRs exceeding 1500 words • Written Representations (WRs) • Summaries of all WRs exceeding 1500 words • Local Impact Reports from any local authorities • Statements of Common Ground (SoCG) requested by the ExA • Statement of Commonality of SoGCs • Applicant's Guide to the Application • The Compulsory Acquisition (CA) schedule • Responses to the ExA's Written Questions

	<ul style="list-style-type: none"> • Comments on updated application documents including specific comments upon drafting of the DCO • Comments on any additional submissions • Responses to further information requested by the ExA • Notification by Statutory Parties and certain Local Authorities who wish to be considered as an Interested Party • Notification of wish to speak at a Compulsory Acquisition Hearing (CAH) • Notification of wish to speak at Open Floor Hearing (OFH) • Notification of wish to make oral representations at the Issue Specific Hearing on the draft Development Consent Order (DCO) • Notification of wish to make oral representations at the Issue Specific Hearing on Environmental matters • Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications • Notification of wish to have future correspondence electronically.
23 January 2019	<p>Issue by the ExA of:</p> <ul style="list-style-type: none"> • Request for further information under Rule 17 of the Examination Procedure Rules
30 January 2019	<p>Deadline 2</p> <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Comments on WRs and responses to comments on RRs • Comments on Local Impact Reports • Comments on responses to the ExA's Written Questions • Revised draft DCO from Applicant

	<ul style="list-style-type: none"> • Responses to further information requested by the ExA.
5 February 2019	Issue Specific Hearing 1 (ISH1) ISH1 on onshore environmental matters to include all environmental and amenity matters held at Blackfriars Hall, St Andrew's Plain, Norwich
6 February 2019	Issue Specific Hearing 2 (ISH2) ISH2 on offshore environmental matters to include offshore ecology and processes held at Blackfriars Hall, St Andrew's Plain, Norwich
6 February 2019 (evening)	Open Floor Hearing (OFH2) Held at Blackfriars Hall, St Andrew's Plain, Norwich
7 February 2019	Issue Specific Hearing 3 (ISH3) ISH3 on the draft Development Consent Order held at Blackfriars Hall, St Andrew's Plain, Norwich
14 February 2019	Deadline 3 Deadline for receipt by the ExA of: <ul style="list-style-type: none"> • Post hearing submissions including written submissions of oral cases • Responses to further information requested by the ExA
22 February 2019	Notification by the ExA of hearings and Accompanied Site Inspections
27 February 2019	Publication by ExA of: <ul style="list-style-type: none"> • The ExA's Further Written Questions
13 March 2019	Deadline 4 Deadline for receipt by the ExA of:

	<ul style="list-style-type: none"> • Responses to the ExA's Further Written Questions • Applicant's revised draft DCO • Updated SoCGs • Updated Statement of Commonality of SoCGs • Applicant's updated Guide to the Application • Responses to further information requested by the ExA
20 March 2019	<p>Deadline 5</p> <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Comments on responses to ExA's Further Written Questions (if required) • Responses to further information requested by the ExA
25 March 2019	Accompanied Site Inspection (ASI)
26 March 2019	Accompanied Site Inspection (ASI)
27 March 2019	<p>Issue Specific Hearing (ISH4)</p> <p>ISH on environmental matters held at Blackfriars Hall, St Andrew's Plain, Norwich</p>
28 March 2019 (morning)	<p>Issue Specific Hearing (ISH5)</p> <p>ISH on the draft Development Consent Order held at Blackfriars Hall, St Andrew's Plain, Norwich</p>
28 March 2019 (afternoon)	<p>Compulsory Acquisition Hearing (CAH)</p> <p>Held at Blackfriars Hall, St Andrew's Plain, Norwich</p>

28 March 2019	<p>Notification by the ExA of:</p> <ul style="list-style-type: none"> Hearings amendment to the Examination Timetable under Rule 8(3) of the Examination Procedure Rules
5 April 2019	<p>Deadline 6</p> <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> Responses to further information requested by the ExA Post hearing submissions including written submissions of oral case
18 April 2019	<p>Publication by the ExA of:</p> <ul style="list-style-type: none"> Procedural Decision to grant Interested Party status to Polly Brockis
24 April 2019	<p>Issue Specific Hearing (ISH6)</p> <p>ISH on Environmental Matters held at Blackfriars Hall, St Andrew's Plain, Norwich</p>
24 April 2019 (evening)	<p>Open Floor Hearing (OFH3)</p> <p>Held at Dereham Sixth Form College, Crown Road, Dereham</p>
25 April 2019	<p>Issue Specific Hearing (ISH7)</p> <p>ISH on the draft Development Consent Order held at Blackfriars Hall, St Andrew's Plain, Norwich</p>
26 April 2019	<p>Publication by ExA of:</p> <ul style="list-style-type: none"> Procedural decision to accept the Applicant's proposed changes to the application
2 May 2019	<p>Deadline 7</p> <p>Deadline for receipt by the ExA of:</p>

	<ul style="list-style-type: none"> • Updated SoCGs • Updated Statement of Commonality of SoCGs • Applicant's updated Guide to the Application • Responses to further information requested by the ExA • Post hearing submissions
9 May 2019	<p>Publication by the ExA of:</p> <ul style="list-style-type: none"> • The Report on the Implications of European Sites (RIES) • The ExA's draft DCO schedule of changes
21 May 2019	<p>Issue by the ExA of:</p> <ul style="list-style-type: none"> • Requests for further information under Rule 17 of the Examination Procedure Rules
28 May 2019	<p>Issue by the ExA of:</p> <ul style="list-style-type: none"> • Request for further information under Rule 17 of the Examination Procedure Rules
3 June 2019	<p>Issue by the ExA of:</p> <ul style="list-style-type: none"> • Requests for further information under Rule 17 of the Examination Procedure Rules
30 May 2019	<p>Deadline 8</p> <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Comments on the RIES • Comments on the ExA's draft DCO schedule of changes • Final updated version of the Book of Reference • Applicant's final guide to application document • Final CA Schedule • Final SoCGs

	<ul style="list-style-type: none"> • Final Statement of Commonality of SoCGs • Responses to further information requested by the ExA • Applicant's final updated Guide to the Application • Final DCO to be submitted by the Applicant in the SI template with the SI template validation report
6 June 2019	<p>Deadline 9</p> <p>Deadline for receipt by the ExA of:</p> <ul style="list-style-type: none"> • Responses to comments on the RIES • Responses to comments on ExA's draft DCO schedule of changes
10 June 2019	Close of Examination
11 June 2019	<p>Issue by the ExA of:</p> <ul style="list-style-type: none"> • Notification of completion of the Examination under section 99 of the Planning Act 2008

APPENDIX B: EXAMINATION LIBRARY

Norfolk Vanguard Offshore Wind Farm

Examination Library

Updated – 2 September 2019

This Examination Library relates to the Norfolk Vanguard Offshore Wind Farm application. The library lists each document that has been submitted to the examination by any party and documents that have been issued by the Planning Inspectorate. All documents listed have been published to the National Infrastructure's Planning website and a hyperlink is provided for each document. A unique reference is given to each document; these references will be used within the Report on the Implications for European Sites and will be used in the Examining Authority's Recommendation Report. The documents within the library are categorised either by document type or by the deadline to which they are submitted.

Please note the following:

- This is a working document and will be updated periodically as the examination progresses.
- Advice under Section 51 of the Planning Act 2008 that has been issued by the Inspectorate, is published to the National Infrastructure Website but is not included within the Examination Library as such advice is not an examination document.
- This document contains references to documents from the point the application was submitted.
- The order of documents within each sub-section is either chronological, numerical, or alphabetical and confers no priority or higher status on those that have been listed first.

EN010079 Norfolk Vanguard Offshore Wind Farm**Examination Library - Index**

Category	Reference
Application Documents As submitted and amended version received before the PM. Any amended version received during the Examination stage to be saved under the Deadline received Plans Reports Environmental Statement Other Documents	APP-xxx
Adequacy of Consultation responses	AoC-xxx
Relevant Representations	RR-xxx
Procedural Decisions and Notifications from the Examining Authority Includes Examining Authority's questions, s55, and post acceptance s51	PD-xxx
Additional Submissions Includes anything accepted at the Preliminary Meeting and correspondence that is either relevant to a procedural decision or contains factual information pertaining to the examination	AS-xxx
Events and Hearings Includes agendas for hearings and site inspections, audio recordings, responses to notifications, applicant's hearing notices, and responses to Rule 6 and Rule 8 letters	EV-xxx
Representations – by Deadline	
Deadline 1:	REP1-xxx

Deadline 2:	REP2-xxx
Deadline 3:	REP3-xxx
Deadline 4:	REP4-xxx
Deadline 5:	REP5-xxx
Deadline 6:	REP6-xxx
Deadline 7:	REP7-xxx
Deadline 8:	REP8-xxx
Deadline 9:	REP9-xxx
Other Documents Includes s127/131/138 information, s56, s58 and s59 certificates, and transboundary documents	OD-xxx

EN010079 Norfolk Vanguard Offshore Wind Farm**Examination Library****Application Documents**

APP-001	Norfolk Vanguard Limited 1.01 Cover letter to PINS
APP-002	Norfolk Vanguard Limited 1.02 Application Form
APP-003	Norfolk Vanguard Limited 1.03 Copies of Newspaper Adverts
APP-004	Norfolk Vanguard Limited 1.04 Guide to the application
APP-005	Norfolk Vanguard Limited 3.01 Draft Development Consent Order
APP-006	Norfolk Vanguard Limited 3.02 Draft Development Consent Order Explanatory Memorandum
APP-007	Norfolk Vanguard Limited 3.03 Draft Development Consent Order - Note on requirements and conditions and Plan of Plans
APP-008	Norfolk Vanguard Limited 4.01 Statement of Reasons
APP-009	Norfolk Vanguard Limited 4.02 Funding Statement
APP-010	Norfolk Vanguard Limited 4.03 Book of Reference

Plans

APP-011	Norfolk Vanguard Limited 2.1 Location plan
APP-012	Norfolk Vanguard Limited 2.02 Onshore Land Plan
APP-013	Norfolk Vanguard Limited 2.02 Offshore Land Plan
APP-014	Norfolk Vanguard Limited 2.03 Special Category Land Plans

APP-015	Norfolk Vanguard Limited 2.04 Works plan
APP-016	Norfolk Vanguard Limited 2.05 Access to works plan
APP-017	Norfolk Vanguard Limited 2.06 Plan Showing Public Rights of Way to be Temporarily Stopped Up
APP-018	Norfolk Vanguard Limited 2.07 Plan Showing Streets to be Temporarily Stopped Up
APP-019	Norfolk Vanguard Limited 2.08 Statutory or non-statutory sites or features of nature conservation
APP-020	Norfolk Vanguard Limited 2.09 Statutory or non-statutory historic or scheduled monuments
APP-021	Norfolk Vanguard Limited 2.10 Onshore Crown Land Plan
APP-022	Norfolk Vanguard Limited 2.10 Offshore Crown Land Plan
APP-023	Norfolk Vanguard Limited 2.11 Important Hedgerows
Other documents	
APP-024	Norfolk Vanguard Limited 6.05 Schedule Of Mitigation
APP-025	Norfolk Vanguard Limited 8.01 Outline Code of Construction Practice
APP-026	Norfolk Vanguard Limited 8.02 Planning Statement
APP-027	Norfolk Vanguard Limited 8.03 Design and Access Statement
APP-028	Norfolk Vanguard Limited 8.04 Public Rights of Way Strategy

APP-029	Norfolk Vanguard Limited 8.05 Outline Written Scheme of Investigation (Onshore)
APP-030	Norfolk Vanguard Limited 8.06 Outline Archaeology written scheme of investigation (offshore)
APP-031	Norfolk Vanguard Limited 8.07 Outline Landscape Ecological Management Strategy
APP-032	Norfolk Vanguard Limited 8.08 Outline Traffic Management Plan
APP-033	Norfolk Vanguard Limited 8.09 Outline Travel Plan
APP-034	Norfolk Vanguard Limited 8.10 Outline Access Management Plan
APP-035	Norfolk Vanguard Limited 8.11 Outline Offshore Operations and Maintenance Plan
APP-036	Norfolk Vanguard Limited 8.12 In Principle Monitoring Plan
APP-037	Norfolk Vanguard Limited 8.13 Draft Marine Mammal Mitigation Protocol
APP-038	Norfolk Vanguard Limited 8.14 Outline Project Environmental Management Plan
APP-039	Norfolk Vanguard Limited 8.15 Site Characterisation Report
APP-040	Norfolk Vanguard Limited 8.16 Outline Scour Protection and Cable Protection Plan
APP-041	Norfolk Vanguard Limited 8.17 Draft SNS cSAC Site Integrity Plan
APP-042	Norfolk Vanguard Limited 8.18 Outline Marine Traffic Monitoring Strategy

Reports	
APP-043	Norfolk Vanguard Limited 5.01 Consultation Report
APP-044	Norfolk Vanguard Limited 5.02 Statement of Engagement
APP-045	Norfolk Vanguard Limited 5.03 Norfolk Vanguard Information to Support HRA
APP-046	Norfolk Vanguard Limited 5.03 Appendix 5.1 Norfolk Vanguard Offshore HRA Screening
APP-047	Norfolk Vanguard Limited 5.03 Appendix 5.2 Norfolk Vanguard Onshore HRA Screening
APP-048	Norfolk Vanguard Limited 5.03 Appendix 7.1 ABP Sandwave study
APP-049	Norfolk Vanguard Limited 5.03 Appendix 7.2 Sabellaria Data Review
APP-050	Norfolk Vanguard Limited 5.03 Appendix 8.1 Additional SNS cSAC assessment
APP-051	Vattenfall Wind Power LTD 5.03 Appendix 9.1 Botanical Survey Report
APP-052	Norfolk Vanguard Limited 5.03 Appendix 9.2 Desmoulin's Whorl Snail Presence Absence Survey
APP-053	Norfolk Vanguard Limited 5.03 Appendix 9.3 Bat Survey Activity Report
APP-054	Norfolk Vanguard Limited 5.04 Consents and licences
APP-055	Norfolk Vanguard Limited Consultation Report - Appendices 3.1 - Hearing your Views I
APP-056	Norfolk Vanguard Limited Consultation Report - Appendix 3.2 - Hearing Your Views II
APP-057	Norfolk Vanguard Limited Consultation Report - Appendix 3.3 - Hearing Your Views III

APP-058	Norfolk Vanguard Limited
	Consultation Report - Appendix 4.1 - Vattenfall Privacy Policy
APP-059	Norfolk Vanguard Limited Consultation Report - Appendix 4.2 - FAQ Documents
APP-060	Norfolk Vanguard Limited Consultation Report - Appendix 4.3 - Vattenfall Social Media Protocol
APP-061	Norfolk Vanguard Limited Consultation Report - Appendix 4.4 - Examples of Social Media Use
APP-062	Norfolk Vanguard Limited Consultation Report - Appendix 7.1 - Transboundary Notification
APP-063	Norfolk Vanguard Limited Consultation Report - Appendix 8.1 - Key Stakeholder List
APP-064	Norfolk Vanguard Limited Consultation Report - Appendix 9.1 - Terms of Reference
APP-065	Norfolk Vanguard Limited Consultation Report - Appendix 9.2 - Benthic Ecology, Fish Ecology, MPP and MSWQ Outgoing documents
APP-066	Norfolk Vanguard Limited Consultation Report - Appendix 9.3 - Onshore Ecology and Ornithology Outgoing documents
APP-067	Norfolk Vanguard Limited Consultation Report - Appendix 9.4 - Traffic and Transport Outgoing documents
APP-068	Norfolk Vanguard Limited Consultation Report - Appendix 9.5 - Landscape and Visual Impact and Land Use Outgoing documents
APP-069	Norfolk Vanguard Limited Consultation Report - Appendix 9.6 - Socio-economic & Tourism Outgoing documents
APP-070	Norfolk Vanguard Limited Consultation Report - Appendix 9.7 - Health Outgoing documents

APP-071	Norfolk Vanguard Limited Consultation Report - Appendix 9.8 - Water Resources, Flood Risk, and Ground Conditions Outgoing documents
APP-072	Norfolk Vanguard Limited Consultation Report - Appendix 9.9 - Onshore Noise Outgoing documents
APP-073	Norfolk Vanguard Limited Consultation Report - Appendix 9.10 - Air Quality Outgoing documents
APP-074	Norfolk Vanguard Limited Consultation Report - Appendix 9.11 - Offshore Archaeology Outgoing documents
APP-075	Norfolk Vanguard Limited Consultation Report - Appendix 9.12 - Onshore Archaeology Outgoing documents
APP-076	Norfolk Vanguard Limited Consultation Report - Appendix 9.13 - Marine Mammals Outgoing documents
APP-077	Norfolk Vanguard Limited Consultation Report - Appendix 9.14 - Offshore Ornithology Outgoing documents
APP-078	Norfolk Vanguard Limited Consultation Report - Appendix 9.15 - Steering Group Meeting Minutes
APP-079	Norfolk Vanguard Limited Consultation Report - Appendix 9.16 - Benthic Ecology, Fish Ecology, MPP and MSWQ - Minutes pre s42
APP-080	Norfolk Vanguard Limited Consultation Report - Appendix 9.17 - Offshore Ornithology - Minutes pre-S42
APP-081	Norfolk Vanguard Limited Consultation Report - Appendix 9.18 - Landscape and Visual Impact and Land Use - Minutes pre-S42

APP-082	Norfolk Vanguard Limited Consultation Report - Appendix 9.19 - Onshore Ecology and Ornithology - Minutes pre-S42
APP-083	Norfolk Vanguard Limited Consultation Report - Appendix 9.20 - Water Resources, Flood Risk, and Ground Conditions - Minutes pre-S42
APP-084	Norfolk Vanguard Limited Consultation Report - Appendix 9.21 - Traffic and Transport - Minutes pre-S42
APP-085	Norfolk Vanguard Limited Consultation Report - Appendix 9.22 - Onshore Archaeology - Minutes pre-S42
APP-086	Norfolk Vanguard Limited Consultation Report - Appendix 9.22 - Onshore Archaeology - Minutes pre-S42
APP-087	Norfolk Vanguard Limited Consultation Report - Appendix 9.24 - Marine Mammals - Minutes pre-S42
APP-088	Norfolk Vanguard Limited Consultation Report - Appendix 9.25 - Onshore Noise - Minutes pre-S42
APP-089	Norfolk Vanguard Limited Consultation Report - Appendix 9.26 - North Norfolk District Council - Minutes pre-S42
APP-090	Norfolk Vanguard Limited Consultation Report - Appendix 9.27 - SERCO Meeting Modelling Report
APP-091	Norfolk Vanguard Limited Consultation Report - Appendix 11.1 - Letter to stakeholders and technical consultees
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AoC-001	Broadland District Council
AoC-002	Breckland Council
AoC-003	North Norfolk District Council
AoC-004	South Norfolk Council
AoC-005	Norfolk County Council
AoC-006	The Broads Authority
AoC-007	Great Yarmouth Borough Council
AoC-008	Forest Heath District Council and St Edmundsbury Borough Council
AoC-009	Lincolnshire County Council
AoC-010	Norwich City Council

AoC-011	Borough Council of King's Lynn & West Norfolk
Relevant Representations	
RR-001	Andrew Johnson
RR-002	Barbara Penn
RR-003	Ian Harding
RR-004	Jenny Smedley
RR-005	John Sings
RR-006	Little Dunham Parish Council
RR-007	Jenny Smedley on behalf of Margaret Woodall
RR-008	Mr John Reid
RR-009	Mr N Warnes
RR-010	Patrice Baldwin
RR-011	Jenny Smedley on behalf of Stuart Higgs
RR-012	The Crown Estate
RR-013	Whale and Dolphin Conservation
RR-014	Norma Albinson
RR-015	Tony Smedley on behalf of Lorraine Gill
RR-016	Jenny Smedley on behalf of Alan Wright
RR-017	Jenny Smedley on behalf of Heidi Wright
RR-018	Jenny Smedley on behalf of Maurice Woodall
RR-019	Royal Yachting Association
RR-020	Andrew Brown
RR-021	Jenny Smedley on behalf of Angela Campbell
RR-022	Brenda Dutton
RR-023	CPRE Norfolk
RR-024	East of England Energy Group (EEEGR)

RR-025	Edna Violet Greening
RR-026	Emily Ruggles-Brown
RR-027	Julian Pearson
RR-028	Linda Smith
RR-029	Jenny Smedley on behalf of Roy Campbell
RR-030	Sharon Ruggles-Brown
RR-031	Simon Nunn
RR-032	Tracey Nunn
RR-033	Alan Knight
RR-034	Deb Pender
RR-035	Gabrielle Joyce
RR-036	Jenny Smedley on behalf of Jakki Harper-Lewis
RR-037	Jenny Smedley on behalf of Lesley Rose
RR-038	Tony Smedley on behalf of Lucy Mayes
RR-039	Paul Young
RR-040	Jenny Smedley on behalf of Phil Harper-Lewis
RR-041	Jenny Smedley on behalf of Sheila Barlow
RR-042	Jenny Smedley on behalf of William Barlow
RR-043	E. A. R. Spain
RR-044	Laura Philpott
RR-045	Edna Violet Greening on behalf of Mr Greening
RR-046	Mrs L. Knightley
RR-047	Richard Philpott
RR-048	Sarah Greenwood
RR-049	Andrew Matthews
RR-050	Mrs Samantha Hagan

RR-051	National Federation of Fishermen's Organisations
RR-052	Nina Matthews
RR-053	Samantha Neville
RR-054	Clive Pellett
RR-055	Tracy
RR-056	Fraser Bateman
RR-057	Mrs Bass
RR-058	David Matthews
RR-059	Frederick Albert Thompson
RR-060	The Corporation of Trinity House of Deptford Strond
RR-061	Katherine Jones
RR-062	Mrs Julie Keay
RR-063	Witton and Ridlington Parish Council
RR-064	Tony Smedley on behalf of Richard Gill
RR-065	Tony Smedley on behalf of Tom Gill
RR-066	Christine Howard
RR-067	East Ruston Parish Council
RR-068	Scottish Power Renewables
RR-069	Better broadband for East Ruston (BB4ER)
RR-070	John Clarke
RR-071	Lorraine Clarke
RR-072	Cadent Gas Limited
RR-073	Glenn Berry
RR-074	James Bellingall
RR-075	Jeff Shalloo
RR-076	Mrs G Watson

RR-077	Mrs S Shalloo
RR-078	No to Relay Stations (N2RS)
RR-079	Ray Pearce
RR-080	The Coal Authority
RR-081	Holme Hale Parish Council
RR-082	Kerry Murray
RR-083	A C H Pearson
RR-084	Dr A E Daniels
RR-085	Jeanette Webb
RR-086	Norfolk Coast Partnership
RR-087	Barbara Champion
RR-088	Alison Cracknell
RR-089	Bernard Smee
RR-090	Edward Sharples
RR-091	Mrs Susan Smee
RR-092	Amanda Bullen
RR-093	Ashley Christian
RR-094	Kevin Miller
RR-095	Graham Cracknell
RR-096	Allan Stanley
RR-097	Ann Lumsden-Bedingfeld
RR-098	Cawston Parish Council
RR-099	I.B. Sharples
RR-100	Denise Ann Axham
RR-101	Diana Daniels
RR-102	Robert Sutton

RR-103	Tracey Collett
RR-104	Tony Smedley on behalf of Westbrooke Holidays
RR-105	Leda N Hayton
RR-106	Natural England
RR-107	Bryan Oldman
RR-108	Jan Burley
RR-109	Pauline Carter
RR-110	Mrs Paula Woodings
RR-111	Andrew Lockwood
RR-112	Debbie Dunne
RR-113	Necton Parish Council
RR-114	Patricia Lockwood
RR-115	S Bernard
RR-116	Scott Sidey
RR-117	Environment Agency
RR-118	North Walsham Town Council
RR-119	Adriana Marks
RR-120	Margaret King
RR-121	Richard William Woods
RR-122	Colin King
RR-123	Norfolk County Council
RR-124	Penelope Malby
RR-125	Stephen King
RR-126	Victoria Spain
RR-127	Derek Pinner
RR-128	Diana Lockwood

RR-129	Happisburgh Parish Council
RR-130	Mr Paul King
RR-131	Mrs Margaret Moore
RR-132	Tony Smedley
RR-133	Ann Seaman
RR-134	Chris Allhusen
RR-135	Donna Blackburn
RR-136	Halena Higgs
RR-137	Karen Basten
RR-138	Leith Marar
RR-139	Brown & Co LLP. on behalf of Mr and Mrs G Kerry
RR-140	Brown and Co on behalf of Necton Farms Ltd
RR-141	Oulton Parish Council c/o Mr L Mills, Clerk to the Council
RR-142	Public Health England
RR-143	Richard Barr
RR-144	Roberta Spain
RR-145	Stefan Flexen
RR-146	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of A W Ditch and Son
RR-147	Savills (UK) Ltd (Savills (UK) Ltd) behalf of Albanwise
RR-148	Brown & Co LLP. on behalf of Angloflora Farms Ltd.
RR-149	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Bradenham Hall Farms
RR-150	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Church Farm (Gimingham) Ltd
RR-151	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Diocese of Norwich
RR-152	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of G F de Feyter and Partners
RR-153	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of G T Cubitt

RR-154	George Freeman MP
RR-155	Geraldine Allen
RR-156	Health and Safety Executive
RR-157	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of J Grier
RR-158	Savills (UK)Ltd (Savills (UK)Ltd) on behalf of Mes A Green
RR-159	Miss Phoenix
RR-160	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mr and Mrs J Leeder
RR-161	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mr P Bunting
RR-162	Brown & Co on behalf of Mr Peter Edwards
RR-163	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mrs A Jones
RR-164	Savills on behalf of Mrs C B Hart
RR-165	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mrs P Carrick
RR-166	Mrs Valerie Morris
RR-167	National Grid Electricity Transmission PLC and National Grid Gas PLC
RR-168	Norfolk Wildlife Trust
RR-169	Peter Soldan
RR-170	Rupert Lovegrove
RR-171	Sheila Rowe
RR-172	The Wildlife Trusts
RR-173	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Trustees of Stinton Hall Trust being Sir David Chapman, Grant Picher, Micheal Dewing and William Edwards
RR-174	Breckland Council
RR-175	Broadland District Council
RR-176	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of C Siely
RR-177	Bidwells on behalf of Christopher S Wright

RR-178	Cllr. Graham Everett
RR-179	Dennis Jackman
RR-180	Eastern Inshore Fisheries and Conservation Authority
RR-181	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of G Hales and Mrs P Riches
RR-182	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of HBSH Pension Scheme
RR-183	Historic England
RR-184	John Gills
RR-185	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of L Padulli
RR-186	Marine Management Organisation
RR-187	Maritime and Coastguard Agency
RR-188	Miss Sherrie Nobbs
RR-189	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mr and Mrs M Jones
RR-190	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mrs P Hinton
RR-191	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of National Trust
RR-192	Addleshaw Goddard LLP on behalf of Network Rail Infrastructure Limited
RR-193	NFU (National Farmers Union)
RR-194	Orsted Wind Power A/S
RR-195	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of P Mutimer
RR-196	Pat Bailey
RR-197	Royal Society for the Protection of Birds (RSPB)
RR-198	Sarah Rodgers
RR-199	Bidwells on behalf of Sir Edward Evans-Lombe
RR-200	Brown and Co on behalf of Stephen Peter Evan Garrett and Penelope Anne Yvonne Garrett

RR-201	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of T Love
RR-202	The National Trust
RR-203	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Trustees of Salle Park Trust being Sir David Chapman, Grant Pilcher, Michael Dewing and William Edwards
RR-204	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of William Youngs
RR-205	Alan Gibson
RR-206	Corbett Farming Company
RR-207	David Vear
RR-208	Helen Standley
RR-209	James Sheringham
RR-210	Julianne
RR-211	Kate Sheringham
RR-212	Lucy Sheringham
RR-213	Lynn Sheringham
RR-214	Margaret Meen
RR-215	Mrs Vanessa Long
RR-216	Paul Haddow
RR-217	R Jackson
RR-218	Robert Craigan
RR-219	Suzanne Meen
RR-220	William Meen
RR-221	Lucy Sheringham on behalf of Andrew Rogers
RR-222	Anglian Water Services Ltd
RR-223	Lucy Sheringham on behalf of Anna Spratt
RR-224	Lucy Sheringham on behalf of Annabelle Rogers
RR-225	Brown & Co on behalf of Bawdeswell Farms Ltd

RR-226	Brian Bales
RR-227	Brown & Co on behalf of Charity of Thomas Barrett - The Trustees thereof care of Nicholas Saffell
RR-228	Christine Dye
RR-229	Christopher Dye
RR-230	Brown & Co on behalf of David Hampson
RR-231	David Spain
RR-232	Diane Flynn
RR-233	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Dillington Hall Estate
RR-234	Dr Andy Scarlett
RR-235	Ed Salmon
RR-236	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Farnham Farms Limited
RR-237	Lucy Sheringham on behalf of Fiona Unick-Wagg
RR-238	Frank Cherry
RR-239	Gary Holley
RR-240	Georgie Armstrong
RR-241	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Gorgate Ltd
RR-242	Jackie Sidey
RR-243	John Darcy
RR-244	Kirsty Willis
RR-245	Louise Brooks
RR-246	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Lucy Keane and Matthew Keane
RR-247	Mark Kiddle-Morris
RR-248	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mark, Dorothy, Marilyn and David Howell

RR-249	Michael Birmingham
RR-250	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mills & Reeve Trust Corporation and Alexander Gavin Angell Lane
RR-251	Savills (UK) Ltd (Savills (UK) Ltd) on behalf of Mr Rex Baldwin
RR-252	Brown & Co on behalf of Mr Robert Claboon
RR-253	Mrs C L Cherry
RR-254	Mrs H Birmingham
RR-255	Mrs Susan Allen
RR-256	Neville McBrien
RR-257	Lucy Sheringham on behalf of Nick Rice
RR-258	North Norfolk District Council
RR-259	Phil Hayton
RR-260	Lucy Sheringham on behalf of Ros Wright
RR-261	Susannah Spain
RR-262	Sydney McNeil
RR-263	Lucy Sheringham on behalf of Thomas Bart
RR-264	Lucy Sheringham on behalf of Tony Wright
RR-265	Brown & Co on behalf of Trustees of the Bawdeswell Settlement being David Gurney, David Brown, Kate Paul, William Barr
RR-266	Brown & Co on behalf of Trustees of the Gurloque Settlement
RR-267	Wendy McNeil
Procedural Decisions and Notifications from the Examining Authority	
PD-001	Notification of Decision to Accept Application
PD-002	Section 51 advice to the Applicant
PD-003	Section 55 Checklist
PD-004	Notice of Appointment of Examining Authority
PD-005	Rule 6 letter - Notification of the Preliminary Meeting and Matters to be Discussed

PD-006	Notice of appointment of Examining Authority (7 December 2018)
PD-007	Rule 8 letter - notification of timetable for the examination
PD-008	Written Questions
PD-009	Rule 13 - Notification of Hearings
PD-010	Notification of Procedural Decision
PD-011	Rule 13 Letter - Notification of Hearings and Accompanied Site Inspection
PD-012	The Examining Authority's Further Written Questions
PD-013	Rule 13 - Notification of Hearings - April 2019
PD-014	The Planning Inspectorate The Examining Authority's Procedural Decision to accept the Applicant's proposed changes to the application
PD-015	Norfolk Vanguard Limited Notice for Accompanied Site Inspection, Issue Specific Hearings and Compulsory Acquisition Hearings 25–28 March 2019
PD-016	Report on the Implications for European Sites (RIES) Published by the Examining Authority on 9 May 2019.
PD-017	The Examining Authority's draft DCO schedule of changes
PD-018	Request for Further Information - Rule 17
PD-019	Request for Further Information to the Applicant - Rule 17
PD-020	Request for Further Information - Rule 17
PD-021	Request for Further Information - Rule 17
PD-022	ExA response to request under s102A of the Planning Act 2008 – Polly Brockis
PD-023	Notification of completion of the Examining Authority's Examination
Additional Submissions	
AS-001	Environment Agency Additional Submission - Accepted at the discretion of the Examining Authority
AS-002	Equinor UK Ltd Additional Submission - Accepted at the discretion of the Examining Authority
AS-003	Great Yarmouth Borough Council Additional Submission - Accepted at the discretion of the Examining Authority
AS-004	Norfolk Vanguard Limited Appendix 2 of Appendix 17.4 of the Environmental Statement (Doc Ref 6.2.17.4) - Stage 3 Geoarchaeological Review - Accepted at the discretion of the Examining Authority
AS-005	Ministry of Defence Additional Submission - Accepted at the discretion of the Examining Authority

AS-006	Norfolk Vanguard Limited Response to Section 51 Advice - Additional Submission - Accepted at the discretion of the Examining Authority
AS-007	Norfolk Vanguard Limited Strategic Approach to Selecting a Grid Connection Point - Additional Submission - Accepted at the discretion of the Examining Authority
AS-008	George Freeman MP Additional Submission - Accepted at the discretion of the Examining Authority
AS-009	Norfolk Vanguard Limited Post submission Change Report
AS-010	Norfolk Vanguard Limited Application Document Errata
AS-011	National Trust Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-012	Cllr Graham Everett Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-013	Norfolk County Council Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-014	Natural England Natural England's Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-015	No to Relay Stations Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-016	Oulton Parish Council Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-017	North Norfolk District Council Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-018	Glenn Berry (Chairman of Happisburgh Parish Council) Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-019	Marine Management Organisation Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-020	Ministry of Defence Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-021	National Farmers Union Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-022	NATS Safeguarding Response to Rule 6 - Accepted at the discretion of the Examining Authority

AS-023	Alice Spain Response to Rule 6 - Accepted at the discretion of the Examining Authority
AS-024	Natural England Natural England's Response to Rule 6 - Concern with project Timetables - Accepted at the discretion of the Examining Authority
AS-025	Norfolk Vanguard Limited Additional Submission - Accepted at the discretion of the Examining Authority
AS-026	Helen & Chris Monk Additional Submission - Accepted at the discretion of the Examining Authority
AS-027	Julian Pearson Additional Submission - Accepted at the discretion of the Examining Authority
AS-028	Matthew Attewell Additional Submission - Accepted at the discretion of the Examining Authority
AS-029	Jenny Smedley on behalf of Necton Substation Action Group Additional Submission - Accepted at the discretion of the Examining Authority
AS-030	Andy Longman Additional Submission - Accepted at the discretion of the Examining Authority
AS-031	Norfolk Vanguard Limited Additional Submission - Clarification Note on Landfall 24 Hour Vehicle Requirements in accordance with Action Point 10 - Accepted at the discretion of the Examining Authority
AS-032	Norfolk County Council Additional Submission - Accepted at the discretion of the Examining Authority
AS-033	George Freeman MP Additional Submission - Accepted at the Discretion of the Examining Authority
AS-034	Necton Substation Action Group Additional Submission - Accepted at the Discretion of the Examining Authority
AS-035	Laura & Richard Philpott Additional Submission - Written Submission - Accepted at the discretion of the Examining Authority
AS-036	Necton Substation Action Group Additional Submission - Accepted at the discretion of the Examining Authority
AS-037	Norfolk Vanguard Limited Additional Submission - Cover Letter - Accepted at the discretion of the Examining Authority
AS-038	Norfolk Vanguard Limited Additional Submission - 3.01 Applicant's revised draft DCO (Clean) (Version 4) - Accepted at the discretion of the Examining Authority

AS-039	Norfolk Vanguard Limited Additional Submission - 3.01 Applicant's revised draft DCO (Tracked Changes) (Version 4) - Accepted at the discretion of the Examining Authority
AS-040	Norfolk Vanguard Limited Additional Submission - Applicant's revised draft DCO Schedule of changes (Version 3) - Accepted at the discretion of the Examining Authority
AS-041	Norfolk Vanguard Limited Additional Submission - 3.2 Explanatory Memorandum (Clean) (Version 4) - Accepted at the discretion of the Examining Authority
AS-042	Norfolk Vanguard Limited Additional Submission - 3.2 Explanatory Memorandum (Tracked Changes) (Version 4) - Accepted at the discretion of the Examining Authority
AS-043	Norfolk Vanguard Limited Additional Submission - Offshore Ornithology Deterministic Collision Risk Modelling for revised layout scenarios - Accepted at the discretion of the Examining Authority
AS-044	Norfolk Vanguard Limited Additional Submission - Habitats Regulations Assessment - Screening Matrices (Updated) (Clean) - Accepted at the discretion of the Examining Authority
AS-045	Norfolk Vanguard Limited Additional Submission - Habitats Regulations Assessment - Screening Matrices (Updated) (Tracked Changes) - Accepted at the discretion of the Examining Authority
AS-046	Norfolk Vanguard Limited Additional Submission - Cover letter - Accepted at the discretion of the Examining Authority
AS-047	Norfolk Vanguard Limited Additional Submission - Technical Note Responding to Norfolk County Council's Request for Trenchless Crossings of the A1067 and B1149 - Accepted at the discretion of the Examining Authority
AS-048	Norfolk Vanguard Limited Additional Submission - Offshore Ornithology Cumulative and In-combination Collision Risk Assessment (Update) - Accepted at the discretion of the Examining Authority
AS-049	Norfolk Vanguard Limited Additional Submission - Offshore Ornithology Deterministic Collision Risk Modelling for revised layout scenarios and increased draught height - Accepted at the discretion of the Examining Authority
AS-050	Eastern Inshore Fisheries & Conservation Authority Additional Submission - Accepted at the discretion of the Examining Authority
AS-051	Castle Farms and Peggy Carrick Additional Submission - Accepted at the discretion of the Examining Authority
AS-052	Helen and Chris Monk Additional Submission - Accepted at the discretion of the Examining Authority

AS-053	Colin King Additional Submissions - Accepted at the discretion of the Examining Authority
AS-054	Highways England Additional Submission - Accepted at the discretion of the Examining Authority
AS-055	Peter Crossley Additional Submissions - Accepted at the discretion of the Examining Authority
AS-056	Highways England Additional Submission - Accepted at the discretion of the Examining Authority
AS-057	Tony Smedley Additional Submission - Accepted at the discretion of the Examining Authority
AS-058	Breckland Council Additional Submissions - Accepted at the discretion of the Examining Authority
AS-059	Highways England Additional Submission - Accepted at the discretion of the Examining Authority
AS-060	David Vince & Nicola Draycott Additional Submissions - Accepted at the discretion of the Examining Authority
AS-061	Shakespeare Martineau LLP on behalf of National Grid Additional Submission - Accepted at the discretion of the Examining Authority
AS-062	Savills on behalf of Mr Carrick and Castle Farms Additional Submission accepted at the discretion of the Examining Authority (Received before the Examination closed at 23:59 on 10 June 2019). Late submission for Deadline 9 submission
AS-063	Colin King Additional Submission accepted at the discretion of the Examining Authority (Received before the Examination closed at 23:59 on 10 June 2019). Update on easements and rights of way

Events and Hearings	
Preliminary Meeting	
EV-001	Notice of Preliminary Meeting and Open Floor Hearing - 10 December 2018
EV-002	Recording of Preliminary Meeting Part 1 - 10 December 2018
EV-003	Recording of Preliminary Meeting Part 2 - 10 December 2018
EV-004	Preliminary meeting note
Open Floor Hearing – 10 December 2018	
EV-005	Recording of Open Floor Hearing - 10 December 2018
Issue Specific Hearing 1 - 05 February 2019	
EV-005a	The Planning Inspectorate Agenda for Issue Specific Hearing 1: onshore environmental matters, to include all environmental and amenity matters - Tuesday 5 February 2019
EV-006	Recording of Issue Specific Hearing 1 - Part 1 of 2 Recording of Issue Specific Hearing on onshore environmental matters: to include all environmental and amenity matters - 5 February 2019
EV-007	Recording of Issue Specific Hearing 1 - Part 2 of 2 Recording of Issue Specific Hearing on onshore environmental matters: to include all environmental and amenity matters - 5 February 2019
EV-007a	Action Points from Issue Specific Hearing 1 - Onshore Environmental Matters 5 February 2019
EV-007c	Norfolk Vanguard Hearing Notice for Issue Specific Hearing 1 -7 (ISH), Open Floor Hearing (OFH) and Compulsory Acquisition Hearing
EV-007d	Norfolk Vanguard Limited Presentation shown at the Issue Specific Hearing on onshore environmental matters
EV-007e	Little Dunham Parish Council Hearing submission for the Issue Specific Hearing on onshore environmental matters
Open Floor Hearing 2 - 06 February 2019	
EV-007b	The Planning Inspectorate Agenda for Open Floor Hearing 2: Wednesday 6 February 2019 (evening)
EV-008	Recording of Open Floor Hearing 2 Open Floor Hearing

Issue Specific Hearing 2 - 06 February 2019	
EV-008a	The Planning Inspectorate Agenda for Issue Specific Hearing 2: offshore environmental matters, to include offshore ecology and processes - Wednesday 6 February 2019
EV-009	Recording of Issue Specific Hearing 2 - Part 1 of 2 Issue Specific Hearing on offshore environmental matters: to include offshore ecology and processes - 6 February 2019
EV-010	Recording of Issue Specific Hearing 2 - Part 2 of 2 Issue Specific Hearing on offshore environmental matters: to include offshore ecology and processes - 6 February 2019
EV-010a	Action Points from Issue Specific Hearing 2 - Offshore Environmental Matters 6 February 2019
EV-010c	Natural England A summary table of main concerns in relation to offshore ornithology submitted in lieu of attendance at the offshore environmental matters issue specific hearing
Issue Specific Hearing 3 - 07 February 2019	
EV-010b	The Planning Inspectorate Agenda for Issue Specific Hearing 3: The draft Development Consent Order - Thursday 7 February 2019
EV-011	Recording of Issue Specific Hearing 3 - Part 1 of 2 Issue Specific Hearing into the draft DCO - 7 February 2019
EV-012	Recording of Issue Specific Hearing 3 - Part 2 of 2 Issue Specific Hearing into the draft DCO - 7 February 2019
EV-012a	Action Points from Issue Specific Hearing 3 - Draft Development Consent Order 7 February 2019
Issue Specific Hearing 4 -27 March 2019	
EV-012b	The Planning Inspectorate Agenda for Issue Specific Hearing 4: Environmental Matters - Wednesday 27 March 2019
EV-013	Recording of Issue Specific Hearing 4 - Part 1 of 4 Issue Specific Hearing on environmental matters - 27 March 2019
EV-014	Recording of Issue Specific Hearing 4 - Part 2 of 4 Issue Specific Hearing on environmental matters - 27 March 2019
EV-015	Recording of Issue Specific Hearing 4 - Part 3 of 4 Issue Specific Hearing on environmental matters - 27 March 2019
EV-016	Recording of Issue Specific Hearing 4 - Part 4 of 4 Issue Specific Hearing on environmental matters - 27 March 2019
EV-017	Action Points from Issue Specific Hearing 4: Environmental Matters - 27 March 2019
Issue Specific Hearing 5 - 28 March 2019	
EV-025	The Planning Inspectorate Agenda for Issue Specific Hearing 5: The draft Development Consent Order - Thursday 28 March 2019
EV-018	Recording of Issue Specific Hearing 5 - Part 1 of 2 Issue Specific Hearing into the draft DCO - 28 March 2019
EV-019	Recording of Issue Specific Hearing 5 - Part 2 of 2 Issue Specific Hearing into the draft DCO - 28 March 2019
EV-020	Action Points from Issue Specific Hearing 5: Draft Development Consent Order - 28 March 2019

Compulsory Acquisition Hearing – 28 March 2019	
EV-021	The Planning Inspectorate Agenda for Compulsory Acquisition Hearing - Thursday 28 March 2019
EV-022	Recording of the Compulsory Acquisition Hearing - 28 March 2019
EV-023	Action Points from Compulsory Acquisition Hearing - 28 March 2019
EV-023a	Lucy Sheringham Written submission in lieu of attendance at the Compulsory Acquisition Hearing
Site Inspections	
EV-024	Accompanied Site Inspection Itinerary
EV-024a	Note of Unaccompanied Site Inspections
Issue Specific Hearing 6 - 24 April 2019	
EV-026	Norfolk Vanguard Limited Notice of Issue Specific and Open Floor Hearings on 24 & 25 April 2019
EV-027	Agenda for Issue Specific Hearing 6: Environmental Matters - Wednesday 24 April 2019
EV-028	Recording of Issue Specific Hearing 6 - Part 1 of 3
EV-029	Recording of Issue Specific Hearing 6 - Part 2 of 3
EV-030	Recording of Issue Specific Hearing 6 - Part 3 of 3
EV-031	Action Points from Issue Specific Hearing 6: Environmental Matters - 24 April 2019
Open Floor Hearing 3 - 24 April 2019	
EV-032	Agenda for Open Floor Hearing 3 - Wednesday 24 April 2019
EV-033	Recording of Open Floor Hearing 3 - 24 April 2019
Issue Specific Hearing 7 - 25 April 2019	
EV-034	Agenda for Issue Specific Hearing 7: The Draft Development Consent Order - Thursday 25 April 2019
EV-035	Recording of Issue Specific Hearing 7 - Part 1 of 3
EV-036	Recording of Issue Specific Hearing 7 - Part 2 of 3
EV-037	Recording of Issue Specific Hearing 7 - Part 3 of 3
EV-038	Action Points from Issue Specific Hearing 7: Draft Development Consent Order - 25 April 2019

Representations

Deadline 1 - 16 January 2019

- Comments on Relevant Representations (RRs)
- Summaries of all RRs exceeding 1500 words
- Written Representations (WRs)
- Summaries of all WRs exceeding 1500 words
- Local Impact Reports from any local authorities
- Statements of Common Ground (SoCG) requested by the ExA
- Statement of Commonality of SoGCs
- Applicant's Guide to the Application
- The Compulsory Acquisition (CA) schedule
- Responses to the ExA's Written Questions
- Comments on updated application documents including specific comments upon drafting of the DCO
- Comments on any additional submissions
- Responses to further information requested by the ExA
- Notification by Statutory Parties and certain Local Authorities who wish to be considered as an Interested Party
- Notification of wish to speak at a Compulsory Acquisition Hearing (CAH)
- Notification of wish to speak at Open Floor Hearing (OFH)
- Notification of wish to make oral representations at the Issue Specific Hearing on the draft Development Consent Order (DCO)
- Notification of wish to make oral representations at the Issue Specific Hearing on Environmental matters
- Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications
- Notification of wish to have future correspondence electronically

REP1-001	Norfolk Vanguard Limited Cover Letter
REP1-002	Norfolk Vanguard Limited Guide to the application
REP1-003	Norfolk Vanguard Limited Landfall Information Sheet
REP1-004	Norfolk Vanguard Limited Responses to Relevant Representations
REP1-005	Norfolk Vanguard Limited HDD Feasibility Report – Cable Landfall Site at Happisburgh
REP1-006	Norfolk Vanguard Limited Written Representation
REP1-007	Norfolk Vanguard Limited Responses to the Examining Authority's Written Questions
REP1-008	Norfolk Vanguard Limited Appendices to Written Questions: Appendices 1.1 & 3.1 - 3.4
REP1-009	Norfolk Vanguard Limited Appendices to Written Questions: Appendices 3.5 – 3.11
REP1-010	Norfolk Vanguard Limited Appendices to Written Questions: Appendices 20.2, 20.3, 22.1, 22.2 & 23.1
REP1-011	Norfolk Vanguard Limited Schedule of Compulsory Acquisition
REP1-012	Norfolk Vanguard Limited Responses to the Additional Submissions
REP1-013	Norfolk Vanguard Limited Substation Info Sheet
REP1-014	Norfolk Vanguard Limited Appendix 3.12 – O'Brien, et al. 2018. Red-Throated Diver Energetics Project - 2018 Field Season Report

REP1-015	Norfolk Vanguard Limited Appendix 3.13 – O’Brien, et al. 2017
REP1-016	Norfolk Vanguard Limited Appendix 5.1 – Comparison of MarLIN and Norfolk Vanguard sensitivity definitions for benthic receptors
REP1-017	Norfolk Vanguard Limited Appendix 6.1 – Relationship Between Design Parameters in Draft Development Consent Order and Environmental Statement
REP1-018	Norfolk Vanguard Limited Appendix 11.1 – Cable Route Info Sheet
REP1-019	Norfolk Vanguard Limited Appendix 12.1 – Vattenfall and National Grid EMF Information
REP1-020	Norfolk Vanguard Limited Appendix 12.2 – RAF report on the recovery of an F16 near Necton
REP1-021	Norfolk Vanguard Limited Appendix 14.1 – Updated LVIA Figures 29.11a and 29.11b
REP1-022	Norfolk Vanguard Limited Appendix 16.1 – Norfolk Vanguard and Norfolk Boreas Site Investigation Phase II
REP1-023	Norfolk Vanguard Limited Appendix 16.2 – TerraConsult 2017 Ground Investigations Report: Crossing 1
REP1-024	Norfolk Vanguard Limited Appendix 16.3 – TerraConsult 2017 Ground Investigations Report: Crossing 2
REP1-025	Norfolk Vanguard Limited Appendix 16.4 – TerraConsult 2017 Ground Investigations Report: Crossing 3
REP1-026	Norfolk Vanguard Limited Appendix 16.5 – TerraConsult 2017 Ground Investigations Report: Crossing 4 & 5
REP1-027	Norfolk Vanguard Limited Appendix 16.6 – TerraConsult 2017 Ground Investigations Report: Crossing 6 & 7
REP1-028	Norfolk Vanguard Limited Appendix 16.7 – TerraConsult 2017 Ground Investigations Report: Happisburgh
REP1-029	Norfolk Vanguard Limited Appendix 18.1 – CRoW Open Access Land Figures
REP1-030	Norfolk Vanguard Limited Appendix 19.1 – Evidence and Examples of Skills and Supply Chain Engagement (Q 19.21)
REP1-031	Norfolk Vanguard Limited Appendix 19.2 – Norfolk Vanguard and Norfolk Boreas Onshore Works Supply Chain Workshop Report
REP1-032	Norfolk Vanguard Limited Appendix 19.3 – Biggar Economics Study
REP1-033	Norfolk Vanguard Limited Appendix 20.1 – Gantt Chart (Q 20.22)

REP1-034	Norfolk Vanguard Limited Statement of Commonality of Statements of Common Ground
REP1-035	Norfolk Vanguard Limited Statement of Common Ground - Anglian Water
REP1-036	Norfolk Vanguard Limited Statement of Common Ground - Broadland District Council
REP1-037	Norfolk Vanguard Limited Statement of Common Ground - Breckland Council
REP1-038	Norfolk Vanguard Limited Statement of Common Ground - Cadent Gas Limited
REP1-039	Norfolk Vanguard Limited Statement of Common Ground - East Anglia Three Ltd
REP1-040	Norfolk Vanguard Limited Statement of Common Ground - Eastern Inshore Fisheries and Conservation Authority
REP1-041	Norfolk Vanguard Limited Statement of Common Ground - Environment Agency
REP1-042	Norfolk Vanguard Limited Statement of Common Ground - Highways England
REP1-043	Norfolk Vanguard Limited Statement of Common Ground - Historic England
REP1-044	Norfolk Vanguard Limited Statement of Common Ground - Marine Management Organisation
REP1-045	Norfolk Vanguard Limited Statement of Common Ground - Maritime and Coastguard Agency
REP1-046	Norfolk Vanguard Limited Statement of Common Ground - Ministry of Defence - Defence Infrastructure Organisation
REP1-047	Norfolk Vanguard Limited Statement of Common Ground - National Federation of Fishermen's Organisations (NFFO) and National Association of Producer Organisations in Dutch Demersal Fisheries (VisNED)
REP1-048	Norfolk Vanguard Limited Statement of Common Ground - National Grid Electricity Transmission PLC and National Grid Gas PLC
REP1-049	Norfolk Vanguard Limited Statement of Common Ground - Natural England
REP1-050	Norfolk Vanguard Limited Statement of Common Ground - NATS En-Route Safeguarding
REP1-051	Norfolk Vanguard Limited Statement of Common Ground - National Farmers Union
REP1-052	Norfolk Vanguard Limited Statement of Common Ground - Necton Parish Council
REP1-053	Norfolk Vanguard Limited Statement of common Ground - Network Rail Infrastructure Limited
REP1-054	Norfolk Vanguard Limited Statement of Common Ground - Norfolk County Council
REP1-055	Norfolk Vanguard Limited Statement of Common Ground - North Norfolk District Council

REP1-056	Norfolk Vanguard Limited Statement of Common Ground - Orsted Hornsea Project Three (UK) Ltd
REP1-057	Norfolk Vanguard Limited Statement of Common Ground - Oulton Parish Council
REP1-058	Norfolk Vanguard Limited Statement of Common Ground - Royal Society for the Protection of Birds
REP1-059	Norfolk Vanguard Limited Statement of Common Ground - Trinity House
REP1-060	Norfolk Vanguard Limited Statement of Common Ground - Royal Yachting Association
REP1-061	Norfolk Vanguard Limited Statement of Common Ground - Whale and Dolphin Conservation Society
REP1-062	Norfolk Vanguard Limited Statement of Common Ground - The Wildlife Trusts
REP1-063	Addleshaw Goddard LLP on behalf of Network rail Written Representation
REP1-064	Anglian Water Services Limited Written Representation
REP1-065	Broadland District Council Local Impact Report and Response to Examining Authority's Written Questions
REP1-066	Broadland District Council Response to Examining Authority's Written Questions
REP1-067	Colin King Written Representation
REP1-068	CPRE Norfolk Written Representation
REP1-069	CPRE Norfolk Response to Examining Authority's Written Questions
REP1-070	Diana Lockwood Written Representation
REP1-071	Environment Agency Written Representation
REP1-072	Environment Agency Response to Examining Authority's Written Questions
REP1-073	George Freeman MP Written Representation
REP1-074	Government of France Written Representation
REP1-075	James Sheringham Written Representation
REP1-076	Julian Pearson Written Representation
REP1-077	Happisburg Parish Council Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications
REP1-078	Happisburgh Parish Council Deadline 1 Submission

REP1-079	Highways England Response to Examining Authority's Written Questions
REP1-080	Historic England Response to Examining Authority's Written Questions
REP1-081	Historic England Written Representation
REP1-082	Lucy Sheringham Written Representation
REP1-083	Maritime and Coastguard Agency Response to Examining Authority's written questions
REP1-084	Marine Management Organisation Response to Examining Authority's Written Questions
REP1-085	Marine Management Organisation Response to the Change Document and Errata
REP1-086	Marine Management Organisation Summary of Relevant Representation
REP1-087	Marine Management Organisation Rule 8 Covering Letter
REP1-088	Natural England Written Representation and Appendices
REP1-089	National Federation of Fishermen's Organisations Written Representation
REP1-090	National Trust Written Representation and Summary of Written Representation
REP1-091	Necton Parish Council Statement of Common Ground Requested by the Examining Authority
REP1-092	Necton Parish Council Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications
REP1-093	Necton Parish Council Response to Examining Authority's Written Questions
REP1-094	Necton Parish Council Support Information
REP1-095	Necton Substation Action Group Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications
REP1-096	Necton Substation Action Group Written Representation
REP1-097	N2RS (No to Relay Stations) Written Representation
REP1-098	Patricia Lockwood Written Representation
REP1-099	North Norfolk District Council Deadline 1 Submission
REP1-100	Norfolk County Council Local Impact Report - Appendices 1-6
REP1-101	Norfolk County Council Comments on application documents and any additional submissions

REP1-102	Norfolk County Council Response to Examining Authority's Written Questions 14.24, 20.32 and 20.49
REP1-103	Norfolk County Council Response to Examining Authority's Written Question 16.16
REP1-104	Norfolk County Council Response to Examining Authority's Written Questions and requests for information
REP1-105	Norfolk County Council Response to Examining Authority's Landscape and Ecology Written Questions
REP1-106	Orsted Hornsea Project Three (UK) Ltd Response to ExA Questions
REP1-107	Oulton Parish Council Written Representation
REP1-108	Peter Soldan Written Representation
REP1-109	Ray and Diane Pearce Written Representation
REP1-110	Royal Society for the Protection of Birds Response to Examining Authority's Written Questions
REP1-111	Royal Society for the Protection of Birds Summary of Relevant Representation
REP1-112	Royal Society for the Protection of Birds Written Representation
REP1-113	Royal Society for the Protection of Birds Bird Collision Avoidance Study
REP1-114	Savills on behalf of Mr C Allhusen Notification of Accompanied Site Inspection (ASI), suggested locations and justifications
REP1-115	Shakespeare Martineau on behalf of National Grid Comments on the Change Report
REP1-116	Shakespeare Martineau LLP on behalf of Cadent Gas Limited Written Representation
REP1-117	Shakespeare Martineau LLP on behalf of Cadent Gas Limited Response to Examining Authority's Written Questions
REP1-118	Shakespeare Martineau on behalf of National Grid Written Representation
REP1-119	Shell (UK) Limited Written Representation
REP1-120	Trinity House Response to Examining Authority's Written Questions
REP1-121	Trinity House Comments on Draft Development Consent Order
REP1-122	Tony Smedley Written Representation
REP1-123	The Wildlife Trusts Written Representation and Response to Examining Authority's Written Questions
REP1-124	Whale and Dolphin Conservation Written Representation and Response to Examining Authority's Written Questions

Late Submissions

REP1-125	Breckland Council Local Impact Report - Late Submission - Accepted at the discretion of the Examining Authority
REP1-126	Historic England Late Submission for Deadline 1 - Accepted at the discretion of the Examining Authority
REP1-127	The Royal Yachting Association Late Submission - Accepted at the discretion of the Examining Authority
REP1-128	NATS Safeguarding Office Response to the Examining Authority's Written Questions. Late Submission – Accepted at the discretion of the Examining Authority
REP1-129	Ministry of Defence Late Submission - Accepted at the discretion of the Examining Authority
REP1-130	Norfolk County Council Deadline 1 Submission - Late Submission - Response to ExA's Written Questions - Accepted at the discretion of the Examining Authority

Deadline 2 – 30 January 2019

- Comments on WRs and responses to comments on RRs
- Comments on Local Impact Reports
- Comments on responses to the ExA's Written Questions
- Revised draft DCO from Applicant
- Responses to further information requested by the ExA

REP2-001	Norfolk Vanguard Limited Deadline 2 Submission - Cover letter
REP2-002	Norfolk Vanguard Limited Deadline 2 Submission - Guide to the Application
REP2-003	Norfolk Vanguard Limited Deadline 2 submission - Comments on Written Representations
REP2-004	Norfolk Vanguard Limited Deadline 2 submission - Comments on responses to the ExA's Written Questions
REP2-005	Norfolk Vanguard Limited Deadline 2 submission - Comments on Norfolk County Council's Local Impact Report
REP2-006	Norfolk Vanguard Limited Deadline 2 Submission - Comments on Breckland Council's Local Impact Report
REP2-007	Norfolk Vanguard Limited Deadline 2 submission - Comments on Broadland District Council's Local Impact Report
REP2-008	Norfolk Vanguard Limited Deadline 2 Submission - Comments on North Norfolk District Council's Local Impact Report
REP2-009	Norfolk Vanguard Limited Deadline 2 Submission - Response to the Examining Authority's request for further information for Deadline 2
REP2-010	Norfolk Vanguard Limited Deadline 2 Submission - Location Plan Onshore
REP2-011	Norfolk Vanguard Limited Deadline 2 Submission - Land Plans
REP2-012	Norfolk Vanguard Limited Deadline 2 Submission - Works Plans
REP2-013	Norfolk Vanguard Limited Deadline 2 Submission - Access to Works Plans
REP2-014	Norfolk Vanguard Limited Deadline 2 Submission - Public Rights of Way Plans
REP2-015	Norfolk Vanguard Limited Deadline 2 submission - Streets to be Stopped Up Plans
REP2-016	Norfolk Vanguard Limited Deadline 2 Submission - Important Hedgerows Plans
REP2-017	Norfolk Vanguard Limited Deadline 2 Submission - Draft DCO
REP2-018	Norfolk Vanguard Limited Deadline 2 Submission - Draft DCO (track changed)
REP2-019	Norfolk Vanguard Limited Deadline 2 Submission - DCO schedule of changes
REP2-020	Norfolk Vanguard Limited Deadline 2 Submission - Explanatory Memorandum

REP2-021	Norfolk Vanguard Limited Deadline 2 Submission - Explanatory Memorandum (track changed)
REP2-022	Norfolk Vanguard Limited Deadline 2 Submission - Statement of Reasons
REP2-023	Norfolk Vanguard Limited Deadline 2 Submission - Statement of Reasons (track changed)
REP2-024	Norfolk Vanguard Limited Deadline 2 Submission - Book of Reference
REP2-025	Norfolk Vanguard Limited Deadline 2 Submission - Book of Reference (track changed)
REP2-026	Norfolk Vanguard Limited Deadline 2 Submission - Outline Access Management Plan
REP2-027	Norfolk Vanguard Limited Deadline 2 Submission - Site Characterisation Report
REP2-028	Norfolk Vanguard Limited Deadline 2 Submission - Site Characterisation Report (track changed)
REP2-029	Norfolk Vanguard Limited Deadline 2 Submission - Outline Fisheries Liaison and Co-Existence Plan
REP2-030	Norfolk Vanguard Limited Deadline 2 Submission - Appendix 23.1 to the comments on responses to Written Questions - Greater Wash SPA common scoter distribution and Norfolk Vanguard Offshore Windfarm
REP2-031	Norfolk Vanguard Limited Deadline 2 submission - Comments on Natural England's Written Representation
REP2-032	Ministry of Defence Deadline 2 Submission - Response to Examining Authority's request for further information for Deadline 2
REP2-033	The National Trust Deadline 2 Submission
REP2-034	Royal Society for the Protection of Birds Deadline 2 Submission - Comments on the Applicant's response to Written Questions
REP2-035	Environment Agency Deadline 2 submission - other submission - late submission accepted at the discretion of the Examining Authority
REP2-036	Natural England Deadline 2 submission - Comments on responses to the ExA's Written Questions
REP2-037	Natural England Deadline 2 submission - Comments on Written Representations
REP2-038	Natural England Deadline 2 submission - Other submission
REP2-039	Norfolk County Council Deadline 2 submission - Other submission
REP2-040	George Freeman MP Deadline 2 submission - Other submission
REP2-041	Oulton Parish Council Deadline 2 Submission
REP2-042	Necton Substation Action Group Deadline 2 Submission - other submission

Deadline 3 - 14 February 2019

- Post hearing submissions including written submissions of oral cases
- Responses to further information requested by the ExA

REP3-001	Norfolk Vanguard Limited Deadline 3 Submission - Cover Letter
REP3-002	Norfolk Vanguard Limited Deadline 3 Submission - Guide to the Application
REP3-003	Norfolk Vanguard Limited Deadline 3 Submission - Written Summary of the Applicant's Oral Case at Issue Specific Hearing 1 - Onshore Environmental Matters
REP3-004	Norfolk Vanguard Limited Deadline 3 Submission - Written Summary of the Applicant's Oral Case at Issue Specific Hearing 2
REP3-005	Norfolk Vanguard Limited Deadline 3 Submission - Written Summary of the Applicant's Oral Case at Issue Specific Hearing 3
REP3-006	Norfolk Vanguard Limited Deadline 3 Submission - Written summary of the Applicant's Oral Case at the Open Floor Hearing
REP3-007	Norfolk Vanguard Limited Deadline 3 Submission - Plan showing Hornsea Project Three compound at Oulton
REP3-008	Norfolk Vanguard Limited Deadline 3 Submission - Appeal Decision for anaerobic digester in Oulton
REP3-009	Norfolk Vanguard Limited Deadline 3 Submission - Hornsea Project Three HGV Road Reduction Report
REP3-010	Norfolk Vanguard Limited Deadline 3 Submission - Consideration of EN-1 Climate Change policy in the Application
REP3-011	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Broadland District Council part 1 of 5
REP3-012	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Broadland District Council - Part 2 of 5
REP3-013	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Broadland District Council - Part 3 of 5
REP3-014	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Broadland District Council - Part 4 of 5
REP3-015	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Broadland District Council - Broadland District Council - Part 5 of 5
REP3-016	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Breckland District - Part 1 of 5
REP3-017	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Breckland Council - Part 2 of 5

REP3-018	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Breckland Council - Part 3 of 5
REP3-019	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Breckland Council - Part 4 of 5
REP3-020	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Breckland Council - Part 5 of 5
REP3-021	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - North Norfolk District Council
REP3-022	Norfolk Vanguard Limited Deadline 3 Submission - Landscape Character Assessment Documents - Norfolk and Suffolk Brecks
REP3-023	Norfolk Vanguard Limited Deadline 3 Submission - Lightning Protection Masts Information Sheet
REP3-024	Norfolk Vanguard Limited Deadline 3 Submission - 19m Onshore Converter Station Photomontages - Part 1 - Ivy Todd Road West
REP3-025	Norfolk Vanguard Limited Deadline 3 Submission - 19m Onshore Converter Station Photomontages - Part 2 - Lodge Lane South
REP3-026	Norfolk Vanguard Limited Deadline 3 Submission - 19m Onshore Converter Station Photomontages - Part 3 - Lodge Lane North
REP3-027	Norfolk Vanguard Limited Deadline 3 Submission - 19m Onshore Converter Station Photomontages - Part 4 - A47 Spicer's Corner
REP3-028	Norfolk Vanguard Limited Deadline 3 Submission - 19m Onshore Converter Station Photomontages - Part 5 - A47 Top Farm
REP3-029	Norfolk Vanguard Limited Deadline 3 Submission - 19m Converter Station Photomontages - Part 6 - Ivy Todd Road East
REP3-030	Norfolk Vanguard Limited Deadline 3 Submission - 19m Onshore Converter Station Photomontages - Part 7 - Hale Road
REP3-031	Norfolk Vanguard Limited Deadline 3 Submission - National Grid Substation Indicator Lights Information Note
REP3-032	Norfolk Vanguard Limited Deadline 3 Submission - Plan Showing Indicative Tree Removal - Part 1 of 3
REP3-033	Norfolk Vanguard Limited Deadline 3 Submission - Plan Showing Indicative Tree Removal - Part 2 of 3
REP3-034	Norfolk Vanguard Limited Deadline 3 Submission - Plan Showing Indicative Tree Removal - Part 3 of 3
REP3-035	Norfolk Vanguard Limited Deadline 3 Submission - Plan Showing Marriott's Way Cumulative Visual Effects

REP3-036	Norfolk Vanguard Limited Deadline 3 Submission - Draft Habitats Regulation Assessment - For Review of Consented Offshore Wind Farms in the Southern North Sea Harbour Porpoise SCI
REP3-037	Norfolk Vanguard Limited Deadline 3 Submission - Applicant's Comments on Deadline 2 Submissions
REP3-038	Norfolk Vanguard Limited Deadline 3 Submission - Migrant non-seabird Collision Risk Modelling
REP3-039	Breckland Council Deadline 3 Submission - Written Response
REP3-040	Cadent Gas Deadline 3 Submission - Written Representation
REP3-041	Colin King Deadline 3 Submission - Post Hearing Submission
REP3-042	East Ruston Parish Council Deadline 3 Submission - Written Submission
REP3-043	George Freeman MP Deadline 3 Submission - Post Hearing Submission
REP3-044	Happisburgh Parish Council Deadline 3 Submission - Written Submission
REP3-045	Jenny Smedley Deadline 3 Submission - Post Hearing Submission
REP3-046	Marine Management Organisation Deadline 3 Submission - Post Hearing Submission
REP3-047	Ministry of Defence Deadline 3 Submission - Response to ExA Written Question
REP3-048	Ministry of Defence Deadline 3 Submission
REP3-049	National Farmers Union & Land Interest Group Deadline 3 Submission - Post Hearing Submission
REP3-050	National Grid Deadline 3 Submission - Written Representation
REP3-051	Natural England Deadline 3 Submission - Response to Deadline 3
REP3-052	Network Rail Deadline 3 Submission - Written Submission
REP3-053	Norfolk County Council Deadline 3 Submission - Post Hearing Submission
REP3-054	Norfolk County Council Deadline 3 Submission - Post Hearing Submission in Response to Climate Change Issues
REP3-055	North Norfolk District Council Deadline 3 Submission - Post Hearing Submission
REP3-056	N2RS Deadline 3 Submission - Post Hearing Submission
REP3-057	Oulton Parish Council Deadline 3 Submission - Response to Deadline 3
REP3-058	Patricia Lockwood Deadline 3 Submission - Post Hearing Submission
REP3-059	Paul Haddow Deadline 3 Submission - Post Hearing Submission
REP3-060	Penelope Malby & Sue Allen Deadline 3 Submission - Written Submission

REP3-061	Ray and Diane Pearce Deadline 3 Submission - Written Submission
REP3-062	Trinity House Deadline 3 Submission - Post Hearing Submission
REP3-063	The Wildlife Trust Deadline 3 Submission - Post Hearing Submission
REP3-064	Necton Substation Action Group Deadline 3 Submission
REP3-065	Helen and Chris Monk Deadline 3 submission -
REP3-065b	Norfolk Vanguard Limited Deadline 3 Submission - Notification of Wish to Attend an Accompanied Site Inspection
REP3-065c	Jenny Smedley Deadline 3 Submission - Requested Post Hearing extra Submission
Late Submissions	
REP3-066	Historic England Deadline 3 Submission - Late Submission - Response to Issue Specific Hearing 1 Action Points - Accepted at the discretion of the Examining Authority
REP3-067	N2RS Deadline 3 Submission - Late Submission - Post Hearing Oral Submission - Accepted at the Discretion of the Examining Authority

Deadline 4 - 13 March 2019

- Responses to the ExA's Further Written Questions (if required)
- Applicant's revised draft DCO
- Updated SoCGs
- Updated Statement of Commonality of SoCGs
- Applicant's updated Guide to the Application
- Responses to further information requested by the ExA

REP4-001	Norfolk Vanguard Limited Deadline 4 Submission - Cover Letter
REP4-002	Norfolk Vanguard Limited Deadline 4 Submission - 1.4 Guide to the Application (Revision 5)
REP4-003	Norfolk Vanguard Limited Deadline 4 Submission - Applicant's Statement of Commonality of Statements of Common Ground (Version 2)
REP4-004	Norfolk Vanguard Limited Deadline 4 Submission - 1.1 Statement of Common Ground with Anglian Water (Version 2)
REP4-005	Norfolk Vanguard Limited Deadline 4 Submission - 2.1 Statement of Common Ground with Breckland Council
REP4-006	Norfolk Vanguard Limited Deadline 4 Submission - 3.1 Statement of Common Ground with Broadland District Council (Version 2)
REP4-007	Norfolk Vanguard Limited Deadline 4 Submission - 4.1 Statement of Common Ground with East Anglia THREE Ltd (Revision 1)
REP4-008	Norfolk Vanguard Limited Deadline 4 Submission - 5.1 Statement of Common Ground with National Farmers Union
REP4-009	Norfolk Vanguard Limited Deadline 4 Submission - 6.1 Statement of Common Ground with Environment Agency (Version 2)
REP4-010	Norfolk Vanguard Limited Deadline 4 Submission - 7.1 Statement of Common Ground with Highways England (Version 2)
REP4-011	Norfolk Vanguard Limited Deadline 4 Submission - 8.1 Statement of Common Ground with Historic England
REP4-012	Norfolk Vanguard Limited Deadline 4 Submission - 10.1 Statement of Common Ground with Cadent Gas
REP4-013	Norfolk Vanguard Limited Deadline 4 Submission - 11.1 Statement of Common Ground with Marine Management Organisation
REP4-014	Norfolk Vanguard Limited Deadline 4 Submission - 12.1 Statement of Common Ground with Network Rail Infrastructure Limited
REP4-015	Norfolk Vanguard Limited Deadline 4 Submission - 15.1 Statement of Common Ground with Norfolk County Council (Version 2)
REP4-016	Norfolk Vanguard Limited Deadline 4 Submission - 17.1 Statement of Common Ground with North Norfolk District Council (Version 2)

REP4-017	Norfolk Vanguard Limited Deadline 4 Submission - 18.1 Statement of Common Ground with Orsted Hornsea Project Three (Version 2)
REP4-018	Norfolk Vanguard Limited Deadline 4 Submission - 24.1 Statement of Common Ground with Happisburgh Parish Council (Version 2)
REP4-019	Norfolk Vanguard Limited Deadline 4 Submission - 27.1 Statement of Common Ground with Eastern Inshore Fisheries and Conservation Authority (Version 2)
REP4-020	Norfolk Vanguard Limited Deadline 4 Submission - 30.1 Statement of Common Ground with Trinity House
REP4-021	Norfolk Vanguard Limited Deadline 4 Submission - 31.1 Statement of Common Ground with Maritime and Coastguard Agency (Version 2)
REP4-022	Norfolk Vanguard Limited Deadline 4 Submission - 2.2 Land Plans (Updated) - Part 1 of 4 (Version 3)
REP4-023	Norfolk Vanguard Limited Deadline 4 Submission - 2.2 Land Plans (Updated) - Part 2 of 4 (Version 3)
REP4-024	Norfolk Vanguard Limited Deadline 4 Submission - 2.2 Land Plans (Updated) - Part 3 of 4 (Version 3)
REP4-025	Norfolk Vanguard Limited Deadline 4 Submission - 2.2 Land Plans (Updated) - Part 4 of 4 (Version 3)
REP4-026	Norfolk Vanguard Limited Deadline 4 Submission - 2.4 Offshore Work Plans (Updated) (Version 2)
REP4-027	Norfolk Vanguard Limited Deadline 4 Submission - 3.01 Draft DCO (Version 3)
REP4-028	Norfolk Vanguard Limited Deadline 4 Submission - 3.01 Draft DCO (Tracked Changes) (Version 3)
REP4-029	Norfolk Vanguard Limited Deadline 4 Submission - Schedule of Changes to the draft DCO (Version 2)
REP4-030	Norfolk Vanguard Limited Deadline 4 Submission - 3.2 Explanatory Memorandum (Revision 3)
REP4-031	Norfolk Vanguard Limited Deadline 4 Submission - 3.2 Explanatory Memorandum (Tracked Changes) (Revision 3)
REP4-032	Norfolk Vanguard Limited Deadline 4 Submission - 4.3 Book of Reference (Revision 3)
REP4-033	Norfolk Vanguard Limited Deadline 4 Submission - 4.3 Book of Reference (Tracked Changes) (Revision 3)
REP4-034	Norfolk Vanguard Limited Deadline 4 Submission - Schedule of Compulsory Acquisition (Version 2)
REP4-035	Norfolk Vanguard Limited Deadline 4 Submission - 4.1 Minor Change Request: Amendment to land rights sought at the existing National Grid Substation

REP4-036	Norfolk Vanguard Limited Deadline 4 Submission - Substation Access Briefing Note
REP4-037	Norfolk Vanguard Limited Deadline 4 Submission - A47 Access Options Figures
REP4-038	Norfolk Vanguard Limited Deadline 4 Submission - Consideration of Cumulative Impacts on Marine Mammals - Delivery of the Site Integrity Plan - Offshore Issue Specific Hearing Action Point 2
REP4-039	Norfolk Vanguard Limited Deadline 4 Submission - Offshore Parameters - Comparison with East Anglia THREE and Hornsea Project Three (ISH2 Action 5 and Q6.13)
REP4-040	Norfolk Vanguard Limited Deadline 4 Submission - Applicant's Responses to the Examining Authority's Further Written Questions
REP4-041	Norfolk Vanguard Limited Deadline 4 Submission - Checklist of East Inshore and Offshore Marine Plans Objectives - Appendix 1.1 (Q1.8)
REP4-042	Norfolk Vanguard Limited Deadline 4 Submission - Power Lines: Demonstrating Compliance with EMF public exposure guidelines - Appendix 2.1 (Q2.11)
REP4-043	Norfolk Vanguard Limited Deadline 4 Submission - East Inshore and Offshore Marine Plans - Appendix 1.2 (Q1.8) - Part 1 of 2
REP4-044	Norfolk Vanguard Limited Deadline 4 Submission - East Inshore and Offshore Marine Plans - Appendix 1.2 (Q1.8) - Part 2 of 2
REP4-045	Norfolk Vanguard Limited Deadline 4 Submission - Ornithology Aerial Surveys: Dates and Times (Version 1)
REP4-046	Norfolk Vanguard Limited Deadline 4 Submission - Supply Chain Guidance - Appendix 19.1 (Q19.30 and Q20.155)
REP4-047	Norfolk Vanguard Limited Deadline 4 Submission - Norfolk Vanguard and Norfolk Boreas Outline Programme - Appendix 22.1 (Q22.43)
REP4-048	Norfolk Vanguard Limited Deadline 4 Submission - East Anglia THREE, Information for Habitats Regulations Assessment Appendix 3 - Appendix 23.1 (Q23.72)
REP4-049	Norfolk Vanguard Limited Deadline 4 Submission - East Anglia THREE Information for Habitats Regulations Assessment Appendix 4 - Appendix 23.2 (Q23.74)
REP4-050	Norfolk Vanguard Limited Deadline 4 Submission - Applicant's Comments on Deadline 3 Submissions
REP4-051	Norfolk Vanguard Limited Deadline 4 Submission - Norfolk Vanguard and Natural England Joint Position Statement at Deadline 4
REP4-052	Broadland District Council Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-053	Broadland District Council Deadline 4 Submission - Updated Statement of Common Ground (SoCG)

REP4-054	Cllr Graham Everett Deadline 4 Submission
REP4-055	Colin King Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-056	Happisburgh Parish Council Deadline 4 Submission
REP4-057	Historic England Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-058	Jenny Smedley Deadline 4 Submission
REP4-059	Marine Management Organisation Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-060	Ministry of Defence Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-061	National Farmers Union & Land Interest Group Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-062	Natural England Deadline 4 Submission
REP4-063	Necton Parish Council Deadline 4 Submission - Response to ExA's further Written Questions
REP4-064	Necton Substation Action Group Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-065	Necton Substation Action Group Deadline 4 Submission
REP4-066	Network Rail Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-067	Norfolk County Council Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-068	North Norfolk District Council Deadline 4 Submission
REP4-069	Oulton Parish Council Deadline 4 Submission
REP4-070	RSPB Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-071	The National Trust Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-072	The Wildlife Trust Deadline 4 Submission - Response to ExA's Further Written Questions
REP4-073	Tony Smedley Deadline 4 Submission
REP4-074	Whale and Dolphin Conservation Deadline 4 Submission - Response to ExA's Further Written Questions

Late Submissions

REP4-075

[Cadent Gas](#)

Deadline 4 Submission - Late Submission - Response to ExA's
Further Written Questions - Accepted at the discretion of the
Examining Authority

Deadline 5 - 20 March 2019

- Comments on responses to ExA's Further Written Questions (if required)
- Responses to further information requested by the ExA

REP5-001	Norfolk Vanguard Limited Deadline 5 Submission - Cover Letter
REP5-002	Norfolk Vanguard Limited Deadline 5 Submission - 1.4 Guide to the Application (Revision 6)
REP5-003	Norfolk Vanguard Limited Deadline 5 Submission - Applicant's Comments on Deadline 4 Submissions
REP5-004	Norfolk Vanguard Limited Deadline 5 Submission - Applicant's Comments on Response to ExA's Further Written Questions
REP5-005	Norfolk Vanguard Limited Deadline 5 Submission - Statement of Common Ground with Cadent Gas
REP5-006	Norfolk Vanguard Limited Deadline 5 Submission - Statement of Common Ground with Ministry of Defence - Defence Infrastructure Organisation
REP5-007	Norfolk Vanguard Limited Deadline 5 Submission - Statement of Common Ground with Natural England
REP5-008	Norfolk Vanguard Limited Deadline 5 Submission - Statement of Common Ground with The Royal Society for the Protection of Birds
REP5-009	Norfolk Vanguard Limited Deadline 5 Submission - Statement of Common Ground with National Grid Electricity Transmission PLC and National Grid Gas PLC
REP5-010	Norfolk Vanguard Limited Deadline 5 Submission - Statement of Common Ground with National Federation of Fishermen's Organisations (NFFO) and National Association of Producer Organisations in Dutch Demersal Fisheries (VisNED)
REP5-011	Norfolk Vanguard Limited Deadline 5 Submission - Applicant's Statement of Commonality of Statements of Common Ground
REP5-012	Norfolk Vanguard Limited Deadline 5 Submission - Cumulative Impact Assessment - Traffic and Transport
REP5-013	Crawston Parish Council Deadline 5 Submission
REP5-014	Happisburgh Parish Council Deadline 5 Submission
REP5-015	Helen & Chris Monk Deadline 5 Submission
REP5-016	Marine Management Organisation Deadline 5 Submission - Response to ExA's Further Written Questions
REP5-017	Natural England Deadline 5 Submission
REP5-018	Necton Substation Action Group Deadline 5 Submission

REP5-019	Orsted Hornsea Project Three (UK) Limited Deadline 5 Submission
REP5-020	Oulton Parish Council Deadline 5 Submission
REP5-021	Trinity House Deadline 5 Submission - Response to ExA's Further Written Questions

Deadline 6 - 05 April 2019

- Responses to further information requested by the ExA
- Post hearing submissions including written submissions of oral case

REP6-001	Norfolk Vanguard Limited Deadline 6 Submission - Cover Letter
REP6-002	Norfolk Vanguard Limited Deadline 6 Submission - 1.4 Guide to the Application (Revision 7)
REP6-003	Norfolk Vanguard Limited Deadline 6 Submission - Schedule of Compulsory Acquisition
REP6-004	Norfolk Vanguard Limited Deadline 6 Submission - Written summary of the Applicant's oral case at Issue Specific Hearing 4 - Environmental Matters
REP6-005	Norfolk Vanguard Limited Deadline 6 Submission - Figures showing the landfall HGV access route and the cable crossing point with Hornsea Project Three
REP6-006	Norfolk Vanguard Limited Deadline 6 Submission - Unresolved Traffic Matters Joint Position Statement with Norfolk County Council
REP6-007	Norfolk Vanguard Limited Deadline 6 Submission - Hornsea Three VISSIM Appendix 8 - Main Construction Compound Access Strategy (Part 1 of 2)
REP6-008	Norfolk Vanguard Limited Deadline 6 Submission - Hornsea Three VISSIM Appendix 8 - Main Construction Compound Access Strategy Part 2 of 2)
REP6-009	Norfolk Vanguard Limited Deadline 6 Submission - Unresolved Traffic Matters with Highways England Position Statement
REP6-010	Norfolk Vanguard Limited Deadline 6 Submission - Broadland District Council Noise and Vibration Position Statement
REP6-011	Norfolk Vanguard Limited Deadline 6 Submission - Implications of Updated Vibration Assessment Undertaken by Hornsea Project Three at Cawston
REP6-012	Norfolk Vanguard Limited Deadline 6 Submission - North Norfolk District Council Position Statement - HGV Waiting Areas and Cart Gap seawall
REP6-013	Norfolk Vanguard Limited Deadline 6 Submission - Onshore Ecology Clarification Notes - Position Statement - Natural England
REP6-014	Norfolk Vanguard Limited Deadline 6 Submission - Written Summary of the Applicant's oral case at Issue Specific Hearing 5 - draft Development Consent Order
REP6-015	Norfolk Vanguard Limited Deadline 6 Submission - Written Summary of the Applicant's oral case at the Compulsory Acquisition Hearing
REP6-016	Norfolk Vanguard Limited Deadline 6 Submission - The Crown Estate Commissioners - Position Statement
REP6-017	Norfolk Vanguard Limited Deadline 6 Submission - The National Trust Land Agreement Position Statement

REP6-018	Norfolk Vanguard Limited Deadline 6 Submission - Applicant's Comments on Deadline 5 Written Submissions
REP6-019	Norfolk Vanguard Limited Deadline 6 Submission - Offshore Ornithology Deterministic Collision Risk Modelling
REP6-020	Norfolk Vanguard Limited Deadline 6 Submission - Lesser Black-backed Gull Alde Ore Estuary Population Viability Analysis
REP6-021	Norfolk Vanguard Limited Deadline 6 Submission - Offshore Ornithology Assessment Update for Deadline 6
REP6-022	Norfolk Vanguard Limited Deadline 6 Submission - Migrant non-seabird Collision Risk Modelling - Revision of REP3-038, addressing Natural England's comments
REP6-023	Cawston Parish Council Deadline 6 Submission
REP6-024	Colin King Deadline 6 Submission
REP6-025	Eastern Inshore Fisheries & Conservation Authority Deadline 6 Submission
REP6-026	Happisburgh Parish Council Deadline 6 Submission
REP6-027	Highways England Deadline 6 Submission
REP6-028	Historic England Deadline 6 Submission
REP6-029	Jenny Smedley Deadline 6 Submission
REP6-030	Marine Management Organisation Deadline 6 Submission - Post Hearing Written Submission of oral case
REP6-031	National Farmers Union Deadline 6 Submission - Post Hearing Written Submission
REP6-032	Natural England Deadline 6 Submission
REP6-033	Necton Substation Action Group Deadline 6 Submission
REP6-034	North Norfolk District Council Deadline 6 Submission
REP6-035	Oulton Parish Council Deadline 6 Submission
REP6-036	Patricia Lockwood Deadline 6 Submission
REP6-037	Ray & Diane Pearce Deadline 6 Submission - Post Hearing Written Submission
REP6-038	Royal Society for the Protection of Birds Deadline 6 Submission
REP6-039	Trinity House Deadline 6 Submission
Late Submission	
REP6-040	Patricia Lockwood Deadline 6 Submission - Late Submission - Accepted at the discretion of the Examining Authority

Deadline 7 - 02 May 2019

- Updated SoCGs
- Updated Statement of Commonality of SoCGs
- Applicant's updated Guide to the Application
- Responses to further information requested by the ExA
- Post hearing submissions (if required)

REP7-001	Norfolk Vanguard Limited Deadline 7 Submission - Cover Letter
REP7-002	Norfolk Vanguard Limited Deadline 7 Submission - 1.4 Guide to the Application (Version 8)
REP7-003	Norfolk Vanguard Limited Deadline 7 Submission - 3.1 Applicant's revised draft DCO (Clean)
REP7-004	Norfolk Vanguard Limited Deadline 7 Submission - 3.1 Applicant's revised draft DCO (Tracked Changes)
REP7-005	Norfolk Vanguard Limited Deadline 7 Submission - 3.3 Note on Requirements and Conditions in the Development Consent Order
REP7-006	Norfolk Vanguard Limited Deadline 7 Submission - 8.1 Outline Code of Construction Practice (Clean)
REP7-007	Norfolk Vanguard Limited Deadline 7 Submission - 8.1 Outline Code of Construction Practice (Tracked Changes)
REP7-008	Norfolk Vanguard Limited Deadline 7 Submission - 8.7 Outline Landscape and Ecological Management Plan (Clean)
REP7-009	Norfolk Vanguard Limited Deadline 7 Submission - 8.7 Outline Landscape and Ecological Management Plan (Tracked Changes)
REP7-010	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Clean) - Part 1 of 4
REP7-011	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Clean) - Part 2 of 4
REP7-012	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Clean) - Part 3 of 4
REP7-013	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Clean) Part 4 of 4
REP7-014	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Track Changes) - Part 1 of 4
REP7-015	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Track Changes) - Part 2 of 4
REP7-016	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Track Changes) - Part 3 of 4
REP7-017	Norfolk Vanguard Limited Deadline 7 Submission - 8.8 Outline Traffic Management Plan (Track Changes) - Part 4 of 4

REP7-018	Norfolk Vanguard Limited Deadline 7 Submission - 8.11 Outline Offshore and Maintenance Plan (Clean)
REP7-019	Norfolk Vanguard Limited Deadline 7 Submission - 8.11 Outline Offshore Operation and Maintenance Plan (Tracked Changes)
REP7-020	Norfolk Vanguard Limited Deadline 7 Submission - 8.12 Offshore In Principle Monitoring Plan (Clean)
REP7-021	Norfolk Vanguard Limited Deadline 7 Submission - 8.12 Offshore In Principles Monitoring Plan (Tracked Changes)
REP7-022	Norfolk Vanguard Limited Deadline 7 Submission - 8.14 Outline Project Environmental Management Plan (Clean)
REP7-023	Norfolk Vanguard Limited Deadline 7 Submission - 8.14 Outline Project Environmental Management Plan (Tracked Changes)
REP7-024	Norfolk Vanguard Limited Deadline 7 Submission - 8.16 Outline Scour Protection Cable and Protection Plan (Clean)
REP7-025	Norfolk Vanguard Limited Deadline 7 Submission - 8.16 Outline Scour Protection and Cable Protection Plan (Tracked Changes)
REP7-026	Norfolk Vanguard Limited Deadline 7 Submission - 8.20 Outline Norfolk Vanguard Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan
REP7-027	Norfolk Vanguard Limited Deadline 7 Submission - 8.21 Outline Operational Drainage Plan
REP7-028	Norfolk Vanguard Limited Deadline 7 Submission - 8.22 Outline Skills and Employment Strategy
REP7-029	Norfolk Vanguard Limited Deadline 7 Submission - 8.23 Development Principles
REP7-030	Norfolk Vanguard Limited Deadline 7 Submission - 11.1 Statement of Common Ground with Marine Management Organisation
REP7-031	Norfolk Vanguard Limited Deadline 7 Submission - Late Submission - 11.1 Marine Management Organisation Statement of Common Ground - Appendix 1 - Accepted at the discretion of the Examining Authority
REP7-032	Norfolk Vanguard Limited Deadline 7 Submission - 18.1 Statement of Common Ground with Ørsted Hornsea Three Project (UK) Ltd
REP7-033	Norfolk Vanguard Limited Deadline 7 Submission - 30.1 Statement of Common Ground with Trinity House

REP7-034	Norfolk Vanguard Limited Deadline 7 Submission - 31.1 Statement of Common Ground with Maritime and Coastguard Agency
REP7-035	Norfolk Vanguard Limited Deadline 7 Submission - Habitats Regulations Assessment - Integrity Matrices (Updated) (Clean)
REP7-036	Norfolk Vanguard Limited Deadline 7 Submission - Habitats Regulations Assessment - Integrity Matrices (Updated) (Tracked Changes)
REP7-037	Norfolk Vanguard Limited Deadline 7 Submission - Applicant's Statement of Commonality of Statements of Common Ground
REP7-038	Norfolk Vanguard Limited Deadline 7 Submission - Applicant's revised draft DCO Schedule of Changes
REP7-039	Norfolk Vanguard Limited Deadline 7 Submission - Written summary of the Applicant's oral case at Issue Specific Hearing 6 - Environmental Matters
REP7-040	Norfolk Vanguard Limited Deadline 7 Submission - Written Summary of the Applicant's oral case at Issue Specific Hearing 7 - draft Development Consent Order
REP7-041	Norfolk Vanguard Limited Deadline 7 Submission - Written Summary of the Applicant's oral case at the Open Floor hearing 3
REP7-042	Norfolk Vanguard Limited Deadline 7 Submission - Unresolved Traffic Matters with Highways England Position Statement - Issue Specific Hearing 6 Action Point 3
REP7-043	Norfolk Vanguard Limited Deadline 7 Submission - Details of Proposed Mitigation for Link 41 - Issue Specific Hearing 6 Action Point 7
REP7-044	Norfolk Vanguard Limited Deadline 7 Submission - Hornsea Project Three Final Construction Traffic Management Plan - Part 1 of 3
REP7-045	Norfolk Vanguard Limited Deadline 7 Submission - Hornsea Project Three Final Construction Traffic Management Plan - Part 2 of 3
REP7-046	Norfolk Vanguard Limited Deadline 7 Submission - Hornsea Project Three Final Construction Traffic Management Plan - Part 3 of 3
REP7-047	Norfolk Vanguard Limited Deadline 7 Submission - Noise Mitigation Measures at the Old Railway Gatehouse Position Statement - Issue Specific Hearing 6, Action Point 14
REP7-048	Norfolk Vanguard Limited Deadline 7 Submission - North Norfolk District Council Little London and Happisburgh Position Statement - Issue Specific Hearing 6 Action Point 20
REP7-049	Norfolk Vanguard Limited Deadline 7 Submission - Air quality assessment for Old Railway Gatehouse Position Statement - Issue Specific Hearing 6 Action Point 15

REP7-050	Norfolk Vanguard Limited Deadline 7 Submission - Technical Guidance Regarding Interaction between Cables and Parallel Assets
REP7-051	Norfolk Vanguard Limited Deadline 7 Submission - Natural England Offshore wind cabling: Ten years experience and recommendations
REP7-052	Norfolk Vanguard Limited Deadline 7 Submission - Harbour Porpoise Special Area of Conservation: Southern North Sea - Conservation Objectives and Advice on Operations
REP7-053	Norfolk Vanguard Limited Deadline 7 Submission - Conservation Objectives in accordance with ISH 6 Action Point 28
REP7-054	Norfolk Vanguard Limited Deadline 7 Submission - Evaluation of the Implications of the Proposals for Closed Areas to Fishing for the Commercial Fisheries Cumulative Impact Assessment
REP7-055	Norfolk Vanguard Limited Deadline 7 Submission - Substation Access Clarification Technical Note - Highways England Agreement In Principle
REP7-056	Norfolk Vanguard Limited Deadline 7 Submission - Proposed Fisheries Management Area Areas - Norfolk Vanguard position statement Written Summary of Oral Submissions: Issue Specific Hearing 6 - Appendix 2
REP7-057	Norfolk Vanguard Limited Deadline 7 Submission - Hornsea Project Three draft DCO
REP7-058	Norfolk Vanguard Limited Deadline 7 Submission - Consideration of the Purpose of the Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan
REP7-059	Norfolk Vanguard Limited Deadline 7 Submission - Applicant's Comments on Deadline 6 Written Submissions
REP7-060	Norfolk Vanguard Limited Deadline 7 Submission - Vattenfall Annual and Sustainability Report 2017 - Applicant's Comments on Deadline 6 Written Submissions: Appendix 1
REP7-061	Norfolk Vanguard Limited Deadline 7 Submission - Alternative Construction Traffic Routes at Cawston Applicant's Comments on Deadline 6 Written Submissions: Appendix 2
REP7-062	Norfolk Vanguard Limited Deadline 7 Submission - Offshore Ornithology Cumulative and In-combination Collision Risk Assessment
REP7-063	Norfolk Vanguard Limited Deadline 7 Submission - Responses to Natural England initial comments on the Alde-Ore Estuary SPA lesser black-backed gull PVA Offshore Ornithology Cumulative and In-combination Collision Risk Assessment: Appendix 1

REP7-064	Norfolk Vanguard Limited Deadline 7 Submission - Natural England's Position Statement at Deadline 7
REP7-065	Norfolk Vanguard Limited Deadline 7 Submission - Counsel's Written Opinion in relation to Arbitration
REP7-066	Broadland District Council Deadline 7 Submission - Further information requested by the Examining Authority
REP7-067	Cawston Parish Council Deadline 7 Submission - Post hearing Submission
REP7-068	Eastern Inshore Fisheries & Conservation Authority Deadline 7 Submission - Post Hearing Submission
REP7-069	Highways England Deadline 7 Submission
REP7-070	Highways England Deadline 7 Submission - Response to Deadline 7
REP7-071	Marine Management Organisation Deadline 7 Submission - Post Hearing Submission
REP7-072	Maritime & Coastguard Agency Deadline 7 Submission
REP7-073	National Farmers Union & The Land Interest Group Deadline 7 Submission - Further information requested by the Examining Authority
REP7-074	NATS Safeguarding Deadline 7 Submission
REP7-075	Natural England Deadline 7 Submission
REP7-076	Necton Parish Council Deadline 7 Submission
REP7-077	Necton Substation Action Group Deadline 7 Submission - Post Hearing Submission
REP7-078	Network Rail Deadline 7 Submission
REP7-079	Norfolk County Council Deadline 7 Submission - Post Hearing Submission
REP7-080	North Norfolk District Council Deadline 7 Submission
REP7-081	Ørsted Hornsea Project Three (UK) Deadline 7 Submission - Response to Natural England comments at ISH4 regarding Hornsea Three
REP7-082	Oulton Parish Council Deadline 7 Submission - Post Hearing Submission
REP7-083	Royal Society for the Protection of Birds Deadline 7 Submission
REP7-084	Trinity House Deadline 7 Submission - Post Hearing Submission
REP7-085	Rosie Begg Deadline 7 Submission
REP7-086	Prof. Tony Benett Deadline 7 Submission - Post Hearing Submission

REP7-087	Matthew Brockis Deadline 7 Submission - Post Hearing Submission
REP7-088	Polly Brockis Deadline 7 Submission - Post Hearing Submission
REP7-089	Nicola Bunham Deadline 7 Submission - Post Hearing Submission
REP7-090	Jan Burley Deadline 7 Submission
REP7-091	Stephen Cross BSc(hons) Deadline 7 Submission
REP7-092	Mr & Mrs Crossley Deadline 7 Submission
REP7-093	Simon Fowler Deadline 7 Submission
REP7-094	Paul Haddow Deadline 7 Submission
REP7-095	Judy Holland Deadline 7 Submission - Post Hearing Submission
REP7-096	Colin King Deadline 7 Submission
REP7-097	Patricia Lockwood Deadline 7 Submission
REP7-098	Penel Malby Deadline 7 Submission
REP7-099	Helen & Chris Monk Deadline 7 Submission - Post Hearing Submission
REP7-100	Julian Pearson Deadline 7 Submission - Post Hearing Submission
REP7-101	Laura & Richard Philpott Deadline 7 Submission
REP7-102	Guy Pitcher Deadline 7 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP7-103	Kate Pitcher Deadline 7 Submission - Post Hearing Submission
REP7-104	Vic Purdy Deadline 7 Submission
REP7-105	Frances L Rossington Deadline 7 Submission - Accepted at the discretion of the Examining Authority
REP7-106	Alison Shaw Deadline 7 Submission - Post Hearing Submission
REP7-107	Lucy Sheringham Deadline 7 Submission
REP7-108	Lucy Sheringham Deadline 7 Submission - Post Hearing Submission
REP7-109	Jenny Smedley Deadline 7 Submission

REP7-110	Tony Smedley Deadline 7 Submission
REP7-111	Alice Spain Deadline 7 Submission - Late Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP7-112	Phil & Amelia Whiting Deadline 7 Submission
REP7-113	Dota & Alan Williams Deadline 7 Submission - Post Hearing Submission
REP7-114	Kate Wyatt Deadline 7 Submission
Late Submissions	
REP7-115	Helen & Chris Monk Deadline 7 Submission - Late Submission - Accepted at the discretion of the Examining Authority

Deadline 8 - 30 May 2019

- Comments on the RIES
- Comments on the ExA's draft DCO schedule of changes (if required)
- Final updated version of the Book of Reference
- Applicant's final guide to application document
- Final CA Schedule
- Final SoCGs
- Final Statement of Commonality of SoCGs
- Responses to further information requested by the ExA
- Applicant's final updated Guide to the Application
- Final DCO to be submitted by the Applicant in the SI template with the SI template validation report

REP8-001	Norfolk Vanguard Limited Deadline 8 Submission - Cover Letter
REP8-002	Norfolk Vanguard Limited Deadline 8 Submission - 1.4 Guide to the Application (Revision 9)
REP8-003	Norfolk Vanguard Limited Deadline 8 Submission - 3.1 Applicant's revised draft DCO (Clean) (Revision 6)
REP8-004	Norfolk Vanguard Limited Deadline 8 Submission - 3.1 Applicant's revised draft DCO (Tracked Changes) (Revision 6)
REP8-005	Norfolk Vanguard Limited Deadline 8 Submission - 3.2 Explanatory Memorandum (Clean) (Revision 5)
REP8-006	Norfolk Vanguard Limited Deadline 8 Submission - 3.2 Explanatory Memorandum (Tracked Changes) (Revision 5)
REP8-007	Norfolk Vanguard Limited Deadline 8 Submission - 3.3 Notes on Requirements and Conditions in the Development Consent Order (Clean) (Revision 3)
REP8-008	Norfolk Vanguard Limited Deadline 8 Submission - 4.1 Statement of Reasons (Revision 2)
REP8-009	Norfolk Vanguard Limited Deadline 8 Submission - 4.2 Funding Statement (Revision 2)
REP8-010	Norfolk Vanguard Limited Deadline 8 Submission - 4.3 Book of Reference (Revision 4)
REP8-011	Norfolk Vanguard Limited Deadline 8 Submission - 8.5 Outline Written Scheme of Investigation: Archaeology and Cultural Heritage (Onshore) (Clean) (Revision 2)
REP8-012	Norfolk Vanguard Limited Deadline 8 Submission - 8.5 Outline Written Scheme of Investigation: Archaeology and Cultural Heritage (Onshore) (Tracked Changes) (Revision 2)
REP8-013	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan (Clean) (Revision3)
REP8-014	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan (Tracked Changes) (Revision3)
REP8-015	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 1 (Revision 3)

REP8-016	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 2 - Part 1 of 4 (Revision 3)
REP8-017	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 2 - Part 2 of 4 (Revision 3)
REP8-018	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 2 - Part 3 of 4 (Revision 3)
REP8-019	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 2 - Part 4 of 4 (Revision 3)
REP8-020	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 3 - Part 1 of 5 (Revision 3)
REP8-021	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 3 - Part 2 of 5 (Revision 3)
REP8-022	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 3 - Part 3 of 5 (Revision 3)
REP8-023	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 3 - Part 4 of 5 (Revision 3)
REP8-024	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 3 - Part 5 of 5 (Revision 3)
REP8-025	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 4 (Revision 3)
REP8-026	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 5 (Revision 3)
REP8-027	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 6 - Part 1 of 5 (Revision 3)
REP8-028	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 6 - Part 2 of 5 (Revision 3)
REP8-029	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 6 - Part 3 of 5 (Revision 3)
REP8-030	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 6 - Part 4 of 5 (Revision 3)
REP8-031	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 6 - Part 5 of 5 (Revision 3)
REP8-032	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 7 - Part 1 of 5 (Revision 3)
REP8-033	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 7 - Part 2 of 5 (Revision 3)

REP8-034	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 7 - Part 3 of 5 (Revision 3)
REP8-035	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 7 - Part 4 of 5 (Revision 3)
REP8-036	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 7 - Part 5 of 5 (Revision 3)
REP8-037	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 8 (Revision 3)
REP8-038	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 9 (Revision 3)
REP8-039	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 10 (Revision 3)
REP8-040	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 11 (Revision 3)
REP8-041	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan Figure 12 (Revision 3)
REP8-042	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan - Appendix 1 (Revision 3)
REP8-043	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan - Appendix 2 (Revision 3)
REP8-044	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan - Appendix 3 (Revision 3)
REP8-045	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan - Appendix 4 (Revision 3)
REP8-046	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan - Appendix 5 - Part 1 of 2 (Revision 3)
REP8-047	Norfolk Vanguard Limited Deadline 8 Submission - 8.8 Outline Traffic Management Plan - Appendix 5 - Part 2 of 2 (Revision 3)
REP8-048	Norfolk Vanguard Limited Deadline 8 Submission - 8.10 Outline Access Management Plan (Clean) (Revision 3)
REP8-049	Norfolk Vanguard Limited Deadline 8 Submission - 8.10 Outline Access Management Plan (Tracked Changes) (Revision 3)
REP8-050	Norfolk Vanguard Limited Deadline 8 Submission - 8.10 Outline Access Management Plan Figure 1 (Revision 3)
REP8-051	Norfolk Vanguard Limited Deadline 8 Submission - 8.10 Outline Access Management Plan - Appendix A (Revision 3)

REP8-052	Norfolk Vanguard Limited Deadline 8 Submission - 8.10 Outline Access Management Plan - Appendix B (Revision 3)
REP8-053	Norfolk Vanguard Limited Deadline 8 Submission - 8.10 Outline Access Management Plan - Appendix C (Revision 3)
REP8-054	Norfolk Vanguard Limited Deadline 8 Submission - 8.21 Outline Operational Drainage Plan (Clean) (Revision 2)
REP8-055	Norfolk Vanguard Limited Deadline 8 Submission - 8.21 Outline Operational Drainage Plan (Tracked Changes) (Revision 2)
REP8-056	Norfolk Vanguard Limited Deadline 8 Submission - 8.23 Development Principles (Revision 2)
REP8-057	Norfolk Vanguard Limited Deadline 8 Submission - The Applicant's Statement of Commonality of Statements of Common Ground (Revision 5)
REP8-058	Norfolk Vanguard Limited Deadline 8 Submission - Schedule of Compulsory Acquisition (Revision 4)
REP8-059	Norfolk Vanguard Limited Deadline 8 Submission - Applicant's revised draft DCO Schedule of Changes (Revision 5)
REP8-060	Norfolk Vanguard Limited Deadline 8 Submission - Unresolved Traffic Matters Joint Position Statement with Norfolk County Council - Issue Specific Hearing 6 Action Points 2,4, 6, 8 and 12
REP8-061	Norfolk Vanguard Limited Deadline 8 Submission - Joint Position Statement with Broadland District Council - Cawston Conservation Area - Issue Specific Hearing 6 Action Point 13
REP8-062	Norfolk Vanguard Limited Deadline 8 Submission - Applicant's Comments on Deadline 7 Written Submissions
REP8-063	Norfolk Vanguard Limited Deadline 8 Submission - Applicant's Comments on Deadline 7 submissions - Appendix 1 Integrated Offshore Transmission Project (East) Conclusions and Recommendations
REP8-064	Norfolk Vanguard Limited Deadline 8 Submission - Applicant's Comments on the Report on the Implications for European Sites (RIES)
REP8-065	Norfolk Vanguard Limited Deadline 8 Submission - Applicant's Comments on ExA's draft DCO Schedule of Changes
REP8-066	Norfolk Vanguard Limited Deadline 8 Submission - Appropriateness of the use of the Calculation of Road Traffic Noise Method
REP8-067	Norfolk Vanguard Limited Deadline 8 Submission - Offshore Ornithology Precaution in ornithological assessment for offshore wind farms
REP8-068	Norfolk Vanguard Limited Deadline 8 Submission - Commercial Fisheries Position Statement
REP8-069	Norfolk Vanguard Limited Deadline 8 Submission - Offshore Ornithology Auk Displacement Assessment Update for Deadline 8

REP8-070	Norfolk Vanguard Limited Deadline 8 Submission - Consideration of potential impacts related to continuous periods of operation - Referred to in DCO Requirement 26(a) and 26(d)
REP8-071	Norfolk Vanguard Limited Deadline 8 Submission - Position Statement North Norfolk District Council Requested Requirement to Address Perceived Tourism Impacts
REP8-072	Norfolk Vanguard Limited Deadline 8 Submission - Network Rail Position Statement
REP8-073	Norfolk Vanguard Limited Deadline 8 Submission - The National Trust Land Agreement Position Statement
REP8-074	Norfolk Vanguard Limited Deadline 8 Submission - The Applicant's Responses to the Examining Authority's Rule 17 Requests for Further Information
REP8-075	Norfolk Vanguard Limited Deadline 8 Submission - Appendix 1: Hornsea Project THREE Detailed Response to Examining Authority's Question 2.2.7
REP8-076	Norfolk Vanguard Limited Deadline 8 Submission - Appendix 2: Consent letter from the Crown Estate Commissioners pursuant to Section 135 Planning Act 2008
REP8-077	Norfolk Vanguard Limited Deadline 8 Submission - Appendix 3: Applicant's Response to Further Question 5.4 and 5.5
REP8-078	Norfolk Vanguard Limited Deadline 8 Submission - Natural England Position Statement at Deadline 8
REP8-079	Norfolk Vanguard Limited Deadline 8 Submission - NATS Radar Mitigation Agreement Position Statement
REP8-080	Norfolk Vanguard Limited Deadline 8 Submission - Oulton Parish Council Position Statement - Reducing Impacts of Construction Traffic
REP8-081	Norfolk Vanguard Limited Deadline 8 Submission - 1.1 Statement of Common Ground with Anglian Water
REP8-082	Norfolk Vanguard Limited Deadline 8 Submission - 2.1 Statement of Common Ground with Breckland Council
REP8-083	Norfolk Vanguard Limited Deadline 8 Submission - 7.1 Statement of Common Ground with Highways England
REP8-084	Norfolk Vanguard Limited Deadline 8 Submission - 8.1 Statement of Common Ground with Historic England
REP8-085	Norfolk Vanguard Limited Deadline 8 Submission - 9.1 Statement of Common Ground with National Grid Electricity Transmission PLC and National Grid Gas PLC
REP8-086	Norfolk Vanguard Limited Deadline 8 Submission - 10.1 Statement of Common Ground with Cadent Gas Limited

REP8-087	Norfolk Vanguard Limited Deadline 8 Submission - 16.1 Statement of Common Ground with Whale and Dolphin Conservation Society
REP8-088	Norfolk Vanguard Limited Deadline 8 Submission - 17.1 Statement of Common Ground with North Norfolk District Council
REP8-089	Norfolk Vanguard Limited Deadline 8 Submission - 19.1 Statement of Common Ground with The Royal Society for the Protection of Birds
REP8-090	Norfolk Vanguard Limited Deadline 8 Submission - 20.1 Statement of Common Ground with The Wildlife Trusts
REP8-091	Norfolk Vanguard Limited Deadline 8 Submission - 26.1 Statement of Common Ground with National Federation of Fishermen's Organisations (NFFO) and National Association of Producer Organisations in Dutch Demersal Fisheries (VisNED)
REP8-092	Norfolk Vanguard Limited Deadline 8 Submission - 27.1 Statement of Common Ground with Eastern Inshore Fisheries and Conservation Authority
REP8-093	Norfolk Vanguard Limited Deadline 8 Submission - 30.1 Statement of Common Ground with Trinity House
REP8-094	Breckland Council Deadline 8 Submission
REP8-095	Broadland District Council Deadline 8 Submission
REP8-096	Shakespeare Martineau LLP on behalf of Cadent Gas Limited Deadline 8 Submission
REP8-097	Cawston Parish Council Deadline 8 Submission
REP8-098	The Crown Estate Deadline 8 Submission
REP8-099	Eastern Inshore Fisheries & Conservation Authority Deadline 8 Submission
REP8-100	Happisburgh Parish Council Deadline 8 Submission
REP8-101	Highways England Deadline 8 Submission
REP8-102	Marine Management Organisation Deadline 8 Submission
REP8-103	Shakespeare Martineau LLP on behalf of National Grid Deadline 8 Submission
REP8-104	Natural England Deadline 8 Submission
REP8-105	Necton Substation Action Group Deadline 8 Submission
REP8-106	Norfolk County Council Deadline 8 Submission - Local Highway Authority (LHA) response to Rule 17 request for further information
REP8-107	North Norfolk District Council Deadline 8 Submission
REP8-108	Oulton Parish Council Deadline 8 Submission

REP8-109	Royal Society for the Protection of Birds Deadline 8 Submission - Comments on RIES
REP8-110	The Wildlife Trusts Deadline 8 Submission - Comments on RIES and draft DCO
REP8-111	Jan Burley Deadline 8 Submission
REP8-112	Paul Haddow Deadline 8 Submission
REP8-113	Julie Keay Deadline 8 Submission
REP8-114	Colin King Deadline 8 Submission
REP8-115	Diana Lockwood Deadline 8 Submission
REP8-116	Patricia Lockwood Deadline 8 Submission
REP8-117	Cllr Greg Peck Deadline 8 Submission
REP8-118	James Sheringham Deadline 8 Submission
REP8-119	Lucy Sheringham Deadline 8 Submission
REP8-120	Jenny Smedley Deadline 8 Submission
REP8-121	David Vince & Nicola Draycott Deadline 8 Submission
REP8-122	Margaret Woodall Deadline 8 Submission
REP8-124	Trinity House Deadline 8 Submission - Comments on the ExA's draft DCO schedule of changes
Late Submission	
REP8-123	Ray & Diane Pearce Deadline 8 Submission - Late Submission - Accepted at the discretion of the Examining Authority

Deadline 9 - 06 June 2019

- Responses to comments on the RIES
- Responses to comments on ExA's draft DCO schedule of changes

REP9-001	Norfolk Vanguard Limited Deadline 9 Submission - Cover Letter and Appendix 1 - proof of validation
REP9-002	Norfolk Vanguard Limited Deadline 9 Submission - 1.4 Guide to the Application (Revision 10)
REP9-003	Norfolk Vanguard Limited Deadline 9 Submission - 2.04 Works Plan - Part 1 of 4 (Revision 3)
REP9-004	Norfolk Vanguard Limited Deadline 9 Submission - 2.04 Works Plan - Part 2 of 4 (Revision 3)
REP9-005	Norfolk Vanguard Limited Deadline 9 Submission - 2.04 Works Plan - Part 3 of 4 (Revision 3)
REP9-006	Norfolk Vanguard Limited Deadline 9 Submission - 2.04 Works Plan - Part 4 of 4 (Revision 3)
REP9-007	Norfolk Vanguard Limited Deadline 9 Submission - 3.1 Applicant's revised draft DCO (Clean) (Revision 7)
REP9-008	Norfolk Vanguard Limited Deadline 9 Submission - 3.1 Applicant's revised draft DCO (Tracked Changes) (Revision 7)
REP9-009	Norfolk Vanguard Limited Deadline 9 Submission - 3.3 Note on Requirements and Conditions in the Development Consent Order (Revision 4)
REP9-010	Norfolk Vanguard Limited Deadline 9 Submission - 8.1 Outline Code of Construction Practice (Clean) (Revision 3)
REP9-011	Norfolk Vanguard Limited Deadline 9 Submission - 8.1 Outline Code of Construction Practice (Tracked Changes) (Revision 3)
REP9-012	Norfolk Vanguard Limited Deadline 9 Submission - 8.06 Outline Written Scheme of Investigation (Offshore) (Clean) (Revision 2)
REP9-013	Norfolk Vanguard Limited Deadline 9 Submission - 8.06 Outline Written Scheme of Investigation (Offshore) (Tracked Changes) (Revision 2)
REP9-014	Norfolk Vanguard Limited Deadline 9 Submission - 8.7 Outline Landscape and Ecological Management Strategy (Clean) (Revision 3)
REP9-015	Norfolk Vanguard Limited Deadline 9 Submission - 8.7 Outline Landscape and Ecological Management Strategy (Tracked Changes) (Revision 3)
REP9-016	Norfolk Vanguard Limited Deadline 9 Submission - 8.11 Outline Offshore Operations and Maintenance Plan (Clean) (Revision 3)
REP9-017	Norfolk Vanguard Limited Deadline 9 Submission - 8.11 Outline Offshore Operations and Maintenance Plan (Tracked Changes) (Revision 3)

REP9-018	Norfolk Vanguard Limited Deadline 9 Submission - 8.12 Offshore In Principle Monitoring Plan (Clean) (Revision 3)
REP9-019	Norfolk Vanguard Limited Deadline 9 Submission - 8.12 Offshore In Principle Monitoring Plan (Tracked Changes) (Revision 3)
REP9-020	Norfolk Vanguard Limited Deadline 9 Submission - 8.13 Draft Marine Mammal Mitigation Protocol (Clean) (Revision 2)
REP9-021	Norfolk Vanguard Limited Deadline 9 Submission - 8.13 Draft Marine Mammal Mitigation Protocol (Tracked Changes) (Revision 2)
REP9-022	Norfolk Vanguard Limited Deadline 9 Submission - 8.14 Outline Project Environmental Management Plan (Clean) (Revision 3)
REP9-023	Norfolk Vanguard Limited Deadline 9 Submission - 8.14 Outline Project Environmental Management Plan (Tracked Changes) (Revision 3)
REP9-024	Norfolk Vanguard Limited Deadline 9 Submission - 8.16 Outline Scour Protection and Cable Protection Plan (Clean) (Revision 3)
REP9-025	Norfolk Vanguard Limited Deadline 9 Submission - 8.16 Outline Scour Protection and Cable Protection Plan (Tracked Changes) (Revision 3)
REP9-026	Norfolk Vanguard Limited Deadline 9 Submission - 8.17 In Principle Norfolk Vanguard Southern North Sea Special Area of Conservation (SAC) Site Integrity Plan (Clean) (Revision 2)
REP9-027	Norfolk Vanguard Limited Deadline 9 Submission - 8.17 In Principle Norfolk Vanguard Southern North Sea Special Area of Conservation (SAC) Site Integrity Plan (Tracked Changes) (Revision 2)
REP9-028	Norfolk Vanguard Limited Deadline 9 Submission - 8.20 Outline Norfolk Vanguard Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan (Clean) (Revision 2)
REP9-029	Norfolk Vanguard Limited Deadline 9 Submission - 8.20 Outline Norfolk Vanguard Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan (Tracked Changes) (Revision 2)
REP9-030	Norfolk Vanguard Limited Deadline 9 Submission - Norfolk Vanguard Ltd and Marine Management Organisation Joint Position Statement - Arbitration and Appeal Mechanisms
REP9-031	Norfolk Vanguard Limited Deadline 9 Submission - Offshore Ornithology Position Statement Deadline 9
REP9-032	Norfolk Vanguard Limited Deadline 9 Submission - Norfolk County Council Unresolved Traffic Matters Position Statement
REP9-033	Norfolk Vanguard Limited Deadline 9 Submission - The National Farmers' Union (NFU) and Land Interest Group (LIG) Position Statement

REP9-034	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Comments on Deadline 8 Written Submissions - Appendix 1: Natural England Comments on the Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan
REP9-035	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Comments on Deadline 8 Written Submissions - Appendix 2: Link 34 Revised Construction Programme
REP9-036	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Comments on Deadline 8 Written Submissions - Appendix 3: B1149 traffic management swept path analysis
REP9-037	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Statement of Commonality of Statements of Common Ground (Revision 6)
REP9-038	Norfolk Vanguard Limited Deadline 9 Submission - Response to comments on the Report on the Implications of European Sites
REP9-039	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Comments on Responses to the Examining Authority's Rule 17 Requests for Further Information
REP9-040	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Responses to Comments on the Examining Authority's draft DCO Schedule of Changes
REP9-041	Norfolk Vanguard Limited Deadline 9 Submission - Schedule of Changes to the draft DCO (Revision 6)
REP9-042	Norfolk Vanguard Limited Deadline 9 Submission - Applicant's Comments on Deadline 8 Written Submissions
REP9-043	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Broadland District Council (Revision 3)
REP9-044	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Environment Agency (Revision 3)
REP9-045	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Marine Management Organisation & Appendices (Revision 4)
REP9-046	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Natural England (Revision 3)
REP9-047	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Norfolk County Council (Revision 3)
REP9-048	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Happisburgh Parish Council
REP9-049	Norfolk Vanguard Limited Deadline 9 Submission - Statement of Common Ground with Maritime & Coastguard Agency (Revision 5)
REP9-050	Breckland Council Deadline 9 Submission - Response to Rule 17 Letter

REP9-051	Cawston Parish Council Deadline 9 Submission
REP9-052	Corpusty and Saxthorpe Parish Council Deadline 9 Submission
REP9-053	Edgefield Parish Council Deadline 9 Submission
REP9-054	Harlaxton Energy Networks Ltd Deadline 9 Submission
REP9-055	Marine Management Organisation Deadline 9 Submission
REP9-056	Savills on behalf of National Farmers Union & The Land Interest Group Deadline 9 Submission - Statement of Common Ground
REP9-057	Natural England Deadline 9 Submission
REP9-058	Natural England Deadline 9 Submission - Response to Rule 17 Letter
REP9-059	Necton Substation Action Group Deadline 9 Submission
REP9-060	Norfolk County Council Deadline 9 Submission - Late Submission - Accepted at the discretion of the Examining Authority
REP9-061	North Norfolk District Council Deadline 9 Submission
REP9-062	Oulton Parish Council Deadline 9 Submission
REP9-063	Royal Society for the Protection of Birds Deadline 9 Submission
REP9-064	Trinity House Deadline 9 Submission
REP9-065	Wood Dalling Parish Council Deadline 9 Submission
REP9-066	Savills on behalf of John Carrick Deadline 9 Submission
REP9-067	Chris Monk Deadline 9 Submission

Other Documents	
OD-001	Norfolk Vanguard Limited Section 56 Notice
OD-002	Regulation 32 Transboundary Screening
OD-003	London Gazette Notice
OD-004	Regulation 24 notification Response - Netherlands
OD-005	Regulation 24 notification Response - Belgium
OD-006	Regulation 24 notification Response - Denmark
OD-007	Regulation 24 notification Response - Germany
OD-008	Regulation 24 notification Response - France
OD-009	Regulation 24 notification Response - Norway
OD-010	Regulation 32 Response - France (08 August 2018)
OD-011	Regulation 32 Response - Norway (15 August 2018)
OD-012	Regulation 32 Response - Denmark (21 August 2018)
OD-013	Regulation 32 Response - Netherlands (17 September 2018)
OD-014	Norfolk Vanguard Limited Section 56, Section 59 and Reg 16 Compliance Certificates
OD-015	Regulation 32 Response - France (17 October 2018)

APPENDIX C: LIST OF ABBREVIATIONS

Abbreviation or usage	Reference
AA	Appropriate Assessment
AD Guidance	DCLG Guidance on Associated Development: Applications for Major Infrastructure Projects (April 2013)
ADR	Air Defence Radar
AEoI	Adverse Effect on Integrity
AEZ	Archaeological Exclusion Zone
ALARP	As low as reasonably practicable
ALC	Agricultural Land Classification
ALO	Agricultural Liaison Officer
AMP	Access Management Plan
AONB	Area of Outstanding Natural Beauty
APFP Regulations	Infrastructure Planning (Applications - Prescribed Forms and Procedure) Regulations 2009 (as amended)
AP	Affected Person
APPX	Appendix
AQD	Air Quality Directive
AQMA	Air Quality Management Areas
AQMP	Air Quality Management Plan
AR	Avoidance Rate
ASI	Accompanied Site Inspection
AW	Anglian Water Services Limited
BC	Breckland Council
BAP	Biodiversity Action Plan
BCA	Blickling Conservation Area
BDC	Broadland District Council
BDMPS	Biologically Defined Minimum Population Scales
BEIS	Department for Business, Energy and Industrial Strategy
BoCC	Birds of Conservation Concern
BoR	Book of Reference
CA	Compulsory Acquisition
CA Guidance	Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land: DCLG September 2013
CA Regulations	The Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (as amended)
CAA	Civil Aviation Authority
CAH	Compulsory Acquisition Hearing
CCA	Cawston Conservation Area
CDM	Construction Design and Management
Cefas	Centre for Environmental, Fisheries and Aquaculture Science

CfD	Contract for Difference
CFG	Commercial Fisheries Working Group
CI	Confidence Interval
CIA	Cumulative Impact Assessment
CNVMP	Construction Noise and Vibration Management Plan
CoCP	Code of Construction Practice
CPA1965	Compulsory Purchase Act 1965 (as amended)
CPC	Cawston Parish Council
CRA	Collision Risk Assessment
CRow Act	Countryside and Rights of Way Act (as amended)
CRM	Collision Risk Modelling
CRPMEM	Comite Regional des Peches Maritime (Nord Pas de Calais Picardie)
cSAC	Candidate Special Area of Conservation
D	Deadline
dB	Decibels
DC	District Council
DCLG compulsory acquisition guidance	'Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land', Department of Communities and Local Government, September 2013
DCO	Development consent order (made or proposed to be made under the Planning Act 2008 (as amended))
DD	Density Dependent
dDCO	Draft DCO
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DEPONS	Disturbance Effects on Harbour Porpoise in the North Sea
DI	Density Independent
DIO	Ministry of Defence – Defence Infrastructure Organisation
DML	Deemed marine licence
dSAC	Designated Special Area of Conservation
dSIP	Draft Site Integrity Plan
DWR	Deep Water Route
EA	Environment Agency
EATL	East Anglia THREE Limited
ECHR	European Convention on Human Rights
EcIA	Ecological Impact Assessment
EEA	European Economic Area
EIFCA	Eastern Inshore Fisheries and Conservation Authority
EIA	Environmental Impact Assessment
EIEOMP	East Inshore and East Offshore Marine Plans
EM	Explanatory Memorandum
EMF	Electro Magnetic Field
EMP	Ecological Management Plan
EPR	Examination Procedure Rules
EPS	European Protected Species

ERCOP	Emergency Response Co-operation Plan
ES	Environmental Statement
ESS	Environmental Stewardship Scheme
EU	European Union
ExA	Examining Authority
ExMemo	Explanatory Memorandum
FIR	Flight Information Region
FRA	Flood Risk Assessment
FS	Funding Statement
FTE	Full Time Equivalent
FWQ	First Round of Written Questions
GBBG	Great Black-backed Gull
GEART	Guidelines for the Environmental Assessment of Road Traffic 1993
GWFL	Galloper Wind Farm Ltd
H3	Hornsea Project Three offshore wind farm
ha	Hectares
Habitats Regulations	Conservation of Habitats and Species Regulations 2017
HAT	Highest Astronomical Tide
HDD	Horizontal Directional Drilling
HE	Highways England
HFA	Harwich Fishermen's Association
HGV	Heavy Goods Vehicle
HHW SAC	Haisborough Hammond and Winterton Special Area of Conservation
HHW SIP	Haisborough Hammond and Winterton Special Area of Conservation Site Integrity Plan
HistE	Historic England
HMR	Helicopter Main Route
Hornsea Three	Hornsea Three Project (UK) Limited
HoTs	Heads of Terms
HPC	Happisburgh Parish Council
HRA	Habitat Regulations Assessment
HRA1998	Human Rights Act 1998
HSE	Health and Safety Executive
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IAQM	Institute of Air Quality Management
IMO	International Maritime Organisation
IP Regulations	Infrastructure Planning (Interested Parties) Regulations 2010 (as amended)
IP/s	Interested Party/Parties
IPMP	In Principle Monitoring Plan
ISH	Issue Specific Hearing
IUCN	International Union for Conservation of Nature
IWSI	Interim Written Scheme of Investigation
JNCC	Joint Nature Conservation Committee
km	Kilometres

kv	Kilovolt
LA	Local Authority
LAeq	Equivalent Continuous Level
LAQM	Local Air Quality Management
LAT	Lowest Astronomical Tide
LBBG	Lesser Black-backed Gull
LBPC	Little Bealings Parish Council
LCA	Landscape Character Assessment
LCA1973	Land Compensation Act 1973 (as amended)
LEP	Local Economic Partnership
LFAC	Low Frequency Alternating Current
LiDAR	Light Detection and Ranging
LIR	Local Impact Report
LLFA	Lead Local Flood Authority
LMS	Landfall Method Statement
LNR	Local Nature Reserve
LPA	Local Planning Authority
LSE	Likely Significant Effects
LVIA	Landscape and Visual Impact Assessment
m	Metres
MA	Mobilisation area
MCA	Maritime and Coastguard Agency
MCAA2009	Marine and Coastal Access Act 2009
MCZ	Marine Conservation Zone
MHCLG	Ministry for Housing, Communities and Local Government
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
mm	Millimetres
MMP	Materials Management Plan
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MNR	Marine Noise Registry
MoD	Ministry of Defence
MPA	Marine Protected Area
MPS	Marine Policy Statement
MSA	Mineral Safeguarding Area
MSDC	Mid Suffolk District Council
MSFD	Marine Strategy Framework Directive
MSL	Mean Sea Level
MU	Management Unit
MW	Megawatt
NATS	National Air Traffic Service
NCC	Norfolk County Council
NCP	North Coast Partnership
NERCA2006	The Natural Environment and Rural Communities Act 2006

Network Rail	Network Rail Infrastructure Limited
NFFO	National Federation of Fishermen's Organisations
NG	National Grid Electricity Transmission PLC and National Grid Gas PLC
nm	Nautical Miles
NNDC	North Norfolk District Council
NNR	National Nature Reserve
NO2	Nitrogen Dioxide
NPA2017	Neighbourhood Planning Act 2017
NPPF	National Planning Policy Framework
NPS/s	National Policy Statement/s
NRA	Navigational Risk Assessment
NSIP	Nationally Significant Infrastructure Project (under PA2008)
NT	National Trust For Places Of Historic Interest Or Natural Beauty
OAMP	Outline Access Management Plan
OCoCP	Outline Code of Construction Practice
OCR	Onshore cable route
ODP	Operational Drainage Plan
OEI	Other Environmental Information
OfCR	Offshore Cable Route
OFTO	Offshore Transmission Owner
OLEMS	Outline Landscape and Ecological Management Strategy
OPC	Oulton Parish Council
ORM	Offshore Ring Main
ORPAD	Offshore Renewals Protocol for Archaeological Discoveries
OTMP	Outline Traffic Management Plan
OTP	Outline Traffic Plan
OWF	Offshore wind farms
PA2008	Planning Act 2008 (as amended)
PBR	Potential Biological Removal
PCCS	Primary Construction Consolidation Sites
PCoD	Population Consequences of Disturbance
PEMP	Project Environmental Management Plan
PEXA	Practice and Exercise Area
PHE	Public Health England
PINS	The Planning Inspectorate
PM	Preliminary Meeting
PPG	Planning Practice Guidance
PRoW	Public Right of Way
pSAC	Possible Special Area of Conservation
PSED	Public Sector Equality Duty
pSPA	Possible Special Protected Area
PTS	Permanent Threshold Shift

PVA	Population Viability Analysis
Ramsar	The Ramsar Convention on Wetlands
RIES	Report on the Implications for European Sites
rMCZ	Recommended Marine Coastal Zone
RoC	Review of Consents
RPG	Register of Parks and Gardens
RR	Relevant Representations
RSA	Road safety audit
RSPB	Royal Society for the Protection of Birds
RTD	Red-throated diver
RWS	Rijkswaterstaat
RYA	Royal Yachting Association
SAC	Special Area of Conservation
SCCS	Secondary Construction Consolidation Sites
SCI	Site of Community Importance
SIP	Site Integrity Plan
SLVIA	Seascape Landscape and Visual Impact Assessment
SMP	Shoreline Management Plan
SNCBs	Statutory nature conservation bodies – a collective reference
SNH	Scottish Natural Heritage
SNS	Southern North Sea
SNS SIP	Southern North Sea Special Area of Conservation Site Integrity Plan
SoCG	Statement of Common Ground
SoR	Statement of Reasons
SoS	Secretary of State for Business, Energy and Industrial Strategy
SPA	Special Protection Area
SPP	Special Parliamentary Procedure
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SU	Statutory Undertaker
SuDS	Sustainable Drainage System(s)
SWDP	Surface Water and Drainage Plan
SWQ	Second Round of Written Questions
TCE	The Crown Estate
TH	Trinity House
TCPA1990	Town and Country Planning Act 1990 (as amended)
TMP	Traffic Management Plan
TP	Temporary possession
TWT	The Wildlife Trusts
USI	Unaccompanied Site Inspection
UK	United Kingdom
UKPPL	United Kingdom Petroleum Production Licence
UXO	Unexploded Ordnance
VisNed	National Association of Producer Organisations in Dutch Demersal Fisheries

WDC	Whale and Dolphin Conservation
WFD	Water Framework Directive
WR	Written Representation or Written Representations depending on context
WSI	Written Scheme of Investigation
WSIO	Written Scheme of Investigation: Archaeology and Cultural Heritage (Offshore)
WTG or WTGs	Wind Turbine Generator or Wind Turbine Generators depending on context
ZTV	Zone of theoretical visibility

APPENDIX D: THE RECOMMENDED DCO

2019 No.

INFRASTRUCTURE PLANNING

The Norfolk Vanguard Offshore Wind Farm Order 201X

Made - - - - - ***
Laid before Parliament ***
Coming into force - - - ***

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An application has been made to the Secretary of State in accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009^(a) for an Order under sections 37, 114, 115, 120 and 149A of the Planning Act 2008 (“the 2008 Act”)^(b);

And whereas the application was examined by a Panel appointed as an examining authority by the Secretary of State pursuant to Chapter 4 of the 2008 Act and the Infrastructure Planning (Examination Procedure) Rules 2010^(c);

The examining authority, having considered the application together with the documents that accompanied it, and the representations made and not withdrawn, has, in accordance with section 74 of the 2008 Act made a report and recommendation to the Secretary of State;

The Secretary of State, having considered the report and recommendation of the Panel, and decided the application, has determined to make an Order giving effect to the proposals comprised in the application with modifications which in its opinion do not make any substantial change to the proposals;

The Secretary of State, having considered the report and recommendation of the Panel, is satisfied that open space comprised within the Order land, when burdened with the new rights authorised for compulsory acquisition under the terms of this Order, will be no less advantageous than it was before such acquisition, to the persons in whom it is vested, other persons, if any, entitled to rights of common or other rights, and the public and that, accordingly, section 132(3) of the 2008 Act applies;

The Secretary of State in exercise of the powers conferred by sections 114, 115, 120, and 149A of the 2008 Act the Secretary of State makes the following Order—

PART 1

Preliminary

Citation and commencement

1. This Order may be cited as the Norfolk Vanguard Offshore Wind Farm Order and comes into force on [X] 201[X].

Interpretation

2.—(1) In this Order—

“the 1961 Act” means the Land Compensation Act 1961^(d);

“the 1965 Act” means the Compulsory Purchase Act 1965^(e);

(a) S.I. 2009/2264 as amended by the Localism Act (Infrastructure Planning) (Consequential Amendments) Regulations 2012 (S.I. 2012/635) and the Infrastructure Planning (Prescribed Consultees and Interested Parties etc) (Amendment) Regulations 2013 (S.I. 2013/522)

(b) 2008 c.29. Parts 1 to 7 were amended by Chapter 6 of Part 6 of the Localism Act 2011 (c.20)

(c) S.I. 2010/103, amended by S.I. 2012/635

(d) 1961 c.33

(e) 1965 c.56

“the 1980 Act” means the Highways Act 1980(a);

“the 1981 Act” means the Compulsory Purchase (Vesting Declarations) Act 1981(b);

“the 1989 Act” means the Electricity Act 1989(c);

“the 1990 Act” means the Town and Country Planning Act 1990(d);

“the 1991 Act” means the New Roads and Street Works Act 1991(e);

“the 2003 Act” means the Communications Act 2003(f);

“the 2004 Act” means the Energy Act 2004(g);

“the 2008 Act” means the Planning Act 2008(h);

“the 2009 Act” means the Marine and Coastal Access Act 2009(i);

“the 2016 Regulations” means the Environmental Permitting (England and Wales) Regulations 2016(j);

“access to works plan” means the plan certified as the access to works plan by the Secretary of State for the purposes of this Order;

“accommodation platform” means a fixed structure providing offshore accommodation for personnel;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order and which are not development within the meaning of section 32 of the 2008 Act;

“authorised development” means the development and associated development described in Part 1 of Schedule 1 (authorised development) and any other development authorised by this Order, which is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and the ancillary works authorised by this Order;

“book of reference” means the book of reference certified by the Secretary of State as the book of reference for the purposes of this Order;

“building” includes any structure or erection or any part of a building, structure or erection;

“business day” means a day other than Saturday or Sunday which is not Christmas Day, Good Friday or a bank holiday under section 1 of the Banking and Financial Dealings Act 1971;

“cable” means any onshore or offshore cable and in respect of any onshore cable includes direct lay cables and/or cables pulled through cable ducts;

“cable ducts” means conduits for the installation of cables and/or fibre optic cables;

“carriageway” has the same meaning as in the 1980 Act;

“commence” means, (a) in relation to works seaward of MHWS, the first carrying out of any licensed marine activities authorised by the deemed marine licences, save for pre-construction surveys and monitoring approved under the deemed marine licences or, (b) in respect of any other works comprised in the authorised project, the first carrying out of any material operation (as defined in section 155 of the 2008 Act) forming part of the authorised project other than operations consisting of site clearance, demolition work, archaeological investigations, environmental surveys, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying

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- (a) 1980 c.66
 - (b) 1981 c.66
 - (c) 1989 c.29
 - (d) 1990 c.8
 - (e) 1991 c.22. Section 48(3A) was inserted by section 124 of the Local Transport Act 2008 (c.26). Sections 78(4), 80(4) and 83(4) were amended by section 40 of, and Schedule 1 to, the Traffic Management Act 2004 (c.18)
 - (f) 2003 c.21
 - (g) 2004 c.20. Section 105 was amended by section 69 of the Energy Act 2008 (c.32)
 - (h) 2008 c.29. The relevant provisions of the Planning Act 2008 are amended by Chapter 6 of Part 6 of, and Schedule 13 to, the Localism Act 2011 (c.20), and by sections 22 to 27 of the Growth and Infrastructure Act 2013 (c.27). Section 149A was inserted by paragraph 4 in Part 1 of Schedule 8 to the Marine and Coastal Access Act 2009 (c.23)
 - (i) 2009 c.23
 - (j) S.I.2016/1154

of services, erection of any temporary means of enclosure, temporary hard standing, the temporary display of site notices or advertisements and the words “commencement” and “commenced” must be construed accordingly;

“deemed marine licences” means the marine licences set out in Schedules 9, 10, 11 and 12;

“Defence Infrastructure Organisation Safeguarding” means Ministry of Defence Safeguarding, Defence Infrastructure Organisation, Kingston Road, Sutton Coldfield, West Midlands B75 7RL and any successor body to its functions;

“design and access statement” means the document certified as the design and access statement by the Secretary of State for the purposes of this Order;

“Development Principles” means the document certified as the Development Principles by the Secretary of State for the purposes of this Order;

“draft marine mammal mitigation protocol” means the document certified as the draft marine mammal mitigation protocol by the Secretary of State for the purposes of this Order;

“draught height” means the distance between the lowest point of the rotating blade of a wind turbine generator and MHWS;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order;

“gravity base system” means a structure principally of steel, concrete, or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“highway” and “highway authority” have the same meaning as in the 1980 Act(a);

“horizontal directional drilling” means a trenchless technique for installing an underground duct between two points without the need to excavate vertical shafts;

“important hedgerows plan” means the document certified as the important hedgerows plan by the Secretary of State for the purposes of this Order;

“in principle Norfolk Vanguard Southern North Sea Special Area of Conservation site integrity plan” means the document certified as the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation site integrity plan by the Secretary of State for the purposes of this Order;

“interface cables” means buried onshore cables and fibre optic cables which connect the onshore project substation to the National Grid substation;

“jacket foundation” means a steel jacket/lattice-type structure constructed of steel which is fixed to the seabed at three or more points with steel pin piles or steel suction caissons and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“jointing pit” means an excavation formed to enable the jointing of high voltage power cables and fibre optic cables;

“jointing works” means a process by which two or more cables or fibre optic cables are connected to each other by means of cable joints within a jointing pit;

“landfall” means the location at which the offshore cables and fibre optic cables come ashore;

“land plan” means the plan certified as the land plan by the Secretary of State for the purposes of this Order;

“LIDAR” means light detection and ranging;

“limits of deviation” means the limits of deviation referred to in article 4 (limits of deviation) for the overhead line modification works comprised in Work No. 11A;

(a) “Highway” is defined in section 328(1) for “highway authority”, see section 1

“HAT” means highest astronomical tide;

“maintain” includes inspect, upkeep, repair, adjust, and alter, and further includes remove, reconstruct and replace (but only in relation to any of the ancillary works in Part 2 of Schedule 1 (ancillary works), any cable, any component part of any wind turbine generator, offshore electrical substation, accommodation platform, meteorological mast, and the onshore transmission works described in Part 1 of Schedule 1 (authorised development) not including the removal, reconstruction or replacement of foundations and buildings associated with the onshore project substation), to the extent assessed in the environmental statement; and “maintenance” is construed accordingly;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“mean low water springs” or “MLWS” means the lowest level which spring tides reach on average over a period of time;

“measurement buoy” means any floating device used for measurement purposes, including LIDAR buoys and wave buoys;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“MMO” means the Marine Management Organisation;

“mobilisation area” means an area associated with the onshore transmission works including hard standings, lay down and storage areas for construction materials and equipment, areas for spoil, areas for vehicular parking, bunded storage areas, areas for welfare facilities including offices and canteen and washroom facilities, workshop facilities and temporary fencing or other means of enclosure and areas for other facilities required for construction purposes;

“monopile foundation” means a steel pile, typically cylindrical, driven and/or drilled into the seabed and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“National Grid” means National Grid Electricity Transmission PLC;

“National Grid substation extension” means the extension to the existing 400kV National Grid substation at Necton to provide a connection point to the 400kV grid network, including switchgear, circuit breakers and extension to existing busbar structures;

“Norfolk Boreas offshore wind farm” means the proposed offshore wind farm located off the Norfolk coast;

“Norfolk Vanguard East” means the eastern area located in the offshore Order limits within which wind turbine generators will be situated;

“Norfolk Vanguard West” means the western area located in the offshore Order limits within which wind turbine generators will be situated;

“offshore cable crossings” means the crossing of existing sub-sea cables or pipelines or other existing offshore infrastructure by the array, interconnecting and/or export cables and fibre optic cables authorised by this Order together with physical protection measures including concrete mattresses, rock placement or other protection methods;

“offshore electrical platform” means a platform attached to the seabed by means of a foundation, with one or more decks, whether open or fully clad, accommodating electrical power transformers, switchgear, instrumentation, protection and control systems, and other associated equipment and facilities to enable the transmission of electronic communications and for electricity to be collected at, and exported from, the platform;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State for the purposes of this Order;

“offshore works” means Work Nos. 1 to 4B and any ancillary works in connection with those works;

“onshore cable corridor” means the onshore area in which the cables and fibre optic cables will be located within the Order limits;

“onshore decommissioning plan” means a plan to decommission Work No. 4B to Work No. 12 which includes a programme within which any works of decommissioning must be undertaken;

“onshore project substation” means a facility containing electrical equipment including (but not limited to) power transformers, switchgear, welfare facilities, access, fencing and other associated equipment, structures or buildings;

“onshore transmission works” means Work Nos. 4C to 12 and any related further associated development in connection with those works and ancillary works described in Schedule 1 part 1 and Schedule 1 part 2 respectively;

“Order land” means the land shown on the land plan which is within the limits of land to be acquired and described in the book of reference;

“Order limits” means the limits shown on the works plan within which the authorised project may be carried out, whose grid coordinates seaward of MHWS are set out in paragraph 2 of Part 1 of Schedule 1 (authorised development) of this Order;

“outline access management plan” means the document certified as the outline access management plan by the Secretary of State for the purposes of this Order under article 37 (certification of plans etc.);

“outline code of construction practice” means the document certified as the outline code of construction practice by the Secretary of State for the purposes of this Order;

“outline operational drainage plan” means the document certified as the outline operational drainage plan by the Secretary of State for the purposes of this Order;

“outline fisheries liaison and co-existence plan” means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State for the purposes of this Order;

“outline landscape and ecological management strategy” means the document certified as the outline landscape and ecological management strategy by the Secretary of State for the purposes of this Order;

“outline marine traffic monitoring strategy” means the document certified as the outline marine traffic monitoring strategy by the Secretary of State for the purposes of this Order;

“outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation site integrity plan” means the document certified as the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation site integrity plan by the Secretary of State for the purposes of this Order;

“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State for the purposes of the Order;

“outline project environmental management plan” means the document certified as the outline project environmental management plan by the Secretary of State for the purposes of this Order;

“outline scour protection and cable protection plan” means the document certified as the outline scour protection and cable protection plan the Secretary of State for the purposes of this Order;

“outline skills and employment strategy” means the document certified as the outline skills and employment strategy by the Secretary of State for the purposes of this Order;

“outline traffic management plan” means the document certified as the outline traffic management plan by the Secretary of State for the purposes of this Order;

“outline travel plan” means the document certified as the outline travel plan by the Secretary of State for the purposes of this Order;

“outline written scheme of investigation (offshore)” means the document certified as the outline written scheme of investigation (offshore) by the Secretary of State for the purposes of this Order;

“outline written scheme of investigation (onshore)” means the document certified as the outline written scheme of investigation (onshore) by the Secretary of State for the purposes of this Order;

“overhead line modification” means alteration and repositioning of the overhead line, including removal of part of the overhead line, in respect of the existing Walpole to Norwich Main 400kV overhead line between pylons 4VV123 and 4VV127 on land north east of Necton, Norfolk to allow connection into the National Grid substation extension including connecting into the National Grid sealing end compound;

“owner” in relation to land, has the same meaning as in section 7 of the Acquisition of Land Act 1981(a);

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure steel jacket foundations;

“relevant drainage authorities” means the drainage board for the area of land to which the relevant provision of this Order applies within the meaning of section 23 of the Land Drainage Act 1991;

“relevant planning authority” means the district planning authority for the area in which the land to which the relevant provision of this Order applies is situated;

“requirements” means those matters set out in Part 3 of Schedule 1 (requirements) to this Order;

“scour protection” means measures to prevent loss of seabed sediment around any marine structure placed in or on the seabed by use of protective aprons, mattresses with or without frond devices, or rock and gravel placement;

“single offshore phase” means carrying out all offshore works as a single construction operation;

“single onshore phase” means a single duct laying operation followed by a one separate operation to pull the cables through the ducts and one separate operation to construct the onshore project substation;

“statutory nature conservation body” means an organisation charged by government with advising on nature conservation matters;

“statutory undertaker” means any person falling within section 127(8) of the 2008 Act and a public communications provider as defined in section 151 of the 2003 Act;

“street” means a street within the meaning of section 48 of the 1991 Act, together with land on the verge of a street or between two carriageways, and includes part of a street;

“street authority” in relation to a street, has the same meaning as in Part 3 of the 1991 Act(b);

“suction caisson” means a large diameter steel cylindrical shell which penetrates the seabed assisted by a hydrostatic pressure differential for fixity of foundations;

“temporary stopping up of public rights of way plan” means the plan certified as the temporary stopping up of public rights of way plan by the Secretary of State for the purposes of this Order;

“transition jointing pit” means an excavation formed to enable the jointing of the offshore export cables and fibre optic cables comprised in Work No. 4B to the onshore transmission works;

“tribunal” means the Lands Chamber of the Upper Tribunal;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“trenchless installation techniques” means techniques for installing an underground duct between two points, without excavating and back-filling a trench;

“two offshore phases” means carrying out the offshore works as two separate construction operations;

“two onshore phases” means a single duct laying operation followed by two separate operations to pull the cables through the ducts and two separate operations to construct the onshore project substation;

(a) 1981 c.67. Section 7 was amended by section 70 of, and paragraph 9 of Schedule 15 to, the Planning and Compensation Act 1991 (c.34). There are other amendments to the 1981 Act which are not relevant to this Order.

(b) “street authority” is defined in section 49, which was amended by paragraph 117 of Schedule 1 to the Infrastructure Act (c.7)

“undertaker” means Norfolk Vanguard Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“watercourse” includes all rivers, streams, creeks, ditches, drains, canals, cuts, culverts, dykes, sluices, sewers and passages through which water flows except a public sewer or drain;

“wind turbine generator” means a structure comprising a tower, rotor with up to three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include (but is not limited to) corrosion protection systems, helicopter landing facilities and other associated equipment, fixed to a foundation; and

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order;

(2) References in this Order to rights over land include references to rights to do or restrain or to place and maintain, anything in, on or under land or in the air-space above its surface and references in this Order to the imposition of restrictive covenants are references to the creation of rights over the land which interfere with the interests or rights of another and are for the benefit of land which is acquired under this Order or which is an interest otherwise comprised in the Order land.

(3) All distances, directions and lengths referred to in this Order are approximate, save in respect of the parameters referred to in paragraph 1(c) and paragraph 1(e) (disposal volumes in connection with Work Nos. 1 to 4B) in Part 1, Schedule 1 (authorised development), requirements 2 to 11 and requirement 16 in Part 3, Schedule 1 (requirements) and conditions 1-8 in Part 4, Schedules 9 and 10 of the deemed marine licences for the generation assets and conditions 1-3 in Part 4, Schedules 11 and 12 of the deemed marine licences for the transmission assets.

(4) Any reference in this Order to a work identified by the number of the work is to be construed as a reference to the work of that number authorised by this Order.

(5) Unless otherwise stated, references in this Order to points identified by letters are to be construed as references to the points so lettered on the works plan.

(6) The expression “includes” is to be construed without limitation unless the contrary intention appears.

PART 2

Principal Powers

Development consent etc. granted by the Order

3.—(1) Subject to the provisions of this Order and to the requirements the undertaker is granted—

- (a) Development consent for the authorised development; and
- (b) Consent for the ancillary works,

to be carried out within the Order limits.

(2) Subject to the requirements and conditions in the deemed marine licences, Work Nos. 1 to 4B must be constructed anywhere within the Order limits seaward of MHWS and Work Nos. 4C to 12 must be constructed anywhere within the Order limits landward of MHWS.

Limits of deviation

4.—(1) In carrying out the overhead line modification as part of Work No.11A for which it is granted development consent by article 3(1) (development consent etc. granted by the Order) the undertaker may—

- (a) deviate vertically from the levels of the existing 400kV overhead line from Walpole to Norwich Main to be modified as part of Work No.11A—

- (i) to any extent not exceeding 4 metres upwards; or
- (ii) to any extent downwards as may be found to be necessary or convenient.
- (b) deviate laterally from the lines or situations of the existing 400kV overhead line from Walpole to Norwich Main to be modified as part of Work No.11A -
 - (i) to any extent not exceeding 25 metres either side of the existing overhead line as shown by the limits of deviation relating to that work on the works plan.

Power to construct and maintain authorised project

5.—(1) The undertaker may at any time construct and maintain the authorised project, except to the extent that this Order or an agreement made under this Order provides otherwise.

(2) The power to maintain conferred under paragraph (1) does not relieve the undertaker of any requirement to obtain a licence under Part 4 of the 2009 Act (marine licensing) for offshore works not covered by the deemed marine licences.

Benefit of the Order

6.—(1) Subject to paragraphs (3), (4) and (5), the undertaker may with the written consent of the Secretary of State—

- (a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (excluding the deemed marine licences referred to in paragraph (2) below) and such related statutory rights as may be agreed between the undertaker and the transferee;
- (b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order (excluding the deemed marine licences referred to in paragraph (2) below) and such related statutory rights as may be so agreed.

(2) Subject to paragraph (4), the undertaker may with the written consent of the Secretary of State—

- (a) where an agreement has been made in accordance with paragraph (1)(a), transfer to the transferee the whole of any of the deemed marine licences and such related statutory rights as may be agreed between the undertaker and the transferee; or
- (b) where an agreement has been made in accordance with paragraph (1)(b), grant to the lessee, for the duration of the period mentioned in paragraph (1)(b), the whole of any of the deemed marine licences and such related statutory rights as may be so agreed.

(3) The undertaker must consult the Secretary of State before making an application for consent under this article by giving notice in writing of the proposed application and the Secretary of State must provide a response within eight weeks of receipt of the notice.

(4) The Secretary of State must consult the MMO before giving consent to the transfer or grant to another person of the whole of the benefit of the provisions of the deemed marine licences.

(5) The Secretary of State must consult National Grid before giving consent to the transfer or grant to a person of any or all of the benefit of the provisions of this Order (excluding the deemed marine licences referred to in paragraph (2) above).

(6) The Secretary of State must determine an application for consent made under this article within a period of eight weeks commencing on the date the application is received by the Secretary of State, unless otherwise agreed in writing with the undertaker.

(7) Where paragraph (11) applies no consent of the Secretary of State is required under paragraph (1) or paragraph (2).

(8) Where an agreement has been made in accordance with paragraph (1) or (2) references in this Order to the undertaker, except in paragraph (9), (10), or (13), include references to the transferee or lessee.

(9) The exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (1) or (2) are subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(10) Where an agreement has been made in accordance with paragraph (1) or (2)—

- (a) the benefit (“the transferred benefit”) includes any rights that are conferred, and any obligations that are imposed by virtue of the provisions to which the benefit relates;
- (b) the transferred benefit resides exclusively with the transferee or, as the case may be, the lessee and the transferred benefit is not enforceable against the undertaker save in the case of a deemed marine licence transferred or granted in respect of any breach of an obligation by the undertaker which occurs prior to such transfer or grant or which occurs as a result of any activity carried out by the undertaker on behalf of the transferee.

(11) This paragraph applies where—

- (a) the transferee or lessee is a person who holds a transmission licence under the Electricity Act 1989; or
- (b) the time limits for claims for compensation in respect of the acquisition of land or effects upon land under this Order have elapsed and—
 - (i) no such claims have been made,
 - (ii) any such claim has been made and has been compromised or withdrawn,
 - (iii) compensation has been paid in final settlement of any such claim,
 - (iv) payment of compensation into court has taken place in lieu of settlement of any such claim; or
 - (v) it has been determined by a tribunal or court of competent jurisdiction in respect of any such claim that no compensation is payable; or
- (c) the transferee or lessee is a person within the same group as Vattenfall AB (publ) (a company incorporated in Sweden with Reg. No. 556036-2138, whose registered office is SE-169 92 Stockholm, Sweden) under Section 1261 of the Companies Act 2006.

(12) In respect of any transfer or grant of a leasehold interest to a company within the same group as Vattenfall AB (publ) in accordance with paragraph 11(c), the undertaker must obtain National Grid’s approval in writing before any such transfer or grant occurs (such approval not to be unreasonably withheld or delayed), and such approval must be given when prior to the transfer or grant, the transferee or lessee provides a direct covenant to National Grid to comply with any contractual obligations of the undertaker given to National Grid in respect of that part of the authorised project to be transferred or subject to the grant of a lease.

(13) The provisions of article 9 (street works), article 11 (temporary stopping up of streets), article 18 (compulsory acquisition of land), article 20 (compulsory acquisition of rights), article 26 (temporary use of land for carrying out the authorised project) and article 27 (temporary use of land for maintaining the authorised project) have effect only for the benefit of the named undertaker and a person who is a transferee or lessee and is also—

- (a) in respect of Works Nos. 4C to 12 a person who holds a licence under the Electricity Act 1989; or
- (b) in respect of functions under article 9 (street works) relating to a street, a street authority.

(14) Prior to any transfer or grant under this article taking effect the undertaker must give notice in writing to the Secretary of State, and if such transfer or grant relates to the exercise of powers in their area, to the MMO and the relevant planning authority, and if such transfer or grant relates to works or utilisation of powers within 15 metres measured in any direction of apparatus of Cadent Gas Limited, to Cadent Gas Limited, and if such transfer or grant relates to works or utilisation of powers within 15 metres measured in any direction of apparatus of National Grid to National Grid..

(15) The notice required under paragraphs (3) and (14) must—

- (a) state—
 - (i) the name and contact details of the person to whom the benefit of the provisions will be transferred or granted;

- (ii) subject to paragraph (16), the date on which the transfer will take effect;
 - (iii) the provisions to be transferred or granted; and
 - (iv) the restrictions, liabilities and obligations that, in accordance with paragraph (9), will apply to the person exercising the powers transferred or granted; and
 - (v) except where paragraph (11)(a) or 11(b) applies, confirmation of the availability and adequacy of funds for compensation associated with the compulsory acquisition of the Order land.
- (b) be accompanied by—
- (i) where relevant, a plan showing the works or areas to which the transfer or grant relates; and
 - (ii) a copy of the document effecting the transfer or grant signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted.

(16) The date specified under paragraph (15)(a)(ii) must not be earlier than the expiry of five days from the date of the receipt of the notice.

(17) The notice given under paragraph (14) must be signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted as specified in that notice.

Application and modification of legislative provisions

7.—(1) Regulation 6 of the Hedgerows Regulations 1997^(a) is modified so as to read for the purposes of this Order only as if there were inserted after paragraph (1)(j) the following

“(k) or for carrying out or the maintenance of development which has been authorised by an order granting development consent pursuant to the Planning Act 2008”

(2) The provisions of the Neighbourhood Planning Act 2017^(b) insofar as they relate to temporary possession of land under articles 26 (temporary use of land for carrying out the authorised project) and 27 (temporary use of land for maintaining the authorised project) of this Order do not apply in relation to the construction of works carried out for the purpose of, or in connection with, the construction or maintenance of the authorised project.

(3) The following provisions do not apply in relation to the construction of works carried out for the purpose of, or in connection with, the construction or maintenance of the authorised project—

- (a) the Environmental Permitting (England and Wales) Regulations 2010^(c), to the extent that they require a permit for anything that would have required consent made under section 109 of the Water Resources Act 1991 immediately before the repeal of that section;
- (b) the provisions of any byelaws made under, or having effect as if made under, paragraphs 5, 6 or 6A of Schedule 25 of the Water Resources Act 1991^(d) that require consent or approval for the carrying out of works;
- (c) section 23 of the Land Drainage Act 1991^(e) (prohibition of obstructions etc. in watercourses); and
- (d) the provisions of any byelaws made under section 66 of the Land Drainage Act 1991 (powers to make byelaws) that require consent or approval for the carrying out of works.

(a) SI 1997/1160

(b) 2017 c.20

(c) S.I. 2010/675. See amendments made by S.I. 2016/475

(d) Paragraph 5 was amended by section 100 of the Natural Environment and Rural Communities Act 2006 (c.16), section 84(2) of, and paragraph 3 of Schedule 11 to, the Marine and Coastal Access Act 2009, paragraph 49 of Schedule 2 to the Flood and Water Management Act 2010 (c.29) and paragraph 315 of Schedule 2 to S.I. 2013/755. Paragraph 6 was amended by paragraph 26 of Schedule 15 to the Environment Act 1995(c.25) and section 224 of, and paragraph 24 of Schedule 16 and Part 5 of Schedule 22 to, the Marine and Coastal Access Act 2009. Paragraph 6A was inserted by section 103(3) of the Environment Act 1995

(e) 1991 c.59. Section 23 was amended by paragraph 192 of Schedule 22 to the Environment Act 1995, paragraph 32 of Schedule 2 to the Flood and Water Management Act 2010 and S.I. 2013/755. Section 66 was amended by paragraph 38 of Schedule 2 to the Flood and Water Management Act 2010 and by section 86(3) of the Water Act 2014

Defence to proceedings in respect of statutory nuisance

8.—(1) Where proceedings are brought under section 82(1) of the Environmental Protection Act 1990(a) (summary proceedings by person aggrieved by statutory nuisance) in relation to a nuisance falling within paragraph (g) of section 79(1) of that Act (noise emitted from premises so as to be prejudicial to health or a nuisance) no order may be made, and no fine may be imposed, under section 82(2) of that Act if—

- (a) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised project and that the nuisance is attributable to the carrying out of the authorised project in accordance with a notice served under section 60 (control of noise on construction site), or a consent given under section 61 (prior consent for work on construction site) or 65 (noise exceeding registered level), of the Control of Pollution Act 1974(b); or
 - (ii) is a consequence of the construction or maintenance of the authorised project and that it cannot reasonably be avoided; or
- (b) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the use of the authorised project and that the nuisance is attributable to the use of the authorised project which is being used in compliance with requirement 27 (control of noise during operational phase); or
 - (ii) is a consequence of the use of the authorised project and that it cannot reasonably be avoided.

(2) Section 61(9) (consent for work on construction site to include statement that it does not of itself constitute a defence to proceedings under section 82 of the Environmental Protection Act 1990) of the Control of Pollution Act 1974 and section 65(8) of that Act (corresponding provision in relation to consent for registered noise level to be exceeded), do not apply where the consent relates to the use of premises by the undertaker for purposes of or in connection with the construction or maintenance of the authorised project.

PART 3

Streets

Street works

9.—(1) The undertaker may, for the purposes of the authorised project, enter on so much of any of the streets specified in Schedule 2 (streets subject to street works) as is within the Order limits and may—

- (a) break up or open the street, or any sewer, drain or tunnel within or under it;
- (b) tunnel or bore under the street;
- (c) remove or use all earth and materials in or under the street;
- (d) place and keep apparatus under the street;
- (e) maintain apparatus under the street or change its position; and
- (f) execute any works required for or incidental to any works referred to in sub-paragraphs (a), (b), (c), (d) and (e).

(2) The authority given by paragraph (1) is a statutory right for the purposes of sections 48(3) (streets, street works and undertakers) and 51(1) (prohibition of unauthorised street works) of the 1991 Act.

(a) 1990 c.43. There are amendments to this Act which are not relevant to the Order.

(b) 1974 c.40. Sections 61(9) and 65(8) were amended by section 162 of, and paragraph 15 of Schedule 3 to, the Environmental Protection Act 1990, c.25. There are other amendments to the 1974 Act which are not relevant to the Order.

(3) In this article “apparatus” has the same meaning as in Part 3 of the 1991 Act.

Public rights of way

10. The undertaker may, in connection with the carrying out of the authorised project, temporarily stop up each of the public rights of way specified in columns (2) of Schedule 3 (public rights of way to be temporarily stopped up) to the extent specified in column (3), by reference to the letters shown on the temporary stopping up of public rights of way plan.

Temporary stopping up of streets

11.—(1) The undertaker, during and for the purposes of carrying out the authorised project, may temporarily stop up, divert and alter any street and may for any reasonable time—

- (a) divert the traffic or a class of traffic from the street; and
- (b) subject to paragraph (3), prevent all persons from passing along the street.

(2) Without limiting paragraph (1), the undertaker may, during and for the purposes of carrying out the authorised project, use any street temporarily stopped up, diverted or altered under the powers conferred by this article within the Order limits as a temporary working site.

(3) The undertaker must provide reasonable access for pedestrians going to or from premises abutting a street affected by the temporary stopping up, diversion or alteration of a street under this article if there would otherwise be no such access.

(4) Without limiting paragraph (1), the undertaker may temporarily stop up, divert or alter the streets specified in column 1 of Schedule 4 (Streets to be stopped up) to the extent specified, by reference to the letters and numbers shown on the streets to be temporarily stopped up plan, in column (3) of that Schedule.

(5) The undertaker must not temporarily stop up, divert, alter or use as a temporary working site—

- (a) any street referred to in paragraph (4) without first consulting the street authority; and
- (b) any other street without the consent of the street authority, which may attach reasonable conditions to the consent.

(6) Any person who suffers loss by the suspension of any private right of way under this article is entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(7) If a street authority fails to notify the undertaker of its decision within 28 days of receiving an application for consent under paragraph (5)(b) that street authority is deemed to have granted consent.

Access to works

12.—(1) The undertaker may, for the purposes of the authorised project—

- (a) form and lay out means of access, or improve existing means of access, in the locations specified in columns (1) and (2) of Schedule 5 (access to works); and
- (b) with the approval of the relevant planning authority after consultation with the highway authority in accordance with requirement 22 (highway accesses), form and lay out such other means of access or improve existing means of access, at such locations within the Order limits as the undertaker reasonably requires for the purposes of the authorised project.

(2) If the relevant planning authority fails to notify the undertaker of its decision within 28 days of receiving an application for approval under paragraph (1)(b) that relevant planning authority is deemed to have granted approval.

Agreements with street authorities

13.—(1) A street authority and the undertaker may enter into agreements with respect to—

- (a) any temporary stopping up, alteration or diversion of a street authorised by this Order; or

- (b) the carrying out in the street of any of the works referred to in article 9(1) (street works).
- (2) Such an agreement may, without prejudice to the generality of paragraph (1)—
 - (a) make provision for the street authority to carry out any function under this Order which relates to the street in question;
 - (b) include an agreement between the undertaker and street authority specifying a reasonable time for the completion of the works; and
 - (c) contain such terms as to payment and otherwise as the parties consider appropriate.

Application of the 1991 Act

14.—(1) The provisions of the 1991 Act mentioned in paragraph 2 that apply in relation to the carrying out of street works under that Act and any regulations made or code of practice issued or approved under those provisions apply (with all necessary modifications) in relation to—

- (a) the carrying out of works under article 9 (street works); and
- (b) the temporary stopping up, temporary alteration or temporary diversion of a street by the undertaker under article 11 (temporary stopping up of streets)

whether or not the carrying out of the works or the stopping up, alteration or diversion constitutes street works within the meaning of that Act.

(2) The provisions of the 1991 Act are—

- (a) subject to paragraph (3), section 55 (notice of starting date of works);
- (b) section 57 (notice of emergency works);
- (c) section 60 (general duty of undertakers to co-operate);
- (d) section 68 (facilities to be afforded to street authority);
- (e) section 69 (works likely to affect other apparatus in the street);
- (f) section 76 (liability for cost of temporary traffic regulation);
- (g) section 77 (liability for cost of use of alternative route); and
- (h) all provisions of that Act that apply for the purposes of the provisions referred to in subparagraphs (a) to (g).

(3) Sections 55 of the 1991 Act as applied by paragraph (2) has effect as if references in section 57 of that Act to emergency works included a reference to a stopping up, alteration or diversion (as the case may be) required in a case of emergency.

PART 4

Supplemental Powers

Discharge of water and works to watercourses

15.—(1) The undertaker may use any watercourse or any public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the authorised project and for that purpose may lay down, take up and alter pipes and may, on any land within the Order limits, make openings into, and connections with, the watercourse, public sewer or drain subject to the obtaining of consent and approval respectively pursuant to paragraphs (3) and (4) below.

(2) Any dispute arising from the making of connections to or the use of a public sewer or drain by the undertaker pursuant to paragraph (1) is determined as if it were a dispute under section 106 of the Water Industry Act 1991(a) (right to communicate with public sewers).

(a) 1991 c.56. Section 106 was amended by sections 36(2) and 99 of the Water Act 2003 (c.37), and Section 35(8)(a) of the Competition and Services (Utilities) Act 1992 (c.43) and amended by sections 32 and 42 of, and paragraph 16(2) of Schedule 3 to, the Flood and Water Management Act 2010 (date in force to be appointed see section 49(3)(h)(i)). There are other amendments to this section which are not relevant to this Order.

(3) The undertaker must not discharge any water into any watercourse, public sewer or drain except with the consent of the person to whom it belongs; and such consent may be given subject to such terms and conditions as that person may reasonably impose, but must not be unreasonably withheld.

(4) The undertaker must not carry out any works to any public sewer or drain pursuant to article 15(1) except—

- (a) in accordance with plans approved by the person to whom the sewer or drain belongs, but such approval must not be unreasonably withheld; and
- (b) where that person has been given the opportunity to supervise the making of the opening.

(5) The undertaker must take such steps as are reasonably practicable to secure that any water discharged into a watercourse or public sewer or drain pursuant to this article is as free as may be practicable from gravel, soil or other solid substance, oil or matter in suspension.

(6) This article does not authorise the entry into controlled waters of any matter whose entry or discharge into controlled waters is prohibited by regulation 12 of the 2016 Regulations.

(7) Subject to paragraph (8) below, the undertaker may in connection with the carrying out or maintenance of the authorised project, alter the bed or banks of, and construct works in, under, over or within any watercourse and may divert, alter, interrupt or obstruct the flow of any watercourse within the Order limits.

(8) The undertaker must not:

- (a) undertake any works within 8 metres of, any watercourse forming part of a river, or within 16 metres of a tidally influenced main river without the consent of the Environment Agency, which must not be unreasonably withheld but may be subject to reasonable conditions; and
- (b) undertake any works to any ordinary watercourse without the consent of the relevant drainage authorities or Norfolk County Council as the case may be, which must not be unreasonably withheld but may be subject to reasonable conditions.

(9) In this article—

- (a) “public sewer or drain” means a sewer or drain which belongs to a sewerage undertaker, the Environment Agency, a relevant drainage authority or a local authority;
- (b) “ordinary watercourse” has the meaning given in the Land Drainage Act 1991;
- (c) other expressions, excluding watercourse, used both in this article and in the Water Resources Act 1991 have the same meaning as in that Act.

(10) If a person who receives an application for consent or approval fails to notify the undertaker of a decision within the relevant period specified in Part 7 of Schedule 16 that person is deemed to have granted consent or given approval, as the case may be.

Authority to survey and investigate the land onshore

16.—(1) The undertaker may for the purposes of this Order enter on any land shown within the Order limits or which may be affected by the authorised project and—

- (a) survey or investigate the land;
- (b) without prejudice to the generality of sub-paragraph (a), make trial holes in such positions on the land as the undertaker thinks fit to investigate the nature of the surface layer and subsoil and remove soil samples;
- (c) without prejudice to the generality of sub-paragraph (a), carry out ecological or archaeological investigations on such land; and
- (d) place on, leave on and remove from the land apparatus for use in connection with the survey and investigation of land and making of trial holes.

(2) No land may be entered or equipment placed or left on or removed from the land under paragraph (1) unless at least 14 days’ notice has been served on every owner and occupier of the land.

- (3) Any person entering land under this article on behalf of the undertaker—
 - (a) must, if so required on entering the land, produce written evidence of their authority to do so; and
 - (b) may take with them such vehicles and equipment as are necessary to carry out the survey or investigation or to make the trial holes.
- (4) No trial holes may be made under this article—
 - (a) in land forming a railway without the consent of Network Rail Infrastructure Limited; or
 - (b) in land held by or in right of the Crown without the consent of the Crown.
- (5) No trial holes may be made under this article—
 - (a) in land located within the highway boundary without the consent of the highway authority; or
 - (b) in a private street without the consent of the street authority,
 but such consent must not be unreasonably withheld.
- (6) The undertaker must compensate the owners and occupiers of the land for any loss or damage arising by reason of the exercise of the authority conferred by this article, such compensation to be determined, in case of dispute, under Part 1 (determination of questions of disputed compensation) of the 1961 Act.
- (7) If either a highway authority or a street authority which receives an application for consent fails to notify the undertaker of its decision within 28 days of receiving the application for consent—
 - (a) under paragraph (5)(a) in the case of a highway authority; or
 - (b) under paragraph (5)(b) in the case of a street authority;
 that authority is deemed to have granted consent.
- (8) Section 13 (refusal to give possession to acquiring authority) of the 1965 Act applies to the entry onto, or possession of land under this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 (application of compulsory acquisition provisions) of the 2008 Act.

Removal of human remains

17.—(1) In this article, “the specified land” means the land within the Order limits.

(2) Before the undertaker carries out any development or works which will or may disturb any human remains in the specified land, it must remove those human remains from the specified land, or cause them to be removed, in accordance with the following provisions of this article.

(3) Before any such remains are removed from the specified land, the undertaker must give notice of the intended removal, describing the specified land and stating the general effect of the following provisions of this article, by—

- (a) publishing a notice once in each of 2 successive weeks in a newspaper circulating in the area of the authorised project; and
- (b) displaying a notice in a conspicuous place on or near to the specified land.

(4) As soon as reasonably practicable after the first publication of a notice under paragraph (3), the undertaker must send a copy of the notice to the relevant planning authority.

(5) At any time within 56 days after the first publication of a notice under paragraph (3), any person who is a personal representative or relative of any deceased person whose remains are interred in the specified land may give notice in writing to the undertaker of that person’s intention to undertake the removal of the remains.

(6) Where a person has given notice under paragraph (5), and the remains in question can be identified, that person may cause such remains to be—

- (a) removed and re-interred in any burial ground or cemetery in which burials may legally take place; or

- (b) removed to, and cremated in, any crematorium

and that person must, as soon as reasonably practicable after such re-interment or cremation, provide to the undertaker a certificate for the purpose of enabling compliance with paragraph (11).

(7) If the undertaker is not satisfied that any person giving notice under paragraph (5) is the personal representative or relative as that person claims to be, or that the remains in question can be identified, the question must be determined on the application of either party in a summary manner by the county court, and the court may make an order specifying who must remove the remains and as to the payment of the costs of the application.

(8) The undertaker must pay the reasonable expenses of removing and re-interring or cremating the remains of any deceased person under this article.

(9) If—

- (a) within the period of 56 days referred to in paragraph (5) no notice under that paragraph has been given to the undertaker in respect of any remains in the specified land; or
- (b) such notice is given and no application is made under paragraph (7) within 56 days after the giving of the notice, but the person who gave the notice fails to remove the remains within a further period of 56 days; or
- (c) within 56 days after any order is made by the county court under paragraph (7) any person, other than the undertaker, specified in the order fails to remove the remains; or
- (d) it is determined that the remains to which any such notice relates cannot be identified,

subject to paragraph (10), the undertaker must remove the remains and cause them to be re-interred in such burial ground or cemetery in which burials may legally take place as the undertaker thinks suitable for the purpose; and, so far as possible, remains from individual graves must be re-interred in individual containers which must be identifiable by a record prepared with reference to the original position of burial of the remains that they contain.

(10) If the undertaker is satisfied that any person giving notice under paragraph (5) is the personal representative or relative as that person claims to be and that the remains in question can be identified, but that person does not remove the remains, the undertaker must comply with any reasonable request that person may make in relation to the removal and re-interment or cremation of the remains.

(11) On the re-interment or cremation of any remains under this article—

- (a) a certificate of re-interment or cremation must be sent by the undertaker to the Registrar General giving the date of re-interment or cremation and identifying the place from which the remains were removed and the place in which they were re-interred or cremated; and
- (b) a copy of the certificate of re-interment or cremation and the record mentioned in paragraph (9) must be sent by the undertaker to the relevant planning authority mentioned in paragraph (4).

(12) The removal of the remains of any deceased person under this article must be carried out in accordance with any directions which may be given by the Secretary of State.

(13) Any jurisdiction or function conferred on the county court by this article may be exercised by the district judge of the court.

(14) Section 25 of the Burial Act 1857^(a) (bodies not to be removed from burial grounds, save under faculty, without licence of Secretary of State) does not apply to a removal carried out in accordance with this article.

(a) 1857 c.81. There are amendments to this Act which are not relevant to this Order.

PART 5

Powers of Acquisition

Compulsory acquisition of land

18.—(1) The undertaker may acquire compulsorily so much of the Order land as is required for the authorised project or to facilitate, or is incidental, to it.

(2) This article is subject to paragraph (2) of article 20 (compulsory acquisition of rights) and article 26 (temporary use of land for carrying out the authorised project).

Time limit for exercise of authority to acquire land compulsorily

19.—(1) After the end of the period of 5 years beginning on the day on which this Order is made—

- (a) no notice to treat may be served under Part 1 of the 1965 Act; and
- (b) no declaration may be executed under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 as applied by article 22 (application of the Compulsory Purchase (Vesting Declarations) Act 1981)(a).

(2) The authority conferred by article 26 (temporary use of land for carrying out the authorised project) ceases at the end of the period referred to in paragraph (1), except that nothing in this paragraph prevents the undertaker remaining in possession of land after the end of that period, if the land was entered and possession was taken before the end of that period.

Compulsory acquisition of rights

20.—(1) The undertaker may acquire compulsorily such rights or impose restrictive covenants over the Order land as may be required for any purpose for which that land may be acquired under article 18 (compulsory acquisition of land), by creating them as well as by acquiring rights already in existence.

(2) Subject to the provisions of this article, article 21 (private rights) and article 29 (statutory undertakers), in the case of the Order land specified in column (1) of Schedule 6 (land in which only new rights etc. may be acquired) the undertaker's powers of compulsory acquisition are limited to the acquisition of such new rights and the imposition of restrictive covenants for the purpose specified in relation to that land in column (2) of that Schedule.

(3) Subject to section 8 of the 1965 Act, as substituted by paragraph 5 of Schedule 7 (modification of compensation and compulsory purchase enactments for creation of new rights), where the undertaker acquires an existing right over land or restrictive covenant under paragraph (1), the undertaker is not required to acquire a greater interest in that land.

(4) Schedule 7 (modification of compensation and compulsory purchase enactments for creation of new rights) has effect for the purpose of modifying the enactments relating to compensation and the provisions of the 1965 Act in their application in relation to the compulsory acquisition under this article of a right over land by the creation of a new right or the imposition of restrictive covenants.

(5) In any case where the acquisition of new rights under paragraph (1) is required for the purpose of diverting, replacing or protecting apparatus of a statutory undertaker, the undertaker may, with the consent of the Secretary of State, transfer the power to acquire such rights to the statutory undertaker in question.

(6) The exercise by a statutory undertaker of any power in accordance with a transfer under paragraph (5) is subject to the same restrictions, liabilities and obligations as would apply under this Order if that power were exercised by the undertaker.

(a) 1981 c.66. Sections 2, 6 and 11 were amended by section 4 of, and paragraph 52 of Schedule 2 to, the Planning (Consequential Provisions) Act 1990 (c.11). There are other amendments to the 1981 Act which are not relevant to this Order.

Private rights

21.—(1) Subject to the provisions of this article, all private rights or restrictive covenants over land subject to compulsory acquisition under article 18 (compulsory acquisition of land) are suspended and unenforceable or, where so notified by the undertaker to the person with the benefit of such private rights or restrictive covenants, extinguished in so far as in either case their continuance would be inconsistent with the acquisition—

- (a) as from the date of acquisition of the land by the undertaker, whether compulsorily or by agreement; or
- (b) on the date of entry on the land by the undertaker under section 11(1) of the 1965 Act (power of entry)

whichever is the earliest.

(2) Subject to the provisions of this article, all private rights or restrictive covenants over land subject to the compulsory acquisition of rights or the imposition of restrictive covenants under article 20 (compulsory acquisition of rights) cease to have effect in so far as their continuance would be inconsistent with the exercise of the right or compliance with the restrictive covenant—

- (a) as from the date of the acquisition of the right or the imposition of the restrictive covenant by the undertaker (whether the right is acquired compulsorily, by agreement or through the grant of lease of the land by agreement); or
- (b) on the date of entry on the land by the undertaker under section 11(1) of the 1965 Act (power of entry) in pursuance of the right

whichever is the earliest.

(3) Subject to the provisions of this article, all private rights or restrictive covenants over land of which the undertaker takes temporary possession under this Order are suspended and unenforceable, in so far as their continuance would be inconsistent with the purpose for which temporary possession is taken, for as long as the undertaker remains in lawful possession of the land.

(4) Any person who suffers loss by the extinguishment or suspension of any private right or restrictive covenant under this article is entitled to compensation in accordance with the terms of section 152 of the 2008 Act to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) This article does not apply in relation to any right to which section 138 of the 2008 Act (extinguishment of rights, and removal of apparatus, of statutory undertakers etc.) or article 29 (statutory undertakers) applies.

(6) Paragraphs (1) to (3) have effect subject to—

- (a) any notice given by the undertaker before—
 - (i) the completion of the acquisition of the land or the acquisition of rights or the imposition of restrictive covenants over or affecting the land;
 - (ii) the undertaker's appropriation of the land,
 - (iii) the undertaker's entry onto the land, or
 - (iv) the undertaker's taking temporary possession of the land

that any or all of those paragraphs do not apply to any right specified in the notice; or

- (b) any agreement made at any time between the undertaker and the person in or to whom the right in question is vested or belongs.

(7) If an agreement referred to in paragraph (6)(b)—

- (a) is made with a person in or to whom the right is vested or belongs; and
- (b) is expressed to have effect also for the benefit of those deriving title from or under that person

the agreement is effective in respect of the persons so deriving title, whether the title was derived before or after the making of the agreement.

(8) Reference in this article to private rights over land includes reference to any trusts or incidents to which the land is subject.

Application of the Compulsory Purchase (Vesting Declarations) Act 1981

- 22.**—(1) The 1981 Act applies as if this Order were a compulsory purchase order.
- (2) The 1981 Act, as so applied, has effect with the following modifications.
- (3) Section 5 (earliest date for execution of declaration) is omitted.
- (4) Section 5A (time limit for general vesting declaration) is omitted(a).
- (5) In section 5B (extension of time limit during challenge)—
- (a) for “section 23 of the Acquisition of Land Act 1981 (application to High Court in respect of compulsory purchase order)” substitute “section 118 of the 2008 Act (legal challenges relating to applications for orders granting development consent)”; and
- (b) for “the three year period mentioned in section 4” substitute “the five year period mentioned in article 19 (time limit for exercise of authority to acquire land compulsorily) of the Norfolk Vanguard Offshore Wind Farm Order 201[X]”.
- (6) In section 7 (constructive notice to treat), in subsection (1)(a), the words “(as modified by section 4 of the Acquisition of Land Act 1981)” are omitted.
- (7) In Schedule A1 (counter-notice requiring purchase of land not in general vesting declaration), omit paragraph 1(2).
- (8) References to the 1965 Act in the 1981 Act must be construed as references to that Act as applied by section 125 of the 2008 Act (as modified by article 23 (application of Part 1 of the Compulsory Purchase Act 1965) to the compulsory acquisition of land under this Order.

Application of Part 1 of the Compulsory Purchase Act 1965

- 23.**—(1) Part 1 of the 1965 Act, as applied to this Order by section 125 (application of compulsory acquisition provisions) of the 2008 Act, is modified as follows.
- (2) In section 4A(1) (extension of time limit during challenge)—
- (a) for “section 23 of the Acquisition of Land Act 1981 (application to High Court in respect of compulsory purchase order)” substitute “section 118 of the 2008 Act (legal challenges relating to applications for orders granting development consent)”; and
- (b) for “the three year period specified in section 4” substitute “the five year period mentioned in article 19 (time limit for exercise of authority to acquire land compulsorily) of the Norfolk Vanguard Offshore Wind Farm Order 201[X]”.
- (3) In section 22(2) (expiry of time limit for exercise of compulsory purchase power not to affect acquisition of interests omitted from purchase), for “section 4 of this Act” substitute “article 19 (time limit for exercise of authority to acquire land compulsorily) of the Norfolk Vanguard Offshore Wind Farm Order 201[X]”
- (4) In Schedule 2A (counter-notice requiring purchase of land not in notice to treat)—
- (a) omit paragraphs 1(2) and 14(2); and
- (b) at the end insert—

“PART 4

INTERPRETATION

30. In this Schedule, references to entering on and taking possession of land do not include doing so under article 26 (temporary use of land for carrying out the authorised development) or article 26 (temporary use of land for maintaining the authorised development) of the Norfolk Vanguard Wind Farm Order 201[].”

(a) Section 5A to the 1981 Act was inserted by section 182(2) of the Housing and Planning Act 2016 (c.22)

Acquisition of subsoil or airspace only

24.—(1) The undertaker may acquire compulsorily so much of, or such rights in, the subsoil or airspace of the land referred to in paragraph (1) of article 18 (compulsory acquisition of land) or article 20 (compulsory acquisition of rights) as may be required for any purpose for which that land may be acquired under that provision instead of acquiring the whole of the land.

(2) Where the undertaker acquires any part of, or rights in, the subsoil or airspace of land under paragraph (1), the undertaker is not required to acquire an interest in any other part of the land.

Rights under or over streets

25.—(1) The undertaker may enter on and appropriate so much of the subsoil of or air-space over any street within the Order limits as may be required for the purposes of the authorised project and may use the subsoil or air-space for those purposes or any other purpose ancillary to the authorised project.

(2) Subject to paragraph (3), the undertaker may exercise any power conferred by paragraph (1) in relation to a street without being required to acquire any part of the street or any easement or right in the street.

(3) Paragraph (2) does not apply in relation to—

- (a) any subway or underground building; or
- (b) any cellar, vault, arch or other construction in, on or under a street which forms part of a building fronting onto the street.

(4) Subject to paragraph (5), any person who is an owner or occupier of land appropriated under paragraph (1) without the undertaker acquiring any part of that person's interest in the land, and who suffers loss as a result, is entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) Compensation is not payable under paragraph (4) to any person who is an undertaker to whom section 85 of the 1991 Act (sharing cost of necessary measures) applies in respect of measures of which the allowable costs are to be borne in accordance with that section.

Temporary use of land for carrying out the authorised project

26.—(1) The undertaker may, in connection with the carrying out of the authorised project—

- (a) enter on and take temporary possession of—
 - (i) the land specified in columns (1) and (2) of Schedule 8 (land of which temporary possession may be taken) for the purpose specified in relation to that land in column (3) of that Schedule; and
 - (ii) any other Order land in respect of which no notice of entry has been served under section 11 of the 1965 Act (other than in connection with the acquisition of rights only) and no declaration has been made under section 4 of the 1981 Act;
- (b) remove any buildings and vegetation from that land;
- (c) construct temporary works (including the provision of means of access), running tracks, security fencing, bridges, structures and buildings on that land;
- (d) use the land for the purposes of a working site with access to the working site in connection with the authorised project; and
- (e) construct any works, or use the land, as specified in relation to that land in column 3 of Schedule 8 (land of which temporary possession may be taken), or any mitigation works.

(2) Not less than 14 days before entering on and taking temporary possession of land under this article the undertaker must serve notice of the intended entry on the owners and occupiers of the land.

(3) The undertaker must not remain in possession of any land under this article for longer than reasonably necessary and in any event must not, without the agreement of the owners of the land,

remain in possession of any land under this article after the end of the period of one year beginning with the date of completion of the part of the authorised project specified in relation to that land in column (4) of Schedule 8 (land of which temporary possession may be taken), unless the undertaker has, before the end of that period, served a notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the 1981 Act in relation to that land.

(4) Unless the undertaker has served notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the 1981 Act or otherwise acquired the land or rights over land subject to temporary possession, the undertaker must before giving up possession of land of which temporary possession has been taken under this article, remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land; but the undertaker is not required to—

- (a) replace any building, structure, drain or electric line removed under this article;
- (b) remove any drainage works installed by the undertaker under this article; or
- (c) remove any new road surface or other improvements carried out under this article to any street specified in Schedule 2 (streets subject to street works).

(5) The undertaker must pay compensation to the owners and occupiers of land which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of the provisions of any power conferred by this article.

(6) Any dispute as to a person's entitlement to compensation under paragraph (5), or as to the amount of the compensation, must be determined under Part 1 of the 1961 Act.

(7) Nothing in this article affects any liability to pay compensation under section 152 of the 2008 Act (compensation in case where no right to claim in nuisance) or under any other enactment in respect of loss or damage arising from the carrying out of the authorised project, other than loss or damage for which compensation is payable under paragraph (5).

(8) The undertaker may not compulsorily acquire under this Order the land referred to in paragraph (1)(a)(i) except that the undertaker is not precluded from—

- (a) acquiring new rights or imposing restrictive covenants over any part of that land under article 20 (compulsory acquisition of rights) to the extent that such land is listed in column (1) of Schedule 6 (land in which new rights etc., may be acquired); or
- (b) acquiring any part of the subsoil (or rights in the subsoil) of that land under article 24 (acquisition of subsoil or airspace only).

(9) Where the undertaker takes possession of land under this article, the undertaker is not required to acquire the land or any interest in it.

(10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) applies to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).

Temporary use of land for maintaining authorised project

27.—(1) Subject to paragraph (2), at any time during the maintenance period relating to any part of the authorised project, the undertaker may—

- (a) enter on and take temporary possession of any land within the Order limits if such possession is reasonably required for the purpose of maintaining the authorised project; and
- (b) construct such temporary works (including the provision of means of access) and buildings on the land as may be reasonably necessary for that purpose.

(2) Paragraph (1) does not authorise the undertaker to take temporary possession of—

- (a) any house or garden belonging to a house; or
- (b) any building (other than a house) if it is for the time being occupied.

(3) Not less than 28 days before entering on and taking temporary possession of land under this article the undertaker must serve notice of the intended entry on the owners and occupiers of the land.

(4) The undertaker is not required to comply with Paragraph (3) in a case of emergency and if an emergency exists they must—

- (a) give to the owners and occupiers of the land in question notice of its intended entry or (as the case may be) of its having entered onto the land as soon as is reasonably practicable; and
- (b) comply with Paragraph (1) so far as is reasonably possible in the circumstances.

(5) The undertaker may only remain in possession of land under this article for so long as may be reasonably necessary to carry out the maintenance of the part of the authorised project for which possession of the land was taken.

(6) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker must remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land.

(7) The undertaker must pay compensation to the owners and occupiers of land of which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of the provisions of this article.

(8) Any dispute as to a person's entitlement to compensation under paragraph (7), or as to the amount of the compensation, must be determined under Part 1 of the 1961 Act.

(9) Nothing in this article affects any liability to pay compensation under section 152 of the 2008 Act (compensation in case where no right to claim in nuisance) or under any other enactment in respect of loss or damage arising from the maintenance of the authorised project, other than loss or damage for which compensation is payable under paragraph (7).

(10) Where the undertaker takes possession of land under this article, the undertaker is not required to acquire the land or any interest in it.

(11) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) applies to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).

(12) In this article “the maintenance period”, in relation to any part of the authorised project, means the period of 5 years beginning with the date on which the authorised project first exports electricity to the national electricity transmission network.

Extinguishment of private rights and restrictive covenants relating to apparatus removed from land subject to temporary possession

28.—(1) This article applies to any Order land of which the undertaker takes temporary possession under article 26 (Temporary use of land for carrying out the authorised project).

(2) Subject to paragraph (3), all private rights or restrictive covenants in relation to apparatus belonging to National Grid removed from any land to which this article applies will remain intact from the date on which the undertaker gives up temporary possession of that land.

(3) If the undertaker, in agreement with National Grid, gives notice before the date that the undertaker gives up temporary possession of the land that any or all of the private rights or restrictive covenants in relation to apparatus belonging to National Grid removed from the land to which this article applies will be extinguished, such rights will be extinguished.

(4) Any extinguishment of rights by paragraph (3) does not give rise to any cause of action relating to the presence on or in the land of any foundations and the undertaker is not required to remove foundations when giving up temporary possession).

Statutory undertakers

29. Subject to the provisions of Schedule 16 (protective provisions) the undertaker may—

- (a) acquire compulsorily, or acquire new rights or impose restrictive covenants over, the land belonging to statutory undertakers shown on the land plan within the limits of the land to be acquired and described in the book of reference; and

- (b) extinguish the rights of, remove, relocate the rights of or reposition the apparatus belonging to statutory undertakers over or within the Order land.

Recovery of costs of new connections

30.—(1) Where any apparatus of a public utility undertaker or of a public communications provider is removed under article 29 (statutory undertakers) any person who is the owner or occupier of premises to which a supply was given from that apparatus is entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of effecting a connection between the premises and any other apparatus from which a supply is given.

(2) Paragraph (1) does not apply in the case of the removal of a public sewer but where such a sewer is removed under article 29 (statutory undertakers), any person who is—

- (a) the owner or occupier of premises the drains of which communicated with that sewer; or
- (b) the owner of a private sewer which communicated with that sewer,

is entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of making the drain or sewer belonging to that person communicate with any other public sewer or with a private sewerage disposal plant.

(3) This article does not have effect in relation to apparatus to which Part 3 of the 1991 Act applies.

(4) In this paragraph—

“public communications provider” has the same meaning as in section 151(1) of the Communications Act 2003; and

“public utility undertaker” has the same meaning as in the 1980 Act.

PART 6

Operations

Operation of generating station

31.—(1) The undertaker is hereby authorised to operate the generating station comprised in the authorised project.

(2) This article does not relieve the undertaker of any requirement to obtain any permit or licence under any other legislation that may be required from time to time to authorise the operation of an electricity generating station.

Deemed marine licences under the 2009 Act

32. The marine licences set out in Schedules 9, 10, 11 and 12 are deemed to have been granted under Part 4 of the 2009 Act (marine licensing) for the licensed marine activities set out in Part 3, and subject to the conditions set out in Part 4, of each licence.

PART 7

Miscellaneous and General

Application of landlord and tenant law

33.—(1) This article applies to—

- (a) any agreement for leasing to any person the whole or any part of the authorised project or the right to operate the same; and

- (b) any agreement entered into by the undertaker with any person for the construction, maintenance, use or operation of the authorised project, or any part of it, so far as any such agreement relates to the terms on which any land which is the subject of a lease granted by or under that agreement is to be provided for that person's use.

(2) No enactment or rule of law regulating the rights and obligations of landlords and tenants may prejudice the operation of any agreement to which this article applies.

(3) Accordingly, no such enactment or rule of law applies in relation to the rights and obligations of the parties to any lease granted by or under any such agreement so as to—

- (a) exclude or in any respect modify any of the rights and obligations of those parties under the terms of the lease, whether with respect to the termination of the tenancy or any other matter;
- (b) confer or impose on any such party any right or obligation arising out of or connected with anything done or omitted on or in relation to land which is the subject of the lease, in addition to any such right or obligation provided for by the terms of the lease; or
- (c) restrict the enforcement (whether by action for damages or otherwise) by any party to the lease of any obligation of any other party under the lease).

Operational land for purposes of the 1990 Act

34. Development consent granted by this Order is treated as specific planning permission for the purposes of section 264(3)(a) of the 1990 Act (cases in which land is to be treated as operational land for the purposes of that Act).

Felling or lopping of trees and removal of hedgerows

35.—(1) The undertaker may fell or lop any tree or shrub near any part of the authorised project, or cut back its roots, if it reasonably believes it to be necessary to do so to prevent the tree or shrub from obstructing or interfering with the construction, maintenance or operation of the authorised project or any apparatus used in connection with the authorised project.

(2) In carrying out any activity authorised by paragraph (1), the undertaker must do no unnecessary damage to any tree or shrub and must pay compensation to any person for any loss or damage arising from such activity.

(3) Any dispute as to a person's entitlement to compensation under paragraph (2), or as to the amount of compensation, must be determined under Part 1 of the 1961 Act.

(4) The undertaker may, for the purposes of the authorised project—

- (a) remove any hedgerows within the Order limits and specified in Schedule 13, Part 3 (removal of hedgerows) and those hedgerows that, after assessment, are not classed as important hedgerows specified in Schedule 13, Part 1 (removal of potentially important hedgerows) ; and
- (b) remove the important hedgerows as are within the Order limits and specified in Schedule 13, Part 1 (removal of potentially important hedgerows) and Part 2 (removal of important hedgerows).

(5) In this article “hedgerow” and “important hedgerow” have the same meaning as in the Hedgerow Regulations 1997(a).

Trees subject to tree preservation orders

36.—(1) The undertaker may fell or lop any tree within or overhanging land within the Order limits subject to a tree preservation order which was made after 28 February 2017 or cut back its roots, if it reasonably believes it to be necessary to do so in order to prevent the tree from obstructing or interfering with the construction, maintenance or operation of the authorised project or any apparatus used in connection with the authorised project.

(a) S.I. 1997/1160

- (2) In carrying out any activity authorised by paragraph (1)—
- (a) the undertaker must do no unnecessary damage to any tree and must pay compensation to any person for any loss or damage arising from such activity; and
 - (b) the duty contained in section 206(1) of the 1990 Act (replacement of trees) does not apply.
- (3) The authority given by paragraph (1) constitutes a deemed consent under the relevant tree preservation order.
- (4) Any dispute as to a person's entitlement to compensation under paragraph (2), or as to the amount of compensation, is to be determined under Part 1 of the 1961 Act.

Certification of plans etc

37.—(1) The undertaker must, as soon as practicable after the making of this Order, submit to the Secretary of State copies of the following for certification that they are true copies of the documents referred to in this Order —

- (a) the environmental statement (document reference 6.1);
- (b) the land plan (document reference 2.2);
- (c) the works plan (document reference 2.4);
- (d) the access to works plan (document reference 2.5);
- (e) the temporary stopping up of public rights of way plan (document reference 2.6);
- (f) the streets to temporarily stopped up plan (document reference 2.7);
- (g) the important hedgerows plan (document reference 2.11);
- (h) the book of reference (4.3);
- (i) the outline code of construction practice (8.1);
- (j) the design and access statement (8.3);
- (k) the outline written scheme of investigation (onshore) (8.5);
- (l) the outline written scheme of investigation (offshore) (8.6);
- (m) the outline landscape and ecological management strategy (8.7);
- (n) the outline traffic management plan (8.8);
- (o) the outline travel plan (8.9);
- (p) the outline access management plan (8.10);
- (q) the outline offshore operations and maintenance plan (8.11);
- (r) the offshore in principle monitoring plan (8.12);
- (s) the draft marine mammal mitigation protocol (8.13);
- (t) the outline project environmental management plan (document reference 8.14);
- (u) the outline scour protection and cable protection plan (document reference 8.16);
- (v) the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation site integrity plan (8.17);
- (w) the outline marine traffic monitoring strategy (8.18);
- (x) the outline fisheries liaison and co-existence plan (8.19);
- (y) the outline Norfolk Vanguard Haisborough, Hammond, and Winterton Special Area of Conservation site integrity plan (8.20);
- (z) the outline operational drainage plan (8.21);
- (aa) the outline skills and employment strategy (8.22); and
- (bb) the Development Principles (8.23).

(2) A plan or document so certified is admissible in any proceedings as evidence of the contents of the document of which it is a copy.

(3) Where a plan or document certified under paragraph (1)—

- (a) refers to a provision of this Order (including any specified requirement) when it was in draft form; and
- (b) identifies that provision by a number, or combination of numbers and letters, which is different from the number, or combination of numbers and letters by which the corresponding provision of this Order is identified in the Order as made

the reference in the plan or document concerned must be construed for the purposes of this Order as referring to the provision (if any) corresponding to that provision in the Order as made.

Arbitration

38.—(1) Subject to article 41 (saving provisions for Trinity House), any difference under any provision of this Order, unless otherwise provided for, must be referred to and settled in arbitration in accordance with the rules at Schedule 14 of this Order, by a single arbitrator to be agreed upon by the parties, within 14 days of receipt of the notice of arbitration, or if the parties fail to agree within the time period stipulated, to be appointed on application of either party (after giving written notice to the other) by the Secretary of State.

(2) Any matter for which the consent or approval of the Secretary of State or the Marine Management Organisation is required under any provision of this Order shall not be subject to arbitration.

(3) Should the Secretary of State fail to make an appointment under paragraph (1) within 14 days of a referral, the referring party may refer to the Centre for Effective Dispute Resolution for appointment of an arbitrator.

Procedure in relation to certain approvals etc

39.—(1) Where an application is made to or request is made of the relevant planning authority, a highway authority, a street authority or the owner of a watercourse, sewer or drain for any agreement or approval required or contemplated by any of the provisions of the Order, such agreement or approval must, if given, be given in writing and may not be unreasonably withheld.

(2) Schedule 15 (procedure for discharge of requirements) has effect in relation to all agreements or approvals granted, refused or withheld in relation to requirements 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33 and 34 in Part 3 of Schedule 1 (requirements).

Abatement of works abandoned or decayed

40. Where Work No. 1(a) to (e) or Work No. 2 or any part of those works is abandoned or allowed to fall into decay the Secretary of State may, following consultation with the undertaker, issue a written notice requiring the undertaker at its own expense to repair and restore or remove Work No. 1(a) to (e) or Work No. 2 or any relevant part of those works, without prejudice to any notice served under section 105(2) of the 2004 Act. The notice may also require the restoration of the site of the relevant part(s) of Work No. 1(a) to (e) or Work No. 2 to a safe and proper condition within an area and to such an extent as may be specified in the notice.

Saving provisions for Trinity House

41. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

Crown rights

42.—(1) Nothing in this Order affects prejudicially any estate, right, power, privilege, authority or exemption of the Crown and in particular, nothing in this Order authorises the undertaker or any licensee to take, use, enter on or in any manner interfere with any land or rights of any description (including any portion of the shore or bed of the sea or any river, channel, creek, bay or estuary) —

- (a) belonging to Her Majesty in right of the Crown and forming part of The Crown Estate without the consent in writing of the Crown Estate Commissioners;
- (b) belonging to Her Majesty in right of the Crown and not forming part of The Crown Estate without the consent in writing of the government department having the management of that land; or
- (c) belonging to a government department or held in trust for Her Majesty for the purposes of a government department without the consent in writing of that government department.

(2) Paragraph (1) does not apply to the exercise of any right under this Order for the compulsory acquisition of an interest in any Crown land (as defined in the 2008 Act) which is for the time being held otherwise than by or on behalf of the Crown.

(3) A consent under paragraph (1) may be given unconditionally or subject to terms and conditions; and is deemed to have been given in writing where it is sent electronically.

Protective provisions

43. Schedule 16 (protective provisions) has effect.

Signed by authority of the Secretary of State for Business, Energy & Industrial Strategy

Address	<i>Name</i>	
Date	Head of [Unit]	
	Department for Business, Energy & Industrial Strategy	

SCHEDULES

SCHEDULE 1

Article 2

Authorised Project

PART 1

Authorised Development

1. A nationally significant infrastructure project as defined in sections 14 and 15 of the 2008 Act which is located in the North Sea approximately 47km from the Norfolk coast, comprising—

Offshore

Work No. 1

- (a) an offshore wind turbine generating station with an electrical export capacity of up to 1,800 MW at the point of connection to the offshore electrical platform(s) referred to at Work No. 2 comprising up to 180 wind turbine generators each fixed to the seabed by one of the following foundation types: monopile (piled or suction caisson), jacket (piled or suction caisson), or gravity base fitted with rotating blades and situated within the area shown on the works plan and further comprising (b) to (e) below;
- (b) up to two accommodation platforms fixed to the seabed within the area shown on the works plan by one of the following foundation types: jacket (piled or suction caisson) or gravity base;
- (c) up to two meteorological masts fixed to the seabed within the area shown on the works plan by one of the following foundation types: monopile (piled or suction caisson), jacket (piled or suction caisson) or gravity base;

- (d) up to two LIDAR measurement buoys fixed to the seabed within the area shown on the works plan by one of the following foundation types: monopile (piled) or floating, and up to two wave measurement buoys fixed to the seabed within the area shown on the works plan by one foundation type (floating); and
- (e) a network of subsea array cables and fibre optic cables within the area shown on the works plan between the wind turbine generators, and between the wind turbine generators and Work No.2 including one or more offshore cable crossings;

and associated development within the meaning of section 115(2) of the 2008 Act comprising—

Work No. 2 – up to two offshore electrical platforms fixed to the seabed within the area shown on the works plan by one of the following foundation types: jacket (piled or suction caisson) or gravity base;

Work No. 3 – a network of subsea cables and fibre optic cables within the area shown on the works plans comprising Work No.2 for the transmission of electricity and electronic communications between the offshore electrical platforms and including one or more offshore cable crossings;

Work No. 4A – up to four subsea export cables and fibre optic cables between Work No. 2 and Work No. 4B consisting of subsea cables and fibre optic cables along routes within the Order limits seaward of MLWS including one or more offshore cable crossings;

Intertidal area

Work No. 4B – up to four subsea export cables and fibre optic cables between Work No. 4A and Work No. 4C consisting of subsea cables and fibre optic cables along routes within the Order limits between MLWS and MHWS at Happisburgh South, North Norfolk;

In the county of Norfolk, district of North Norfolk

Work No. 4C – the onshore transmission works at the landfall consisting of up to two transition jointing pits and up to four cables to be laid in ducts underground and associated fibre optic cables laid within cable ducts underground from MHWS at Work No. 4B to Work No. 5;

Work No. 5 – onshore transmission works consisting of up to four cables to be laid in ducts and up to four additional cable ducts for the Norfolk Boreas offshore wind farm laid underground and associated fibre optic cables laid underground within cable ducts from Work No. 4C to Work No. 6;

In the county of Norfolk, district of Broadland

Work No. 6 – onshore transmission works consisting of up to four cables to be laid in ducts and up to four additional cable ducts for the Norfolk Boreas offshore wind farm laid underground and associated fibre optic cables laid underground within cable ducts from Work No. 5 to Work No. 7;

In the county of Norfolk, district of Breckland

Work No. 7 – onshore transmission works consisting of up to four cables to be laid in ducts and up to four additional cable ducts for the Norfolk Boreas offshore wind farm laid underground and associated fibre optic cables laid underground within cable ducts from Work No. 6 to Work No. 8A;

Work No. 8A – onshore project substation to the east of the existing National Grid substation at Necton;

Work No.8B – surface water management, bunding, embankments, boundary treatments and landscaping in connection with Work No. 8A;

Work No. 9 – works consisting of the connection of up to twelve interface cables, laid underground and associated fibre optic cables laid underground within cable ducts from Work No. 8A to the extended National Grid substation at Necton;

Work No. 10A – an extension to the existing National Grid substation at Necton;

Work No. 10B – additional surface water management for the extended National Grid substation at Necton in connection with Work No. 10A;

Work No. 10C – bunding, embankments, boundary treatments and landscaping in connection with Work No. 10A;

Work No. 11 – the removal of one existing pylon and construction of two new permanent pylons, as shown marked by (W) and (E) on the works plans, and the installation of conductors, insulators and fittings on to the pylons;

Work No. 11A – the overhead line modification;

Work No. 12 – permanent accesses connecting the A47 to Work No.8A, Work No. 10A and Work No. 10B including highway widening works on the A47 to create a new junction;

and in connection with Work Nos. 1 to 4B and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised project and which fall within the scope of the work assessed by the environmental statement including—

- (a) scour protection around the foundations of the offshore structures;
- (b) cable protection measures such as the placement of rock and/or concrete mattresses, with or without frond devices;
- (c) the removal of material from the seabed required for the construction of Work Nos. 1 to 4B and the disposal of up to 49,329,712 cubic metres of inert material of natural origin within the Order limits produced during construction drilling, seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching and excavation of horizontal directional drilling exit pits;
- (d) removal of static fishing equipment; and
- (e) disposal of drill arisings in connection with any foundation drilling up to a total of 414,761 cubic metres;

and in connection with such Work Nos. 4C to 12 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised development and which fall within the scope of the work assessed by the environmental statement, including—

- (a) works to secure vehicular and/or pedestrian means of access including the creation of new tracks, footpaths, and/or widening, creation of passing places, upgrades, creation of bell mouths, creation of temporary slip roads and improvements of existing tracks, footpaths and roads;
- (b) temporary access tracks and running tracks both alongside and used for the purpose of constructing Work Nos. 5, 6, 7, and 9;
- (c) car parking areas, welfare facilities, temporary offices and workshops;
- (d) bunds, embankments, swales, landscaping, boundary treatments and works to mitigate any effects of the construction, operation or maintenance of the authorised project;
- (e) spoil and equipment storage;
- (f) jointing pits, manholes, kiosks, marker posts, link boxes and other works associated with laying ducts and/or cables and fibre optic cables and/or pulling cables and fibre optic cables through cable ducts;
- (g) water supply works, foul drainage provision, surface water management systems, temporary drainage during installation of ducts and/or cables and fibre optic cables and at the onshore project substation and culverting;
- (h) works of restoration;
- (i) fencing or other means of enclosure;

- (j) works to alter the course of, or otherwise interfere with, non-navigable rivers, streams or watercourses;
- (k) working sites and mobilisation areas in connection with the construction of the authorised development;
- (l) bowzers, septic tanks, generators and standby generators;
- (m) ramps and temporary bridges used for the purpose of constructing Work Nos. 5, 6 7, and 9;
- (n) works for the provision of apparatus including cabling, water and electricity supply works;
- (o) habitat creation and archaeological works; and
- (p) such other works, apparatus, plant and machinery of whatever nature as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised project;

and in connection with Work No. 11 and Work No. 11A and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised development and which fall within the scope the work assessed by the environmental statement, including—

- (a) the construction of a temporary overhead electric line comprising three temporary pylons, conductors, insulators and fittings between pylons 4VV123 and 4VV127; and
- (b) the temporary diversion of the overhead line onto the temporary pylons.

2. The grid coordinates for that part of the authorised project which is seaward of MHWS are specified below—

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 55' 0.308" N	3° 4' 42.589" E	269	52° 48' 36.617" N	1° 39' 45.198" E
2	52° 49' 53.975" N	3° 5' 22.789" E	270	52° 48' 36.608" N	1° 39' 45.442" E
3	52° 46' 19.050" N	3° 2' 16.682" E	271	52° 48' 36.111" N	1° 39' 58.227" E
4	52° 45' 10.584" N	2° 45' 33.989" E	272	52° 47' 53.162" N	1° 57' 17.842" E
5	52° 51' 41.636" N	2° 45' 34.220" E	273	52° 47' 51.688" N	1° 57' 48.405" E
6	53° 2' 36.817" N	2° 34' 16.309" E	274	52° 47' 50.436" N	1° 58' 0.642" E
7	52° 49' 38.834" N	2° 34' 15.809" E	275	52° 47' 48.214" N	1° 58' 12.320" E
8	52° 48' 47.472" N	2° 33' 28.343" E	276	52° 47' 42.495" N	1° 58' 33.820" E
9	52° 48' 3.133" N	2° 26' 37.427" E	277	52° 47' 36.793" N	1° 58' 49.157" E
10	52° 56' 9.089" N	2° 18' 33.231" E	278	52° 47' 27.713" N	1° 59' 7.719" E
11	52° 45' 11.467" N	2° 45' 30.454" E	279	52° 47' 19.963" N	1° 59' 19.409" E
12	52° 45' 11.943" N	2° 45' 28.711" E	280	52° 47' 10.581" N	1° 59' 30.409" E

13	52° 45' 12.967" N	2° 45' 25.281" E	281	52° 45' 3.401" N	2° 1' 51.874" E
14	52° 45' 14.081" N	2° 45' 21.928" E	282	52° 45' 3.127" N	2° 1' 52.189" E
15	52° 45' 15.285" N	2° 45' 18.661" E	283	52° 45' 2.287" N	2° 1' 53.183" E
16	52° 45' 15.920" N	2° 45' 17.061" E	284	52° 45' 1.635" N	2° 1' 53.925" E
17	52° 45' 17.254" N	2° 45' 13.933" E	285	52° 45' 1.351" N	2° 1' 54.277" E
18	52° 45' 17.952" N	2° 45' 12.407" E	286	52° 45' 0.388" N	2° 1' 55.510" E
19	52° 45' 19.409" N	2° 45' 9.432" E	287	52° 45' 0.110" N	2° 1' 55.877" E
20	52° 45' 20.533" N	2° 45' 7.335" E	288	52° 44' 59.840" N	2° 1' 56.258" E
21	52° 45' 20.944" N	2° 45' 6.567" E	289	52° 44' 58.926" N	2° 1' 57.587" E
22	52° 45' 21.741" N	2° 45' 5.178" E	290	52° 44' 58.663" N	2° 1' 57.982" E
23	52° 45' 23.389" N	2° 45' 2.488" E	291	52° 44' 58.407" N	2° 1' 58.390" E
24	52° 45' 24.240" N	2° 45' 1.188" E	292	52° 44' 57.545" N	2° 1' 59.812" E
25	52° 45' 25.993" N	2° 44' 58.685" E	293	52° 44' 57.298" N	2° 2' 0.233" E
26	52° 45' 27.812" N	2° 44' 56.313" E	294	52° 44' 57.059" N	2° 2' 0.667" E
27	52° 45' 29.693" N	2° 44' 54.076" E	295	52° 44' 56.253" N	2° 2' 2.175" E
28	52° 45' 31.632" N	2° 44' 51.980" E	296	52° 44' 56.022" N	2° 2' 2.621" E
29	52° 45' 32.623" N	2° 44' 50.985" E	297	52° 44' 55.800" N	2° 2' 3.078" E
30	52° 45' 33.626" N	2° 44' 50.027" E	298	52° 44' 55.053" N	2° 2' 4.667" E
31	52° 45' 35.671" N	2° 44' 48.223" E	299	52° 44' 54.839" N	2° 2' 5.136" E
32	52° 45' 37.763" N	2° 44' 46.570" E	300	52° 44' 54.635" N	2° 2' 5.615" E
33	52° 45' 39.897" N	2° 44' 45.071" E	301	52° 44' 53.950" N	2° 2' 7.278" E
34	52° 45' 42.069" N	2° 44' 43.731" E	302	52° 44' 53.755" N	2° 2' 7.768" E
3	52° 45' 43.168" N	2° 44' 43.121" E	303	52° 44' 53.569" N	2° 2' 8.268" E
36	52° 45' 44.275" N	2° 44' 42.551" E	304	52° 44' 52.949" N	2° 2' 9.998" E
37	52° 45' 46.511" N	2° 44' 41.534" E	305	52° 44' 52.773" N	2° 2' 10.507" E

38	52° 45' 47.638" N	2° 44' 41.087" E	306	52° 44' 52.607" N	2° 2' 11.025" E
39	52° 45' 48.833" N	2° 44' 40.681" E	307	52° 44' 52.053" N	2° 2' 12.816" E
40	52° 46' 9.781" N	2° 44' 40.687" E	308	52° 44' 51.897" N	2° 2' 13.343" E
41	52° 46' 46.724" N	2° 44' 40.696" E	309	52° 44' 51.751" N	2° 2' 13.877" E
42	52° 46' 48.173" N	2° 44' 40.696" E	310	52° 44' 51.267" N	2° 2' 15.722" E
43	52° 46' 52.974" N	2° 44' 40.698" E	311	52° 44' 51.131" N	2° 2' 16.263" E
44	52° 46' 55.152" N	2° 44' 40.698" E	312	52° 44' 51.006" N	2° 2' 16.812" E
45	52° 46' 57.976" N	2° 44' 40.699" E	313	52° 44' 50.593" N	2° 2' 18.703" E
46	52° 47' 0.395" N	2° 44' 40.053" E	314	52° 44' 50.478" N	2° 2' 19.257" E
47	52° 47' 1.558" N	2° 44' 39.624" E	315	52° 44' 50.373" N	2° 2' 19.818" E
48	52° 47' 1.970" N	2° 44' 39.479" E	316	52° 44' 50.034" N	2° 2' 21.747" E
49	52° 47' 2.003" N	2° 44' 39.463" E	317	52° 44' 49.940" N	2° 2' 22.313" E
50	52° 47' 3.144" N	2° 44' 38.936" E	318	52° 44' 49.857" N	2° 2' 22.883" E
51	52° 47' 4.295" N	2° 44' 38.272" E	319	52° 44' 49.592" N	2° 2' 24.844" E
52	52° 47' 4.681" N	2° 44' 38.004" E	320	52° 44' 49.520" N	2° 2' 25.418" E
53	52° 47' 4.998" N	2° 44' 37.816" E	321	52° 44' 49.459" N	2° 2' 25.996" E
54	52° 47' 5.524" N	2° 44' 37.450" E	322	52° 44' 49.268" N	2° 2' 27.980" E
55	52° 47' 6.616" N	2° 44' 36.554" E	323	52° 44' 49.218" N	2° 2' 28.561" E
56	52° 47' 7.671" N	2° 44' 35.546" E	324	52° 44' 49.179" N	2° 2' 29.143" E
57	52° 47' 8.686" N	2° 44' 34.431" E	325	52° 44' 49.065" N	2° 2' 31.144" E
58	52° 47' 9.657" N	2° 44' 33.214" E	326	52° 44' 49.037" N	2° 2' 31.728" E
59	52° 47' 10.579" N	2° 44' 31.898" E	327	52° 44' 49.021" N	2° 2' 32.314" E
60	52° 47' 11.449" N	2° 44' 30.489" E	328	52° 44' 48.989" N	2° 2' 34.021" E
61	52° 47' 12.264" N	2° 44' 28.993" E	329	52° 44' 48.983" N	2° 2' 34.638" E
62	52° 47' 13.021" N	2° 44' 27.415" E	330	52° 44' 49.220" N	2° 15' 49.970" E

63	52° 47' 13.715" N	2° 44' 25.762" E	331	52° 44' 49.236" N	2° 15' 51.345" E
64	52° 47' 14.346" N	2° 44' 24.040" E	332	52° 44' 49.268" N	2° 15' 53.169" E
65	52° 47' 14.910" N	2° 44' 22.257" E	333	52° 44' 49.284" N	2° 15' 53.754" E
66	52° 47' 15.404" N	2° 44' 20.418" E	334	52° 44' 49.311" N	2° 15' 54.339" E
67	52° 47' 15.784" N	2° 44' 18.728" E	335	52° 44' 49.422" N	2° 15' 56.340" E
68	52° 47' 15.918" N	2° 44' 18.041" E	336	52° 44' 49.460" N	2° 15' 56.922" E
69	52° 47' 16.179" N	2° 44' 16.606" E	337	52° 44' 49.509" N	2° 15' 57.503" E
70	52° 47' 16.456" N	2° 44' 14.647" E	338	52° 44' 49.680" N	2° 15' 59.308" E
71	52° 47' 16.520" N	2° 44' 14.023" E	339	52° 44' 49.731" N	2° 15' 59.809" E
72	52° 47' 16.658" N	2° 44' 12.664" E	340	52° 44' 49.791" N	2° 16' 0.309" E
73	52° 47' 16.784" N	2° 44' 10.663" E	341	52° 44' 51.112" N	2° 16' 10.573" E
74	52° 47' 16.834" N	2° 44' 8.653" E	342	52° 44' 51.112" N	2° 16' 10.573" E
75	52° 47' 16.807" N	2° 44' 6.642" E	343	52° 45' 49.555" N	2° 23' 47.080" E
76	52° 47' 16.703" N	2° 44' 4.638" E	344	52° 45' 49.556" N	2° 23' 47.093" E
77	52° 47' 16.559" N	2° 44' 3.046" E	345	52° 45' 49.762" N	2° 23' 48.593" E
78	52° 47' 15.589" N	2° 43' 55.247" E	346	52° 45' 50.105" N	2° 23' 50.522" E
79	52° 47' 14.341" N	2° 43' 45.216" E	347	52° 45' 50.521" N	2° 23' 52.412" E
80	52° 47' 13.615" N	2° 43' 39.381" E	348	52° 45' 51.008" N	2° 23' 54.255" E
81	52° 47' 13.538" N	2° 43' 38.765" E	349	52° 45' 51.565" N	2° 23' 56.044" E
82	52° 43' 46.039" N	2° 16' 19.075" E	350	52° 45' 52.188" N	2° 23' 57.772" E
83	52° 43' 45.182" N	2° 16' 10.004" E	351	52° 45' 52.876" N	2° 23' 59.431" E
84	52° 43' 44.634" N	2° 16' 0.162" E	352	52° 45' 53.626" N	2° 24' 1.017" E
85	52° 43' 44.531" N	2° 15' 54.221" E	353	52° 45' 54.434" N	2° 24' 2.521" E
86	52° 43' 44.490" N	2° 15' 51.462" E	354	52° 45' 55.299" N	2° 24' 3.939" E
87	52° 43' 44.512" N	2° 7' 23.550" E	355	52° 45' 56.215" N	2° 24' 5.265" E

88	52° 42' 44.166" N	2° 3' 14.512" E	356	52° 45' 57.180" N	2° 24' 6.493" E
89	52° 42' 43.152" N	2° 3' 9.802" E	357	52° 45' 58.191" N	2° 24' 7.619" E
90	52° 42' 42.369" N	2° 3' 4.946" E	358	52° 45' 59.242" N	2° 24' 8.639" E
91	52° 42' 31.534" N	2° 1' 44.644" E	359	52° 46' 0.330" N	2° 24' 9.547" E
92	52° 42' 31.056" N	2° 1' 40.338" E	360	52° 46' 1.450" N	2° 24' 10.341" E
93	52° 42' 30.948" N	2° 1' 39.044" E	361	52° 46' 2.598" N	2° 24' 11.017" E
94	52° 42' 30.701" N	2° 1' 34.686" E	362	52° 46' 3.770" N	2° 24' 11.573" E
95	52° 42' 30.654" N	2° 1' 30.309" E	363	52° 46' 4.960" N	2° 24' 12.007" E
96	52° 42' 30.675" N	2° 1' 29.003" E	364	52° 46' 6.165" N	2° 24' 12.317" E
97	52° 42' 30.833" N	2° 1' 25.173" E	365	52° 46' 7.380" N	2° 24' 12.501" E
98	52° 42' 33.173" N	2° 0' 49.768" E	366	52° 46' 8.022" N	2° 24' 12.532" E
99	52° 42' 34.216" N	2° 0' 40.941" E	367	52° 46' 9.762" N	2° 24' 12.670" E
100	52° 42' 34.439" N	2° 0' 39.649" E	368	52° 50' 9.656" N	2° 24' 31.707" E
101	52° 42' 35.302" N	2° 0' 35.379" E	369	52° 51' 3.549" N	2° 34' 15.864" E
102	52° 42' 41.649" N	2° 0' 7.655" E	370	52° 51' 3.486" N	2° 34' 19.188" E
103	52° 42' 43.788" N	2° 0' 0.073" E	371	52° 51' 3.295" N	2° 34' 22.530" E
104	52° 42' 44.149" N	1° 59' 59.016" E	372	52° 51' 2.978" N	2° 34' 25.846" E
105	52° 42' 45.445" N	1° 59' 55.557" E	373	52° 51' 2.535" N	2° 34' 29.122" E
106	52° 42' 55.437" N	1° 59' 30.877" E	374	52° 51' 1.968" N	2° 34' 32.346" E
107	52° 42' 55.855" N	1° 59' 29.924" E	375	52° 51' 1.280" N	2° 34' 35.504" E
108	52° 42' 58.378" N	1° 59' 24.593" E	376	52° 51' 0.473" N	2° 34' 38.585" E
109	52° 42' 58.842" N	1° 59' 23.685" E	377	52° 50' 59.551" N	2° 34' 41.577" E
110	52° 43' 0.673" N	1° 59' 20.588" E	378	52° 50' 58.516" N	2° 34' 44.466" E
111	52° 43' 2.861" N	1° 59' 17.394" E	379	52° 50' 57.374" N	2° 34' 47.243" E
112	52° 43' 17.859" N	1° 58' 57.179" E	380	52° 50' 56.129" N	2° 34' 49.896" E

113	52° 43' 19.625" N	1° 58' 54.953" E	381	52° 50' 54.785" N	2° 34' 52.414" E
114	52° 43' 21.284" N	1° 58' 53.106" E	382	52° 50' 53.348" N	2° 34' 54.787" E
115	52° 43' 21.796" N	1° 58' 52.576" E	383	52° 50' 51.823" N	2° 34' 57.007" E
116	52° 43' 23.547" N	1° 58' 50.895" E	384	52° 50' 50.218" N	2° 34' 59.065" E
117	52° 45' 46.103" N	1° 56' 43.184" E	385	52° 50' 48.537" N	2° 35' 0.952" E
118	52° 46' 2.160" N	1° 56' 27.260" E	386	52° 50' 46.788" N	2° 35' 2.661" E
119	52° 46' 3.532" N	1° 56' 26.078" E	387	52° 50' 44.977" N	2° 35' 4.185" E
120	52° 46' 17.577" N	1° 56' 12.146" E	388	52° 50' 43.112" N	2° 35' 5.518" E
121	52° 46' 37.038" N	1° 55' 33.566" E	389	52° 50' 41.200" N	2° 35' 6.655" E
122	52° 46' 51.513" N	1° 54' 38.977" E	390	52° 50' 39.248" N	2° 35' 7.591" E
123	52° 46' 58.151" N	1° 53' 21.115" E	391	52° 50' 37.265" N	2° 35' 8.323" E
124	52° 46' 59.490" N	1° 52' 52.341" E	392	52° 50' 33.492" N	2° 35' 9.272" E
125	52° 47' 32.039" N	1° 39' 38.159" E	393	52° 50' 32.920" N	2° 35' 9.346" E
126	52° 47' 32.129" N	1° 39' 36.152" E	394	52° 46' 31.498" N	2° 26' 1.301" E
127	52° 47' 32.273" N	1° 39' 33.526" E	395	52° 46' 31.407" N	2° 26' 1.294" E
128	52° 47' 32.388" N	1° 39' 31.565" E	396	52° 46' 31.505" N	2° 26' 1.330" E
129	52° 47' 32.521" N	1° 39' 29.607" E	397	52° 46' 30.476" N	2° 26' 1.280" E
130	52° 47' 32.673" N	1° 39' 27.652" E	398	52° 46' 29.257" N	2° 26' 1.347" E
131	52° 47' 32.844" N	1° 39' 25.702" E	399	52° 46' 28.043" N	2° 26' 1.540" E
132	52° 47' 33.028" N	1° 39' 23.714" E	400	52° 46' 26.839" N	2° 26' 1.859" E
133	52° 47' 33.217" N	1° 39' 21.768" E	401	52° 46' 25.650" N	2° 26' 2.301" E
134	52° 47' 33.425" N	1° 39' 19.828" E	402	52° 46' 24.480" N	2° 26' 2.866" E
135	52° 47' 33.652" N	1° 39' 17.893" E	403	52° 46' 23.333" N	2° 26' 3.551" E
136	52° 47' 33.896" N	1° 39' 15.964" E	404	52° 46' 22.215" N	2° 26' 4.353" E
137	52° 47' 34.155" N	1° 39' 13.999" E	405	52° 46' 21.130" N	2° 26' 5.269" E

138	52° 47' 34.419" N	1° 39' 12.073" E	406	52° 46' 20.230" N	2° 26' 6.150" E
139	52° 47' 34.701" N	1° 39' 10.153" E	407	52° 46' 20.081" N	2° 26' 6.296" E
140	52° 47' 35.001" N	1° 39' 8.241" E	408	52° 46' 19.074" N	2° 26' 7.430" E
141	52° 47' 35.320" N	1° 39' 6.337" E	409	52° 46' 18.112" N	2° 26' 8.665" E
142	52° 47' 35.827" N	1° 39' 3.397" E	410	52° 46' 17.199" N	2° 26' 9.998" E
143	52° 47' 36.193" N	1° 39' 1.398" E	411	52° 46' 16.338" N	2° 26' 11.422" E
144	52° 47' 36.599" N	1° 38' 59.313" E	412	52° 46' 15.534" N	2° 26' 12.933" E
145	52° 47' 37.000" N	1° 38' 57.371" E	413	52° 46' 14.788" N	2° 26' 14.524" E
146	52° 47' 37.497" N	1° 38' 55.056" E	414	52° 46' 14.105" N	2° 26' 16.189" E
147	52° 47' 37.906" N	1° 38' 53.193" E	415	52° 46' 13.486" N	2° 26' 17.921" E
148	52° 47' 38.332" N	1° 38' 51.340" E	416	52° 46' 12.935" N	2° 26' 19.714" E
149	52° 47' 38.777" N	1° 38' 49.499" E	417	52° 46' 12.453" N	2° 26' 21.561" E
150	52° 47' 39.239" N	1° 38' 47.670" E	418	52° 46' 12.042" N	2° 26' 23.454" E
151	52° 48' 59.902" N	1° 33' 32.091" E	419	52° 46' 11.704" N	2° 26' 25.386" E
152	52° 49' 1.602" N	1° 33' 25.973" E	420	52° 46' 11.440" N	2° 26' 27.349" E
153	52° 49' 2.819" N	1° 33' 19.121" E	421	52° 46' 11.252" N	2° 26' 29.335" E
154	52° 49' 3.674" N	1° 33' 13.073" E	422	52° 46' 11.139" N	2° 26' 31.337" E
155	52° 49' 3.797" N	1° 33' 6.096" E	423	52° 46' 11.103" N	2° 26' 33.346" E
156	52° 49' 2.898" N	1° 32' 57.549" E	424	52° 46' 11.144" N	2° 26' 35.356" E
157	52° 49' 4.139" N	1° 32' 54.271" E	425	52° 46' 11.261" N	2° 26' 37.357" E
158	52° 49' 4.845" N	1° 32' 52.212" E	426	52° 46' 11.399" N	2° 26' 38.780" E
159	52° 49' 5.188" N	1° 32' 51.467" E	427	52° 46' 11.399" N	2° 26' 38.781" E
160	52° 49' 6.147" N	1° 32' 49.575" E	428	52° 46' 11.399" N	2° 26' 38.782" E
161	52° 49' 7.035" N	1° 32' 47.473" E	429	52° 47' 4.976" N	2° 33' 42.433" E
162	52° 49' 7.208" N	1° 32' 46.999" E	430	52° 47' 5.398" N	2° 33' 45.780" E

163	52° 49' 8.015" N	1° 32' 44.486" E	431	52° 47' 6.051" N	2° 33' 50.967" E
164	52° 49' 8.663" N	1° 32' 42.319" E	432	52° 47' 6.366" N	2° 33' 53.472" E
165	52° 49' 8.910" N	1° 32' 41.417" E	433	52° 47' 6.366" N	2° 33' 53.472" E
166	52° 49' 9.102" N	1° 32' 41.019" E	434	52° 47' 6.366" N	2° 33' 53.473" E
167	52° 49' 9.635" N	1° 32' 40.648" E	435	52° 47' 6.675" N	2° 33' 55.224" E
168	52° 49' 9.807" N	1° 32' 40.345" E	436	52° 47' 7.088" N	2° 33' 57.116" E
169	52° 49' 9.768" N	1° 32' 39.737" E	437	52° 47' 7.573" N	2° 33' 58.962" E
170	52° 49' 9.855" N	1° 32' 38.941" E	438	52° 47' 8.126" N	2° 34' 0.754" E
171	52° 49' 10.086" N	1° 32' 38.247" E	439	52° 47' 8.747" N	2° 34' 2.485" E
172	52° 49' 10.218" N	1° 32' 37.939" E	440	52° 47' 9.433" N	2° 34' 4.148" E
173	52° 49' 10.691" N	1° 32' 36.993" E	441	52° 47' 10.180" N	2° 34' 5.737" E
174	52° 49' 11.553" N	1° 32' 35.417" E	442	52° 47' 10.987" N	2° 34' 7.246" E
175	52° 49' 12.200" N	1° 32' 33.887" E	443	52° 47' 11.849" N	2° 34' 8.668" E
176	52° 49' 12.742" N	1° 32' 32.736" E	444	52° 47' 12.764" N	2° 34' 9.998" E
177	52° 49' 13.080" N	1° 32' 31.922" E	445	52° 47' 13.727" N	2° 34' 11.230" E
178	52° 49' 13.507" N	1° 32' 31.040" E	446	52° 47' 14.736" N	2° 34' 12.361" E
179	52° 49' 14.325" N	1° 32' 29.767" E	447	52° 47' 15.785" N	2° 34' 13.384" E
180	52° 49' 14.340" N	1° 32' 29.796" E	448	52° 47' 16.872" N	2° 34' 14.297" E
181	52° 49' 15.178" N	1° 32' 31.478" E	449	52° 47' 17.991" N	2° 34' 15.096" E
182	52° 49' 15.638" N	1° 32' 32.401" E	450	52° 47' 19.138" N	2° 34' 15.777" E
183	52° 49' 45.178" N	1° 33' 31.705" E	451	52° 47' 20.309" N	2° 34' 16.338" E
184	52° 49' 45.944" N	1° 33' 33.513" E	452	52° 47' 21.499" N	2° 34' 16.777" E
185	52° 49' 46.772" N	1° 33' 35.540" E	453	52° 47' 22.704" N	2° 34' 17.091" E
186	52° 49' 47.579" N	1° 33' 37.591" E	454	52° 47' 23.918" N	2° 34' 17.280" E
187	52° 49' 48.363" N	1° 33' 39.664" E	455	52° 47' 25.496" N	2° 34' 17.365" E

188	52° 49' 49.126" N	1° 33' 41.760" E	456	52° 48' 2.953" N	2° 26' 36.184" E
189	52° 49' 49.866" N	1° 33' 43.878" E	457	52° 48' 2.518" N	2° 26' 33.730" E
190	52° 49' 50.585" N	1° 33' 46.016" E	458	52° 48' 1.985" N	2° 26' 31.328" E
191	52° 49' 51.280" N	1° 33' 48.175" E	459	52° 48' 1.357" N	2° 26' 28.991" E
192	52° 49' 51.952" N	1° 33' 50.354" E	460	52° 48' 1.009" N	2° 26' 27.849" E
193	52° 49' 52.602" N	1° 33' 52.551" E	461	52° 48' 0.243" N	2° 26' 25.626" E
194	52° 49' 53.228" N	1° 33' 54.767" E	462	52° 47' 59.827" N	2° 26' 24.547" E
195	52° 49' 53.831" N	1° 33' 57.000" E	463	52° 47' 58.931" N	2° 26' 22.461" E
196	52° 49' 54.410" N	1° 33' 59.251" E	464	52° 47' 57.954" N	2° 26' 20.477" E
197	52° 49' 54.965" N	1° 34' 1.518" E	465	52° 47' 57.436" N	2° 26' 19.526" E
198	52° 49' 55.496" N	1° 34' 3.800" E	466	52° 47' 56.343" N	2° 26' 17.712" E
199	52° 49' 56.003" N	1° 34' 6.098" E	467	52° 47' 55.181" N	2° 26' 16.022" E
200	52° 49' 56.486" N	1° 34' 8.409" E	468	52° 47' 53.953" N	2° 26' 14.462" E
210	52° 49' 56.944" N	1° 34' 10.735" E	469	52° 47' 53.316" N	2° 26' 13.734" E
202	52° 49' 57.378" N	1° 34' 13.073" E	470	52° 47' 52.000" N	2° 26' 12.384" E
203	52° 49' 57.786" N	1° 34' 15.423" E	471	52° 47' 51.322" N	2° 26' 11.763" E
204	52° 49' 58.171" N	1° 34' 17.784" E	472	52° 47' 49.931" N	2° 26' 10.635" E
205	52° 49' 58.530" N	1° 34' 20.157" E	473	52° 47' 48.498" N	2° 26' 9.662" E
206	52° 49' 58.864" N	1° 34' 22.539" E	474	52° 47' 47.030" N	2° 26' 8.847" E
207	52° 49' 59.173" N	1° 34' 24.930" E	475	52° 47' 45.531" N	2° 26' 8.195" E
208	52° 49' 59.456" N	1° 34' 27.330" E	476	52° 47' 44.124" N	2° 26' 7.739" E
209	52° 49' 59.714" N	1° 34' 29.738" E	477	52° 47' 42.819" N	2° 26' 7.446" E
210	52° 49' 59.947" N	1° 34' 32.153" E	478	52° 47' 42.518" N	2° 26' 7.422" E
211	52° 50' 0.154" N	1° 34' 34.574" E	479	52° 47' 40.198" N	2° 26' 6.759" E
212	52° 50' 0.336" N	1° 34' 37.001" E	480	52° 47' 32.505" N	2° 26' 6.180" E

213	52° 50' 0.492" N	1° 34' 39.433" E	481	52° 50' 2.151" N	2° 35' 9.316" E
214	52° 50' 0.623" N	1° 34' 41.869" E	482	52° 47' 39.858" N	2° 35' 10.667" E
215	52° 50' 0.727" N	1° 34' 44.308" E	483	52° 47' 38.680" N	2° 35' 10.728" E
216	52° 50' 0.806" N	1° 34' 46.750" E	484	52° 47' 37.466" N	2° 35' 10.917" E
217	52° 50' 0.859" N	1° 34' 49.193" E	485	52° 47' 36.261" N	2° 35' 11.231" E
218	52° 50' 0.887" N	1° 34' 51.638" E	486	52° 47' 35.071" N	2° 35' 11.670" E
219	52° 50' 0.888" N	1° 34' 54.083" E	487	52° 47' 33.900" N	2° 35' 12.231" E
220	52° 50' 0.864" N	1° 34' 56.528" E	488	52° 47' 32.753" N	2° 35' 12.912" E
221	52° 50' 0.814" N	1° 34' 58.972" E	489	52° 47' 31.634" N	2° 35' 13.711" E
222	52° 50' 0.739" N	1° 35' 1.414" E	490	52° 47' 30.547" N	2° 35' 14.623" E
223	52° 50' 0.637" N	1° 35' 3.854" E	491	52° 47' 29.498" N	2° 35' 15.647" E
224	52° 50' 0.510" N	1° 35' 6.290" E	492	52° 47' 28.489" N	2° 35' 16.777" E
225	52° 50' 0.357" N	1° 35' 8.722" E	493	52° 47' 27.525" N	2° 35' 18.010" E
226	52° 50' 0.178" N	1° 35' 11.150" E	494	52° 47' 26.611" N	2° 35' 19.340" E
227	52° 49' 59.974" N	1° 35' 13.572" E	495	52° 47' 25.748" N	2° 35' 20.762" E
228	52° 49' 59.745" N	1° 35' 15.987" E	496	52° 47' 24.942" N	2° 35' 22.271" E
229	52° 49' 59.490" N	1° 35' 18.396" E	497	52° 47' 24.194" N	2° 35' 23.860" E
230	52° 49' 59.209" N	1° 35' 20.797" E	498	52° 47' 23.509" N	2° 35' 25.523" E
231	52° 49' 58.903" N	1° 35' 23.190" E	499	52° 47' 22.888" N	2° 35' 27.254" E
232	52° 49' 58.573" N	1° 35' 25.573" E	500	52° 47' 22.334" N	2° 35' 29.046" E
233	52° 49' 58.217" N	1° 35' 27.947" E	501	52° 47' 21.849" N	2° 35' 30.892" E
234	52° 49' 57.836" N	1° 35' 30.310" E	502	52° 47' 21.436" N	2° 35' 32.784" E
235	52° 49' 57.430" N	1° 35' 32.661" E	503	52° 47' 21.096" N	2° 35' 34.716" E
236	52° 49' 56.999" N	1° 35' 35.001" E	504	52° 47' 20.829" N	2° 35' 36.678" E
237	52° 49' 56.544" N	1° 35' 37.328" E	505	52° 47' 20.638" N	2° 35' 38.665" E

238	52° 49' 56.064" N	1° 35' 39.641" E	506	52° 47' 20.523" N	2° 35' 40.667" E
239	52° 49' 55.560" N	1° 35' 41.940" E	507	52° 47' 20.485" N	2° 35' 42.678" E
240	52° 49' 55.032" N	1° 35' 44.225" E	508	52° 47' 20.523" N	2° 35' 44.688" E
241	52° 49' 54.480" N	1° 35' 46.494" E	509	52° 47' 20.637" N	2° 35' 46.691" E
242	52° 49' 53.904" N	1° 35' 48.746" E	510	52° 47' 20.743" N	2° 35' 47.801" E
243	52° 49' 53.304" N	1° 35' 50.982" E	511	52° 47' 20.744" N	2° 35' 47.806" E
244	52° 49' 52.681" N	1° 35' 53.200" E	512	52° 47' 21.786" N	2° 35' 56.101" E
245	52° 49' 52.034" N	1° 35' 55.400" E	513	52° 48' 20.763" N	2° 43' 47.964" E
246	52° 49' 51.868" N	1° 35' 55.943" E	514	52° 48' 21.026" N	2° 43' 49.928" E
247	52° 48' 40.863" N	1° 39' 22.453" E	515	52° 48' 21.364" N	2° 43' 51.862" E
248	52° 48' 40.702" N	1° 39' 22.924" E	516	52° 48' 21.774" N	2° 43' 53.756" E
249	52° 48' 40.367" N	1° 39' 23.994" E	517	52° 48' 22.256" N	2° 43' 55.605" E
250	52° 48' 40.234" N	1° 39' 24.393" E	518	52° 48' 22.808" N	2° 43' 57.400" E
251	52° 48' 40.107" N	1° 39' 24.797" E	519	52° 48' 23.426" N	2° 43' 59.134" E
252	52° 48' 39.560" N	1° 39' 26.596" E	520	52° 48' 24.109" N	2° 44' 0.800" E
253	52° 48' 39.405" N	1° 39' 27.124" E	521	52° 48' 24.854" N	2° 44' 2.393" E
254	52° 48' 39.261" N	1° 39' 27.661" E	522	52° 48' 25.659" N	2° 44' 3.905" E
255	52° 48' 38.783" N	1° 39' 29.512" E	523	52° 48' 26.519" N	2° 44' 5.331" E
256	52° 48' 38.649" N	1° 39' 30.055" E	524	52° 48' 27.432" N	2° 44' 6.665" E
257	52° 48' 38.525" N	1° 39' 30.606" E	525	52° 48' 28.394" N	2° 44' 7.902" E
258	52° 48' 38.044" N	1° 39' 32.861" E	526	52° 48' 29.401" N	2° 44' 9.037" E
259	52° 48' 37.927" N	1° 39' 33.484" E	527	52° 48' 30.449" N	2° 44' 10.065" E
260	52° 48' 37.569" N	1° 39' 35.557" E	528	52° 48' 31.534" N	2° 44' 10.983" E
261	52° 48' 37.477" N	1° 39' 36.124" E	529	52° 48' 32.652" N	2° 44' 11.786" E
262	52° 48' 37.396" N	1° 39' 36.696" E	530	52° 48' 33.799" N	2° 44' 12.472" E

263	52° 48' 37.137" N	1° 39' 38.662" E	531	52° 48' 34.969" N	2° 44' 13.037" E
264	52° 48' 37.067" N	1° 39' 39.237" E	532	52° 48' 36.158" N	2° 44' 13.481" E
265	52° 48' 37.008" N	1° 39' 39.816" E	533	52° 48' 37.362" N	2° 44' 13.800" E
266	52° 48' 36.824" N	1° 39' 41.805" E	534	52° 48' 38.576" N	2° 44' 13.994" E
267	52° 48' 36.776" N	1° 39' 42.387" E	535	52° 48' 39.226" N	2° 44' 14.030" E
268	52° 48' 36.739" N	1° 39' 42.971" E	536	52° 51' 27.631" N	2° 44' 14.043" E

PART 2

Ancillary Works

1. Works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised development;
- (b) beacons, fenders and other navigational warning or ship impact protection works; and
- (c) temporary works for the benefit or protection of land or structures affected by the authorised development.

PART 3

Requirements

Time limits

1. The authorised project must commence no later than the expiration of five years beginning with the date this Order comes into force.

Detailed offshore design parameters

2.—(1) Subject to paragraph (2), any wind turbine generator forming part of the authorised project must not—

- (a) exceed a height of 350 metres when measured from HAT to the tip of the vertical blade;
- (b) exceed a height of 198.5 metres to the height of the centreline of the generator shaft forming part of the hub when measured from HAT;
- (c) exceed a rotor diameter of 303 metres;
- (d) be less than 760 metres from the nearest wind turbine generator in either direction perpendicular to the approximate prevailing wind direction (crosswind) or be less than 760 metres from the nearest wind turbine generator in either direction which is in line with the approximate prevailing wind direction (downwind);
- (e) have a draught height of less than 27 metres from MHWS.

(2) References to the location of a wind turbine generator in paragraph (2) above are references to the centre point of that turbine.

3.—(1) The total number of wind turbine generators forming part of the authorised project must not exceed 180 and must be configured such that at any time—

- (a) no more than two-thirds of the total number of wind turbine generators (rounded to the nearest whole number) must be located in Norfolk Vanguard West; and
 - (b) no more than one-half of the total number of wind turbine generators (rounded to the nearest whole number) must be located in Norfolk Vanguard East.
- (2) The total number of offshore electrical platforms forming part of the authorised project must not exceed two.
- (3) The total number of accommodation platforms must not exceed two.
- (4) The total number of meteorological masts must not exceed two.
- (5) The total number of LIDAR measurement buoys must not exceed two and the total number of wave measurement buoys must not exceed two.
- 4.—**(1) The dimensions of any offshore electrical platforms forming part of the authorised project (excluding towers, helipads, masts and cranes) must not exceed 100 metres in height when measured from HAT, 120 metres in length and 80 metres in width.
- (2) The dimensions of any accommodation platform forming part of the authorised project (excluding helipads) must not exceed 100 metres in height when measured from HAT, 90 metres in length and 60 metres in width.
- (3) Each meteorological mast must not exceed a height of 200 metres above HAT.
- (4) Each meteorological mast must not have more than one supporting foundation.
- 5.—**(1) The total length of the cables and the volume and area of their cable protection must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection (m² and m³)</i>
Work No. 1(e) (array)	600 kilometres	400,000m ² 204,000 m ³
Work No. 3 (interconnector link)	150 kilometres	76,000m ² 38,000 m ³
Work No. 4A and 4B (export cable)	400 kilometres	102,086m ² 59,836 m ³

- 6.—**(1) In relation to a wind turbine generator, each foundation using piles must not have—
- (a) more than four driven piles;
 - (b) in the case of single pile structures, a pile diameter which is more than 15 metres; or
 - (c) in the case of two or more pile structures, have a pile diameter which is more than five metres.
- (2) In relation to a wind turbine generator, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 1,963 m².
- 7.—**(1) In relation to a meteorological mast, each foundation using piles must not have—
- (a) more than four driven piles;
 - (b) in the case of single pile structures, a pile diameter which is more than 10 metres;
 - (c) in the case of two or more pile structures, have a pile diameter which is more than three metres.
- (2) In relation to a meteorological mast, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 314 m².
- 8.—**(1) In relation to an offshore electrical platform, each foundation using piles must not have—
- (a) more than 18 driven piles;
 - (b) in the case of two or more pile structures, have a pile diameter which is more than five metres.

(2) In relation to the offshore electrical platform(s), the foundations must not have a combined seabed footprint area (excluding scour protection) of greater than 15,000 m².

9.—(1) In relation to any accommodation platform, each foundation using piles must not have—

- (a) more than six driven piles;
- (b) in the case of two or more pile structures, have a pile diameter which is more than three metres.

(2) In relation to an accommodation platform, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 7,500 m².

10.—(1) In relation to any LIDAR measurement buoys, each foundation using piles must not have a pile diameter of greater than 10 metres.

(2) In relation to any LIDAR measurement buoys, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 79 m² per buoy and 157m² in total.

(3) In relation to any wave measurement buoys, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 150m² per buoy and 300 m² in total.

11. The total amount of scour protection for the wind turbine generators, accommodation platform, meteorological masts, offshore electrical platforms and LIDAR measurement buoys forming part of the authorised project must not exceed 5,483,752 m² and 27,418,759 m³.

Aviation safety

12.—(1) The undertaker must exhibit such lights, with such shape, colour and character and at such times as are required in writing by Air Navigation Order 2016(a) and/or determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the CAA. Lighting installed specifically to meet Ministry of Defence aviation safety requirements must remain operational for the life of the authorised development unless otherwise agreed in writing with the Ministry of Defence.

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, at least 14 days prior to the commencement of the offshore works, in writing of the following information—

- (a) the date of the commencement of construction of the offshore works;
- (b) the date any wind turbine generators are brought into use;
- (c) the maximum height of any construction equipment to be used;
- (d) the maximum heights of any wind turbine generator, meteorological mast, offshore electrical platform and accommodation platform to be constructed;
- (e) the latitude and longitude of each wind turbine generator, meteorological mast, offshore electrical platform and accommodation platform to be constructed,

and the Defence Infrastructure Organisation Safeguarding must be notified of any changes to the information supplied under this paragraph and of the completion of the construction of the offshore works.

Ministry of Defence surveillance operations

13.—(1) No wind turbine generator forming part of the authorised development is permitted to rotate its rotor blades on its horizontal axis until the Secretary of State having consulted with the Ministry of Defence confirms satisfaction in writing that appropriate mitigation will be implemented and maintained for the life of the authorised development and that arrangements have been put in place with the Ministry of Defence to ensure that the approved mitigation is implemented.

(2) For the purposes of this requirement—

(a) S.I 2016/765

- (a) “appropriate mitigation” means measures to prevent or remove any adverse effects which the authorised development will have on the air defence radar at Remote Radar Head (RRH) Trimingham and the Ministry of Defence’s air surveillance and control operations;
- (b) “approved mitigation” means the detailed Radar Mitigation Scheme (RMS) that will set out the appropriate measures and timescales for implementation as agreed with the Ministry of Defence at the time the Secretary of State confirms satisfaction in writing in accordance with paragraph (1);
- (c) “Ministry of Defence” means the Ministry of Defence as represented by Defence Infrastructure Organisation – Safeguarding, Kingston Road, Sutton Coldfield, B75 7RL or any successor body.

(3) The undertaker must thereafter comply with all other obligations contained within the approved mitigation for the life of the authorised development.

Offshore decommissioning

14. No offshore works may commence until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2) of the 2004 Act has been submitted to the Secretary of State for approval.

Stages of authorised development onshore

15.—(1) The onshore transmission works may not be commenced until notification has been submitted to the relevant planning authority detailing whether the onshore works will be constructed:

- (a) in a single onshore phase; or
- (b) in two onshore phases.

(2) The onshore transmission works may not be commenced until a written scheme setting out the stages of the onshore transmission works for the relevant onshore phase has been submitted to the relevant planning authority.

(3) The written scheme must be implemented as notified under paragraph 2.

Detailed design parameters onshore

16.—(1) The total number of buildings housing the principal electrical equipment for the onshore project substation comprised in Work No. 8A must not exceed two.

(2) Construction works for the buildings referred to in paragraph (1) above must not commence until details of the layout, scale and external appearance of the same have been submitted to and approved by the relevant planning authority.

(3) The onshore project substation must be carried out in accordance with the approved details.

(4) Any details provided by the undertaker pursuant to paragraph (2) must accord with the design and access statement and be within the Order limits.

(5) Buildings comprised in Work No. 8A must not exceed a height of 19 metres above existing ground level and external electrical equipment comprised in Work No. 8A must not exceed a height of 25 metres above existing ground level.

(6) The total footprint of each building housing the principal electrical equipment for the onshore project substation comprised in Work No. 8A must not exceed 110 metres by 70 metres.

(7) The fenced compound area (excluding its accesses) for the onshore project substation comprised in Work No. 8A must not exceed 250 metres by 300 metres.

(8) For the purposes of subparagraph (5) of this requirement ‘existing ground level’ means 71 metres above ordnance datum.

(9) The external electrical equipment comprised in Work No. 10A (the external appearance of which shall have been approved in writing by the relevant planning authority prior to

commencement of its construction) must not exceed a height of 15 metres above existing ground level.

(10) For the purposes of subparagraph (9) of this requirement ‘existing ground level’ means 69 metres above ordnance datum.

(11) The fenced compound area (excluding its accesses) for the extension to the Necton National Grid substation comprised in Work No. 10A must not exceed 200 metres by 150 metres.

(12) Construction works for the permanent replacement overhead pylons comprised in Work No. 11 must not commence until details of the same have been submitted to and approved by the relevant planning authority.

(13) The permanent replacement overhead line pylon works comprised in Work No. 11 must be carried out in accordance with the approved details.

(14) The permanent replacement overhead line pylons comprised in Work No. 11 must not exceed a height of 55 metres above existing ground level.

(15) The total footprint of each permanent replacement overhead line pylon comprised in Work No. 11 must not exceed 25 metres by 25 metres.

(16) For the purposes of subparagraph (14) of this requirement ‘existing ground level’ means between 66 and 69 metres above ordnance datum in respect of the eastern pylon identified on work plan 41 of 42 with the letter ‘E’ and between 68 and 70 metres above ordnance datum in respect of the eastern pylon identified on work plan 41 of 42 with the letter ‘W’.

(17) Trenchless installation techniques must be used for the purposes of passing under—

- (a) the River Wensum (Work No. 7);
- (b) King’s Beck (Work No. 5);
- (c) Wendling Beck (Work No. 7);
- (d) River Bure (Work No. 6);
- (e) North Walsham and Dilham Canal (Work No. 5);
- (f) the Witton Hall Plantation along Old Hall Road (Work No. 5);
- (g) the Wendling Carr County Wildlife Site (Work No. 7);
- (h) Little Wood County Wildlife Site (Work No. 7);
- (i) land south of the Dillington Carr County Wildlife Site (Work No. 7);
- (j) Kerdiston proposed County Wildlife Site (Work No. 6);
- (k) Marriott’s Way County Wildlife Site/ Public Right of Way (Work No. 6);
- (l) Paston Way and Knapton Cutting County Wildlife Site (Work No. 5);
- (m) Norfolk Coast Path (Work No. 4C);
- (n) Norwich to Cromer railway line at north Walsham (Work No. 5);
- (o) Wymondham to North Elmham Railway line at Dereham (Work No. 7);
- (p) A47 Road (Work No. 7);
- (q) A140 Road (Work No. 6);
- (r) A149 Road (Work No. 5);
- (s) A1067 Road (Work No. 7);
- (t) Colby Road (Church Road), north of Banningham Road (Work No. 5); and
- (u) In circumstances where the Hornsea Project 3 DCO is made and development of the Hornsea Project 3 DCO commences, there shall be trenchless crossing of the B1149 (Work No. 6).

(18) The number of underground cable ducts to be installed at the landfall must not exceed two.

Landfall method statement

17.—(1) No part of Works No. 4A, 4B or 4C may commence until a method statement for the construction of Works No. 4A, 4B and 4C has been submitted to and approved in writing by North Norfolk District Council in consultation with Natural England.

(2) The method statement referred to in paragraph (1) must include measures for long horizontal directional drilling below the coastal shore platform and cliff base at the landfall as well as measures for ongoing inspection of Work No. 4C and reporting of results to North Norfolk District Council during the operation of the authorised project.

(3) In the event that inspections indicate that as a result of the rate and extent of landfall erosion Work No. 4C could become exposed during the operation of the authorised project the undertaker must, as soon as practicable, submit proposals in writing for remedial measures to protect Work No. 4C, together with a timetable for their implementation, to North Norfolk District Council for their approval, in consultation with Natural England.

(4) The method statement and any proposals for remedial measures must be implemented as approved.

Provision of landscaping

18.—(1) No stage of the onshore transmission works may commence until for that stage a written landscaping management scheme and associated work programme (which accords with the outline landscape and ecological management strategy) has been submitted to and approved by the relevant planning authority in consultation with Natural England.

(2) The landscaping management scheme must include details of proposed hard and soft landscaping works appropriate for the relevant stage, including—

- (a) location, number, species, size and planting density of any proposed planting, including any trees;
- (b) cultivation, importing of materials and other operations to ensure plant establishment;
- (c) hard surfacing materials;
- (d) details of existing trees to be removed, and details of existing trees and hedgerows to be retained with measures for their protection during the construction period;
- (e) retained historic landscape features and proposals for restoration, where relevant;
- (f) implementation timetables for all landscaping works;
- (g) proposed finished heights, form and gradient of earthworks; and
- (h) maintenance of the landscaping.

(3) The landscaping management scheme must be implemented as approved.

Implementation and maintenance of landscaping

19.—(1) All landscaping works must be carried out in accordance with the landscaping management schemes approved under requirement 18 (provision of landscaping), and in accordance with the relevant recommendations of appropriate British Standards.

(2) Any tree or shrub planted as part of an approved landscaping management scheme that, within a period of ten years after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased must be replaced in the first available planting season with a specimen of the same species and size as that originally planted unless a different species is otherwise agreed in writing with the relevant planning authority.

Code of construction practice

20.—(1) No stage of the onshore transmission works may commence until for that stage a code of construction practice has been submitted to and approved by the relevant planning authority, in consultation with Norfolk County Council, the Environment Agency, and Natural England.

(2) The code of construction practice must accord with the outline code of construction practice and include details, as appropriate to the relevant stage, on—

- (a) relevant health, safety and environmental legislation and compliance;
- (b) local community liaison responsibilities;
- (c) artificial light emissions;
- (d) contaminated land and groundwater;
- (e) construction noise and vibration;
- (f) soil management;
- (g) construction method statements;
- (h) site and excavated waste management;
- (i) construction surface water and drainage;
- (j) materials management;
- (k) screening, fencing and site security;
- (l) air quality;
- (m) invasive species management; and
- (n) proposals for managing public rights of way.

(3) The code of construction practice approved in relation to the relevant stage of the onshore transmission works must be followed in relation to that stage of the onshore transmission works.

(4) Pre-commencement screening, fencing and site security works must only take place in accordance with a specific plan for such pre-commencement works which must accord with the relevant details for screening, fencing and site security set out in the outline code of construction practice, and which has been submitted to and approved by the relevant local authority.

Traffic

21.—(1) No stage of the onshore transmission works may commence until for that stage the following plans, as appropriate for the relevant stage, have for that stage been submitted to and approved by the relevant planning authority in consultation with the highway authority—

- (a) a traffic management plan which must be in accordance with the outline traffic management plan;
- (b) a travel plan which must be in accordance with the outline travel plan; and
- (c) an access management plan which must be in accordance with the outline access management plan.

(2) The plans approved under paragraph (1) must be implemented prior to commencement of the relevant stage of the onshore transmission works.

(3) If any of the accesses identified in the outline access management plan are required for pre-commencement archaeological investigations, a specific plan for such accesses which must accord with the relevant details set out in the outline access management plan must be submitted to and approved by the relevant planning authority, in consultation with the highway authority, prior to the construction and use of such accesses. The accesses identified must be constructed and used in accordance with the details contained in the specific plan so approved.

(4) In circumstances where the Hornsea Project 3 DCO is made and development of the Hornsea Project 3 commences, and notwithstanding the requirement of sub-paragraph (a) of paragraph (1) above, the traffic management plan shall include, in respect of Link 34 as referred to in the Environmental Statement, revised details of a scheme of traffic mitigation which shall be submitted to, and approved in writing by, the relevant planning authority, in consultation with the highway authority.

Highway accesses

22.—(1) The access management plan submitted for approval under Requirement 21(1)(c) must include details of the siting, design, layout and any access management measures for any new, permanent or temporary means of access (including, where relevant, details of reinstatement measures) to a highway to be used by vehicular traffic, or any alteration to an existing means of access to a highway used by vehicular traffic.

(2) The highway accesses for each stage of the onshore transmission works must be constructed or altered and the works described in paragraph (1) above in relation to access management measures must be carried out, as the case may be, in accordance with the approved details before they are brought into use for the purposes of the authorised project.

Archaeological written scheme of investigation

23.—(1) No stage of the onshore transmission works may commence until for that stage an archaeological written scheme of investigation (which accords with the outline written scheme of investigation (onshore)) has, after consultation with Norfolk County Council and Historic England, been submitted to and approved by the relevant planning authority.

(2) In the event that archaeological site investigation is required, the scheme must include details of the following—

- (a) an assessment of significance and research questions; and
- (b) the programme and methodology of site investigation and recording;
- (c) the programme for post investigation assessment;
- (d) provision to be made for analysis of the site investigation and recording;
- (e) provision to be made for publication and dissemination of the analysis and records of the site investigation;
- (f) provision to be made for archive deposition of the analysis and records of the site investigation; and
- (g) nomination of a competent person or persons/organisation to undertake the works set out within the written scheme of investigation.

(3) Any archaeological site investigation, archaeological works or watching brief must be carried out in accordance with the approved scheme.

(4) Pre-commencement surveys, site preparation works and archaeological investigations must only take place in accordance with a specific written scheme of investigation which is in accordance with the details set out in the outline written scheme of investigation (onshore), and which has been submitted to and approved by the relevant local authority.

Ecological management plan

24.—(1) No stage of the onshore transmission works may commence until for that stage a written ecological management plan (which accords with the outline landscape and ecological management strategy as appropriate for the relevant stage) has been submitted to and approved by the relevant planning authority in consultation with Natural England. The ecological management plan must be informed by post consent ecological surveying of previously un-surveyed areas for the relevant stage.

(2) The ecological management plan must include an implementation timetable and must be carried out as approved.

(3) Pre-commencement site clearance works must only take place in accordance with a specific ecological management plan for site clearance works which is in accordance with the relevant details for site clearance works set out in the outline landscape and ecological management strategy, and which has been submitted to and approved by the relevant local authority. The plan for site clearance works must be informed by post consent ecological surveying of previously un-surveyed areas for the relevant stage referred to in the plan.

(4) Construction works within 5km of the Broadland Special Protection Area and Ramsar site must be carried out in accordance with the mitigation relating to onshore ornithology contained in paragraphs 227 to 230 of the outline landscape and ecological management strategy, which must be incorporated into the ecological management plan.

Watercourse crossings

25.—(1) No stage of the onshore transmission works involving the crossing, diversion and subsequent reinstatement of any designated main river or ordinary watercourse may commence until a scheme and programme for any such crossing, diversion and reinstatement in that stage has been submitted to and, approved by the relevant planning authority in consultation with Norfolk County Council, the Environment Agency, relevant drainage authorities and Natural England.

(2) The designated main river or ordinary watercourse must be crossed, diverted and subsequently reinstated in accordance with the approved scheme and programme.

(3) Unless otherwise permitted under paragraph (1), throughout the period of construction of the onshore transmission works, all ditches, watercourses, field drainage systems and culverts must be maintained such that the flow of water is not impaired or the drainage onto and from adjoining land rendered less effective.

Construction hours

26.—(1) Construction work for the onshore transmission works must only take place between 0700 hours and 1900 hours Monday to Friday, and 0700 hours to 1300 hours on Saturdays, with no activity on Sundays or bank holidays, except as specified in paragraphs (2) to (4).

(2) Outside the hours specified in paragraph (1), construction work may be undertaken for essential activities including but not limited to—

- (a) continuous periods of operation that are required as assessed in the environmental statement, such as concrete pouring, drilling, and pulling cables (including fibre optic cables) through ducts;
- (b) delivery to the onshore transmission works of abnormal loads that may otherwise cause congestion on the local road network;
- (c) works required that may necessitate the temporary closure of roads;
- (d) onshore transmission works requiring trenchless installation techniques;
- (e) onshore transmission works at the landfall;
- (f) commissioning or outage works associated with the extension to the Necton National Grid substation comprised within Work No. 10A;
- (g) commissioning or outage works associated with the overhead line modification works comprised within Work No. 11 and Work No. 11A;
- (h) electrical installation; and
- (i) emergency works.

(3) Outside the hours specified in paragraph (1), construction work may be undertaken for non-intrusive activities including but not limited to—

- (a) fitting out works within the onshore project substation buildings comprised within Work No. 8A; and
- (b) daily start up or shut down;

(4) Save for emergency works, full details, including but not limited to type of activity, vehicle movements and type, timing and duration and any proposed mitigation, of all essential construction activities under paragraph (2) and undertaken outside the hours specified in paragraph (1) must be agreed with the relevant planning authority in writing in advance, and must be carried out within the agreed time.

(5) No crushing or screening works must take place at any time on any of the mobilisation areas, without the prior written consent of the relevant planning authority.

Control of noise during operational phase and during maintenance

27.—(1) The noise rating level for the use of Work No. 8A and during maintenance must not exceed 35dB L_{Aeq} , (5 minutes) at any time at a free field location immediately adjacent to any noise sensitive location.

(2) The noise rating level for the use of Work No. 8A and during maintenance must not exceed 32 dB L_{Leq} (15 minutes) in the 100Hz third octave band at any time at a free field location immediately adjacent to any noise sensitive location.

(3) Work No. 8A must not commence operation until a scheme for monitoring compliance with the noise rating levels set out in paragraphs (1) and (2) above has been submitted to and approved by the relevant planning authority. The scheme must include identification of suitable monitoring locations (and alternative surrogate locations if appropriate) and times when the monitoring is to take place to demonstrate that the noise levels have been achieved after both initial commencement of operations and six months after Work No. 8A is at full operational capacity. Such measurements shall be submitted to the relevant planning authority no later than 28 days following completion to confirm the rating level of operational noise emissions do not exceed the levels specified in subparagraphs (1) and (2), including details of any remedial works and a programme of implementation should the emissions exceed the stated levels.

(4) The monitoring scheme must be implemented as approved.

European protected species onshore

28.—(1) No stage of the onshore transmission works may commence until final pre-construction survey work has been carried out to establish whether a European protected species is present on any of the land affected, or likely to be affected, by that stage of the onshore transmission works or in any of the trees to be lopped or felled as part of that stage of the onshore transmission works.

(2) Where a European protected species is shown to be present, the relevant part(s) of the onshore transmission works must not begin until, after consultation with Natural England and the relevant planning authority, a scheme of protection and mitigation measures has been submitted to and approved by the relevant planning authority. The onshore transmission works must be carried out in accordance with the approved scheme.

(3) “European protected species” has the same meaning as in regulations 42 and 46 of the Conservation of Habitats and Species Regulations 2017(a).

Onshore decommissioning

29.—(1) Within six months of the permanent cessation of commercial operation of the onshore transmission works an onshore decommissioning plan must be submitted to the relevant planning authority for approval.

(2) The onshore decommissioning plan must be implemented as approved.

(3) The undertaker must notify the relevant planning authority in writing of the permanent cessation of commercial operation of the onshore transmission works within 28 days of such permanent cessation.

Requirement for written approval

30. Where under any of the above requirements the approval or agreement of the Secretary of State, the relevant planning authority or another person is required, that approval or agreement must be given in writing.

(a) S.I. 2017/1012

Amendments to approved details

31.—(1) With respect to any requirement which requires the authorised project to be carried out in accordance with the details approved by the relevant planning authority or another person, the approved details must be carried out as approved unless an amendment or variation is previously agreed in writing by the relevant planning authority or that other person in accordance with paragraph (2).

(2) Any amendments to or variations from the approved details must be in accordance with the principles and assessments set out in the environmental statement. Such agreement may only be given in relation to changes where it has been demonstrated to the satisfaction of the relevant planning authority or that other person that the subject matter of the agreement sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

(3) The approved details must be taken to include any amendments that may subsequently be approved in writing by the relevant planning authority or that other person.

Operational drainage plan

32.—(1) Each of Work No. 8A and Work No. 8B and Work No. 10A, Work No. 10B, and Work No. 10C must not commence until a written plan for drainage during operation of the relevant work, has been submitted to and approved by the relevant planning authority, following consultation with Norfolk County Council and the Environment Agency.

(2) The operational drainage plan must accord with the principles for the relevant work set out in the outline operational drainage plan, and must include a timetable for implementation.

(3) The operational drainage plan must be implemented as approved.

Skills and employment strategy

33.—(1) No stage of the onshore transmission works may commence until a skills and employment strategy (which accords with the outline skills and employment strategy) has been submitted to and approved in writing by Norfolk County Council.

(2) Prior to submission of the skills and employment strategy for approval in accordance with paragraph (1), the undertaker must consult North Norfolk District Council, Broadland District Council, Breckland District Council, Norfolk County Council and the New Anglia Local Enterprise Partnership on the content of the strategy.

(3) The skills and employment strategy must be implemented as approved.

Cromer Primary Surveillance Radar

34.—(1) No erection of any wind turbine generator forming part of the authorised development may commence until the Secretary of State having consulted with NATS has confirmed satisfaction in writing that appropriate mitigation will be implemented and maintained for the lifetime of the authorised development and that arrangements have been put in place with NATS to ensure that the approved mitigation is implemented and in operation prior to erection of the wind turbine generators.

(2) The undertaker must thereafter comply with all other obligations contained within the approved mitigation for the lifetime of the authorised development.

(3) For the purposes of this requirement—

“appropriate mitigation” means measures to prevent or remove any adverse effects which the operation of the authorised development will have on NATS’ ability to provide safe and efficient air traffic (surveillance and control) services/operations during the lifetime of the authorised development in respect of which all necessary stakeholder consultation has been completed by NATS and all necessary approvals and regulatory consents have been obtained;

“approved mitigation” means the detailed Primary Surveillance Radar Mitigation Scheme setting out the appropriate mitigation approved by the Secretary of State and confirmed in writing in accordance with paragraph (1);

“NATS” means NATS (En-Route) Plc or any successor body;

“lifetime of the authorised development” means the period ending when the wind turbine generators are finally decommissioned and removed.

SCHEDULE 2

Article 9

Streets subject to Street Works

<i>(1) Area</i>	<i>(2) Street subject to street works</i>
District of North Norfolk	Private track between reference points 1a and 1b on the works plan
District of North Norfolk	WHIMPWELL STREET between reference points 2a and 2b on the works plan
District of North Norfolk	Private track between reference points 2c and 2d on the works plan
District of North Norfolk	GRUB STREET between reference points 2e and 2f on the works plan
District of North Norfolk	GRUBB STREET between reference points 2g and 2h on the works plan
District of North Norfolk	WALCOTT GREEN between reference points 3a and 3b on the works plan
District of North Norfolk	B1159 between reference points 3c and 3d on the works plan
District of North Norfolk	NORTH WALSHAM ROAD between reference points 3e and 3f on the works plan
District of North Norfolk	NORTH WALSHAM ROAD between reference points 4a and 4b on the works plan
District of North Norfolk	THE STREET between reference points 4c and 4d on the works plan
District of North Norfolk	NORTH WALSHAM ROAD between reference points 5a and 5b on the works plan
District of North Norfolk	HOOLEHOUSE ROAD between reference points 5c and 5d on the works plan
District of North Norfolk	CROSSWAYS LANE between reference points 5e and 5f on the works plan
District of North Norfolk	BACTON ROAD between reference points 6a and 6b on the works plan
District of North Norfolk	THATCHED COTTAGE ROAD between reference points 6c and 6d on the works plan
District of North Norfolk	THATCHED COTTAGE ROAD between reference points 6e and 6f on the works plan
District of North Norfolk	OLD HALL ROAD between reference points 6g and 6h on the works plan
District of North Norfolk	NORTH WALSHAM ROAD between reference points 7a and 7b on the works plan
District of North Norfolk	PASTON ROAD between reference points 7c and 7d on the works plan
District of North Norfolk	OLD HALL LANE between reference points 8a and 8b on the works plan
District of North Norfolk	HALL LANE between reference points 8c and 8d on the works plan

District of North Norfolk	LITTLE LONDON ROAD between reference points 8e and 8f on the works plan
District of North Norfolk	B1145 between reference points 8g and 8h on the works plan
District of North Norfolk	BRADFIELD ROAD between reference points 9a and 9b on the works plan
District of North Norfolk	Private track between reference points 9c and 9d on the works plan
District of North Norfolk	LYNGATE ROAD between reference points 9e and 9f on the works plan
District of North Norfolk	CROMER ROAD between reference points 10a and 10b on the works plan
District of North Norfolk	CROMER ROAD between reference points 10c and 10d on the works plan
District of North Norfolk	Private track between reference points 10e and 10f on the works plan
District of North Norfolk	CROMER ROAD between reference points 10g and 10h on the works plan
District of North Norfolk	CROMER ROAD between reference points 10i and 10j on the works plan
District of North Norfolk	BRICK KILN LANE between reference points 11a and 11b on the works plan
District of North Norfolk	Private track between reference points 11c and 11d on the works plan
District of North Norfolk	RECTORY ROAD between reference points 12a and 12b on the works plan
District of North Norfolk	FELMINGHAM ROAD between reference points 12c and 12d on the works plan
District of North Norfolk	Private track between reference points 13a and 13b on the works plan
District of North Norfolk	CHURCH ROAD between reference points 13c and 13d on the works plan
District of North Norfolk	CHURCH ROAD between reference points 13e and 13f on the works plan
District of North Norfolk	Private track between reference points 13g and 13h on the works plan
District of North Norfolk	Private track between reference points 13i and 13j on the works plan
District of North Norfolk	BANNINGHAM ROAD between reference points 14a and 14b on the works plan
District of Broadland	Private track between reference points 14c and 14d on the works plan
District of Broadland	A140 between reference points 14e and 14f on the works plan
District of Broadland	DRABBLEGATE between reference points 14g and 14h on the works plan
District of Broadland	CROMER ROAD between reference points 15a and 15b on the works plan
District of Broadland	INGWORTH ROAD between reference points 16a and 16b on the works plan
District of Broadland	BLICKLING ROAD between reference points 16c and 16d on the works plan
District of Broadland	BLICKLING ROAD between reference points 16e and 16f on the works plan

District of Broadland	SILVERGATE LANE between reference points 16g and 16h on the works plan
District of Broadland	AYLSHAM ROAD between reference points 17a and 17b on the works plan
District of Broadland	HEYDON ROAD between reference points 18a and 18b on the works plan
District of Broadland	HEYDON ROAD between reference points 18c and 18d on the works plan
District of Broadland	OULTON STREET between reference points 19a and 19b on the works plan
District of Broadland	B1149 between reference points 19c and 19d on the works plan
District of Broadland	OULTON STREET between reference points 20a and 20b on the works plan
District of Broadland	SOUTHGATE LANE between reference points 20c and 20d on the works plan
District of Broadland	HEYDON ROAD between reference points 20e and 20f on the works plan
District of Broadland	Private track between reference points 21a and 21b on the works plan
District of Broadland	B1145 between reference points 21c and 21d on the works plan
District of Broadland	B1145 between reference points 21e and 21f on the works plan
District of Broadland	Private track between reference points 21g and 21h on the works plan
District of Broadland	B1145 between reference points 22a and 22b on the works plan
District of Broadland	WOOD DALLING ROAD between reference points 22c and 22d on the works plan
District of Broadland	WOOD DALLING ROAD between reference points 22e and 22f on the works plan
District of Broadland	Private track between reference points 22g and 22h on the works plan
District of Broadland	KERDISTON ROAD between reference points 23a and 23b on the works plan
District of Broadland	Private track between reference points 23c and 23d on the works plan
District of Broadland	B1145 between reference points 24a and 24b on the works plan
District of Broadland	B1145 between reference points 24c and 24d on the works plan
District of Broadland	B1145 between reference points 24e and 24f on the works plan
District of Broadland	Private track between reference points 24g and 24h on the works plan
District of Broadland	B1145 between reference points 24i and 24j on the works plan
District of Broadland	Private track between reference points 24k and 24l on the works plan
District of Broadland	NOWHERE LANE between reference points 24m and 24n on the works plan
District of Broadland	JORDAN LANE between reference points 25a and 25b on the works plan

District of Breckland	Private track between reference points 26a and 26b on the works plan
District of Breckland	Private track between reference points 26c and 26d on the works plan
District of Breckland	Private track between reference points 26e and 26f on the works plan
District of Breckland	WELL LANE between reference points 27a and 27b on the works plan
District of Breckland	FAKENHAM ROAD (A1067) between reference points 27c and 27d on the works plan
District of Breckland	LIME KILN ROAD between reference points 27e and 27f on the works plan
District of Breckland	Private track between reference points 27g and 27h on the works plan
District of Breckland	LIME KILN ROAD between reference points 27i and 27j on the works plan
District of Breckland	Private track between reference points 28a and 28b on the works plan
District of Breckland	ELSING LANE between reference points 28c and 28d on the works plan
District of Breckland	BYLAUGH ROAD between reference points 28e and 28f on the works plan
District of Breckland	Private track between reference points 28g and 28h on the works plan
District of Breckland	ELSING ROAD between reference points 29a and 29b on the works plan
District of Breckland	ELSING ROAD between reference points 29c and 29d on the works plan
District of Breckland	WOODGATE ROAD between reference points 30a and 30b on the works plan
District of Breckland	Frog's Hall Lane between reference points 30c and 30d on the works plan
District of Breckland	Private track between reference points 30e and 30f on the works plan
District of Breckland	NORWICH ROAD between reference points 31a and 31b on the works plan
District of Breckland	MOWLES ROAD between reference points 31c and 31d on the works plan
District of Breckland	DEREHAM ROAD between reference points 31e and 31f on the works plan
District of Breckland	SWANTON ROAD between reference points 31g and 31h on the works plan
District of Breckland	Dirty Lane (private track) between reference points 32a and 32b on the works plan
District of Breckland	HOE ROAD SOUTH between reference points 32c and 32d on the works plan
District of Breckland	HOE ROAD SOUTH between reference points 32e and 32f on the works plan
District of Breckland	Private track between reference points 33a and 33b on the works plan
District of Breckland	BACK LANE between reference points 33c and 33d on the works plan
District of Breckland	BACK LANE between reference points 33e and 33f on the works plan

District of Breckland	HOLT ROAD (B1146) between reference points 34a and 34b on the works plan
District of Breckland	HOLT ROAD (B1146) between reference points 34c and 34d on the works plan
District of Breckland	Private track between reference points 34e and 34f on the works plan
District of Breckland	MILL LANE between reference points 34g and 34h on the works plan
District of Breckland	GRESSENHALL ROAD between reference points 35a and 35b on the works plan
District of Breckland	CHURCH LANE between reference points 35c and 35d on the works plan
District of Breckland	CHURCH LANE between reference points 35e and 35f on the works plan
District of Breckland	LONGHAM ROAD between reference points 36a and 36b on the works plan
District of Breckland	A47 between reference points 37a and 37b on the works plan
District of Breckland	DALE ROAD between reference points 37c and 37d on the works plan
District of Breckland	DALE ROAD between reference points 37e and 37f on the works plan
District of Breckland	DEREHAM ROAD between reference points 37g and 37h on the works plan
District of Breckland	DEREHAM ROAD between reference points 37i and 37j on the works plan
District of Breckland	BRADENHAM LANE between reference points 38a and 38b on the works plan
District of Breckland	Private track between reference points 38c and 38d on the works plan
District of Breckland	BRADENHAM LANE between reference points 38e and 38f on the works plan
District of Breckland	HULVER STREET between reference points 38h and 38i on the works plan
District of Breckland	NOT USED: 39a and 39b
District of Breckland	HAGGARDS WAY between reference points 39c and 39d on the works plan
District of Breckland	NOT USED: 39e and 39f
District of Breckland	NOT USED: 39g and 39h
District of Breckland	Smugglers lane between reference points 39i and 39j on the works plan
District of Breckland	NOT USED: 39k and 39l
District of Breckland	Private track between reference points 39m and 39n on the works plan
District of Breckland	Goggles Lane between reference points 40a and 40b on the works plan
District of Breckland	NOT USED: 40c and 40d
District of Breckland	Private track between reference points 40e and 40f on the works plan
District of Breckland	Private track between reference points 41a and 41b on the works plan
District of Breckland	Private track between reference points 41c and 41d on the works plan
District of Breckland	Private track between reference points 41e and 41f on the works plan

District of Breckland	Private track between reference points 41g and 41h on the works plan
District of Breckland	A47 between reference points 41i and 41j on the works plan
District of Breckland	A47 between reference points 41k and 41l on the works plan
District of Breckland	Private track between reference points 41m and 41n on the works plan
District of Breckland	Private track between reference points 41o and 41p on the works plan
District of Breckland	A47 between reference points 42a and 42b on the works plan

SCHEDULE 3

Article 10

Public Rights of Way to be temporarily stopped up

<i>(1) Area</i>	<i>(2) Public rights of way to be temporarily stopped up</i>	<i>(3) Extent of temporary stopping up</i>
District of North Norfolk	Restricted byway reference 1 Happisburgh RB22	Approximately 10 metres of Restricted byway reference 1 Happisburgh RB22 shown in purple between points marked A & B on sheet 1 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 2 Happisburgh FP7	Approximately 50 metres of footpath reference 2 Happisburgh FP7 shown in orange between points marked C & D on sheet 3 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 3 Witton FP3	Approximately 170 metres of footpath reference 3 Witton FP3 shown in orange between points marked E & F on sheet 4 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 4 Witton FP4	Approximately 50 metres of footpath reference 4 Witton FP4 shown in orange between points marked G & H on sheet 4 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 5 Witton FP7	Approximately 50 metres of footpath reference 5 Witton FP7 shown in orange between points marked I & J on sheet 5 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 6 Witton FP8	Approximately 60 metres of footpath reference 6 Witton FP8 shown in orange between

District of North Norfolk	Footpath reference 7 Paston FP4	points marked K & L on sheet 5 of the public rights of way to be temporarily stopped up plan Approximately 180 metres of footpath reference 7 Paston FP4 shown in orange between points marked M & N on sheet 7 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 8 Knapton FP10	Approximately 60 metres of footpath reference 8 Knapton FP10 shown in orange between points marked O & P on sheet 8 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 9 North Walsham FP4	Approximately 100 metres of footpath reference 9 North Walsham FP4 shown in orange between points marked Q & R on sheet 10 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Bridleway reference 10 Felmingham BR12	Approximately 300 metres of Bridleway reference 10 Felmingham BR12 shown in green between points marked S & T on sheet 10 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 11 Suffield FP1	Approximately 50 metres of footpath reference 11 Suffield FP1 shown in orange between points marked U & V on sheet 11 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 12 Suffield FP3	Approximately 100 metres of footpath reference 12 Suffield FP3 shown in orange between points marked W & X on sheet 12 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 13 Colby FP2	Approximately 90 metres of footpath reference 13 Colby FP2 shown in orange between points marked Y & Z on sheet 13 of the public rights of way to be temporarily stopped up plan
District of North Norfolk	Footpath reference 14 Colby FP2	Approximately 10 metres of footpath reference 14 Colby FP2 shown in orange between points marked AA & AB on sheet 13 of the public rights of way to be temporarily stopped up plan

		way to be temporarily stopped up plan
District of Broadland	Bridleway reference 15 Aylsham BR30	Approximately 50 metres of Bridleway reference 15 Aylsham BR30 shown in green between points marked AC & AD on sheet 14 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 16 Blickling FP11	Approximately 100 metres of footpath reference 16 Blickling FP11 shown in orange between points marked AE & AF on sheet 15 of the public rights of way to be temporarily stopped up plan
District of Broadland	Bridleway reference 17 Blickling BR12	Approximately 10 metres of Bridleway reference 17 Blickling BR12 shown in green between points marked AG & AH on sheet 16 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 18 Blickling FP14	Approximately 80 metres of footpath reference 18 Blickling FP14 shown in orange between points marked AI & AJ on sheet 16 of the public rights of way to be temporarily stopped up plan
District of Broadland	Long distance trail reference 19 Weavers Way	Approximately 80 metres of Long distance trail reference 19 Weavers Way shown in brown between points marked AK & AL on sheet 16 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 20 Reepham FP18	Approximately 50 metres of footpath reference 20 Reepham FP18 shown in orange between points marked AM & AN on sheet 21 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 21 Reepham FP34	Approximately 360 metres of footpath reference 21 Reepham FP34 shown in orange between points marked AO & AP on sheet 20 and 21 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 22 Salle FP8	Approximately 50 metres of footpath reference 22 Salle FP8 shown in orange between points marked AQ & AR on sheet 22 of the public rights of

		way to be temporarily stopped up plan
District of Broadland	Footpath reference 23 Reepham FP11	Approximately 10 metres of footpath reference 23 Reepham FP11 shown in orange between points marked AS & AT on sheet 22 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 24 Reepham FP8	Approximately 50 metres of footpath reference 24 Reepham FP8 shown in orange between points marked AX & AU on sheet 22 of the public rights of way to be temporarily stopped up plan
District of Broadland	Footpath reference 24a Reepham FP8	Approximately 6 metres of footpath reference 24a Reepham FP8 shown in orange between points marked AV & AW on sheet 22 of the public rights of way to be temporarily stopped up plan
District of Breckland	Long distance trail reference 25 Wensum Way	Approximately 950 metres of Long distance trail reference 25 Wensum Way shown in brown between points marked AY & AZ on sheet 28 and 29 of the public rights of way to be temporarily stopped up plan
District of Breckland	Long distance trail reference 26 Wensum Way	Approximately 50 metres of Long distance trail reference 26 Wensum Way shown in brown between points marked BA & BB on sheet 29 of the public rights of way to be temporarily stopped up plan
District of Breckland	Footpath reference 27 Dereham FP9	Approximately 60 metres of footpath reference 27 Dereham FP9 shown in orange between points marked BC & BD on sheet 32 of the public rights of way to be temporarily stopped up plan
District of Breckland	Footpath reference 28 Hoe FP6	Approximately 570 metres of footpath reference 28 Hoe FP6 shown in orange between points marked BE & BF on sheet 34 of the public rights of way to be temporarily stopped up plan
District of Breckland	Footpath reference 29 Dereham FP20	Approximately 280 metres of footpath reference 29 Dereham FP20 shown in orange between points marked BG & BH on sheet 34 of the public

SCHEDULE 4

Streets to be stopped up

Article 11

<i>(1) Area</i>	<i>(2) Street to be stopped up</i>	<i>(3) Extent of stopping up</i>
District of North Norfolk	Private track	Approximately 340 metres of Private track as is within Work No.4C as shown between point 1a and 1b on sheet 1 of the streets to be stopped up plan
District of North Norfolk	WHIMPWELL STREET	Approximately 50 metres of WHIMPWELL STREET as is within Work No.5 as shown on sheet 2a and 2b on sheet 2 of the streets to be stopped up plan
District of North Norfolk	Private track	Approximately 50 metres of Private track as is within Work No.5 as shown on sheet 2c and 2d on sheet 2 of the streets to be stopped up plan
District of North Norfolk	GRUB STREET	Approximately 50 metres of GRUB STREET as is within Work No.5 as shown on sheet 2e and 2f on sheet 2 of the streets to be stopped up plan
District of North Norfolk	GRUBB STREET	Approximately 50 metres of GRUBB STREET as is within Work No.5 as shown on sheet 2g and 2h on sheet 2 of the streets to be stopped up plan
District of North Norfolk	WALCOTT GREEN	Approximately 50 metres of WALCOTT GREEN as is within Work No.5 as shown on sheet 3a and 3b on sheet 3 of the streets to be stopped up plan
District of North Norfolk	B1159	Approximately 50 metres of B1159 as is within Work No.5 as shown on sheet 3c and 3d on sheet 3 of the streets to be stopped up plan
District of North Norfolk	NORTH WALSHAM ROAD	Approximately 20 metres of NORTH WALSHAM ROAD as is within Work No.5 as shown on sheet 3e and 3f on sheet 3 of the streets to be stopped up plan
District of North Norfolk	NORTH WALSHAM ROAD	Approximately 30 metres of NORTH WALSHAM ROAD as is within Work No.5 as

District of North Norfolk	THE STREET	shown on sheet 4a and 4b on sheet 4 of the streets to be stopped up plan Approximately 50 metres of THE STREET as is within Work No.5 as shown on sheet 4c and 4d on sheet 4 of the streets to be stopped up plan
District of North Norfolk	NORTH WALSHAM ROAD	Approximately 70 metres of NORTH WALSHAM ROAD as is within Work No.5 as shown on sheet 5a and 5b on sheet 5 of the streets to be stopped up plan
District of North Norfolk	HOOLEHOUSE ROAD	Approximately 50 metres of HOOLEHOUSE ROAD as is within Work No.5 as shown on sheet 5c and 5d on sheet 5 of the streets to be stopped up plan
District of North Norfolk	CROSSWAYS LANE	Approximately 40 metres of CROSSWAYS LANE as is within Work No.5 as shown on sheet 5e and 5f on sheet 5 of the streets to be stopped up plan
District of North Norfolk	BACTON ROAD	Approximately 50 metres of BACTON ROAD as is within Work No.5 as shown on sheet 6a and 6b on sheet 6 of the streets to be stopped up plan
District of North Norfolk	THATCHED COTTAGE ROAD	Approximately 60 metres of THATCHED COTTAGE ROAD as is within Work No.5 as shown on sheet 6c and 6d on sheet 6 of the streets to be stopped up plan
District of North Norfolk	THATCHED COTTAGE ROAD	Approximately 30 metres of THATCHED COTTAGE ROAD as is within Work No.5 as shown on sheet 6e and 6f on sheet 6 of the streets to be stopped up plan
District of North Norfolk	NORTH WALSHAM ROAD	Approximately 50 metres of NORTH WALSHAM ROAD as is within Work No.5 as shown on sheet 7a and 7b on sheet 7 of the streets to be stopped up plan
District of North Norfolk	PASTON ROAD	Approximately 60 metres of PASTON ROAD as is within Work No.5 as shown on sheet 7c and 7d on sheet 7 of the streets to be stopped up plan
District of North Norfolk	OLD HALL LANE	Approximately 30 metres of OLD HALL LANE as is

District of North Norfolk	HALL LANE	within Work No.5 as shown on sheet 8a and 8b on sheet 8 of the streets to be stopped up plan Approximately 80 metres of HALL LANE as is within Work No.5 as shown on sheet 8c and 8d on sheet 8 of the streets to be stopped up plan
District of North Norfolk	LITTLE LONDON ROAD	Approximately 90 metres of LITTLE LONDON ROAD as is within Work No.5 as shown on sheet 8e and 8f on sheet 8 of the streets to be stopped up plan
District of North Norfolk	BRADFIELD ROAD	Approximately 50 metres of BRADFIELD ROAD as is within Work No.5 as shown on sheet 9a and 9b on sheet 9 of the streets to be stopped up plan
District of North Norfolk	Private track	Approximately 60 metres of Private track as is within Work No.5 as shown on sheet 9c and 9d on sheet 9 of the streets to be stopped up plan
District of North Norfolk	LYNGATE ROAD	Approximately 90 metres of LYNGATE ROAD as is within Work No.5 as shown on sheet 9e and 9f on sheet 9/10 of the streets to be stopped up plan
District of North Norfolk	CROMER ROAD	Approximately 30 metres of CROMER ROAD as is within Work No.5 as shown on sheet 10a and 10b on sheet 10 of the streets to be stopped up plan
District of North Norfolk	Private track	Approximately 60 metres of Private track as is within Work No.5 as shown on sheet 10c and 10d on sheet 10 of the streets to be stopped up plan
District of North Norfolk	CROMER ROAD	Approximately 40 metres of CROMER ROAD as is within Work No.5 as shown on sheet 10e and 10f on sheet 10 of the streets to be stopped up plan
District of North Norfolk	CROMER ROAD	Approximately 50 metres of CROMER ROAD as is within Work No.5 as shown on sheet 10g and 10h on sheet 10 of the streets to be stopped up plan
District of North Norfolk	BRICK KILN LANE	Approximately 20 metres of BRICK KILN LANE as is within Work No.5 as shown on sheet 11a and 11b on sheet 11

District of North Norfolk	Private track	of the streets to be stopped up plan Approximately 50 metres of Private track as is within Work No.5 as shown on sheet 11c and 11d on sheet 11 of the streets to be stopped up plan
District of North Norfolk	RECTORY ROAD	Approximately 50 metres of RECTORY ROAD as is within Work No.5 as shown on sheet 12a and 12b on sheet 12 of the streets to be stopped up plan
District of North Norfolk	FELMINGHAM ROAD	Approximately 50 metres of FELMINGHAM ROAD as is within Work No.5 as shown on sheet 12c and 12d on sheet 12 of the streets to be stopped up plan
District of North Norfolk	Private track	Approximately 50 metres of Private track as is within Work No.5 as shown on sheet 13a and 13b on sheet 13 of the streets to be stopped up plan
District of North Norfolk	CHURCH ROAD	Approximately 30 metres of CHURCH ROAD as is within Works No.5 as shown on sheet 13c and 13d on sheet 13 of the streets to be stopped up plan
District of North Norfolk	CHURCH ROAD	Approximately 50 metres of CHURCH ROAD as is within Work No.5 as shown on sheet 13e and 13f on sheet 13 of the streets to be stopped up plan
District of North Norfolk	Private track	Approximately 50 metres of Private track as is within Work No.5 as shown on sheet 13g and 13h on sheet 13 of the streets to be stopped up plan
District of North Norfolk	Private track	Approximately 50 metres of Private track as is within Work No.5 as shown on sheet 13i and 13j on sheet 13 of the streets to be stopped up plan
District of North Norfolk	BANNINGHAM ROAD	Approximately 50 metres of BANNINGHAM ROAD as is within Work No.5 as shown on sheet 14a and 14b on sheet 14 of the streets to be stopped up plan
District of Broadland	Private track	Approximately 60 metres of Private track as is within Work No.6 as shown on sheet 14c and 14d on sheet 14 of the streets to be stopped up plan

District of Broadland	CROMER ROAD	Approximately 50 metres of CROMER ROAD as is within Work No.6 as shown on sheet 15a and 15b on sheet 15 of the streets to be stopped up plan
District of Broadland	INGWORTH ROAD	Approximately 30 metres of INGWORTH ROAD as is within Work No.6 as shown on sheet 16a and 16b on sheet 16 of the streets to be stopped up plan
District of Broadland	BLICKLING ROAD	Approximately 50 metres of BLICKLING ROAD as is within Work No.6 as shown on sheet 16c and 16d on sheet 16 of the streets to be stopped up plan
District of Broadland	BLICKLING ROAD	Approximately 30 metres of BLICKLING ROAD as is within Work No.6 as shown on sheet 16e and 16f on sheet 16 of the streets to be stopped up plan
District of Broadland	SILVERGATE LANE	Approximately 50 metres of SILVERGATE LANE as is within Work No.6 as shown on sheet 16g and 16h on sheet 16 of the streets to be stopped up plan
District of Broadland	AYLSHAM ROAD	Approximately 50 metres of AYLSHAM ROAD as is within Work No.6 as shown on sheet 17a and 17b on sheet 17 of the streets to be stopped up plan
District of Broadland	HEYDON ROAD	Approximately 70 metres of HEYDON ROAD as is within Work No.6 as shown on sheet 18a and 18b on sheet 18 of the streets to be stopped up plan
District of Broadland	HEYDON ROAD	Approximately 30 metres of HEYDON ROAD as is within Work No.6 as shown on sheet 18c and 18d on sheet 18 of the streets to be stopped up plan
District of Broadland	OULTON STREET	Approximately 30 metres of OULTON STREET as is within Work No.6 as shown on sheet 19a and 19b on sheet 19 of the streets to be stopped up plan
District of Broadland	B1149	Approximately 50 metres of B1149 as is within Work No.6 as shown on sheet 19c and 19d on sheet 19 of the streets to be stopped up plan

District of Broadland	OULTON STREET	Approximately 70 metres of OULTON STREET as is within Work No.6 as shown on sheet 20a and 20b on sheet 20 of the streets to be stopped up plan
District of Broadland	SOUTHGATE LANE	Approximately 50 metres of SOUTHGATE LANE as is within Work No.6 as shown on sheet 20c and 20d on sheet 20 of the streets to be stopped up plan
District of Broadland	HEYDON ROAD	Approximately 50 metres of HEYDON ROAD as is within Work No.6 as shown on sheet 20e and 20f on sheet 20 of the streets to be stopped up plan
District of Broadland	Private track	Approximately 60 metres of Private track as is within Work No.6 as shown on sheet 21a and 21b on sheet 21 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 70 metres of B1145 as is within Work No.6 as shown on sheet 21c and 21d on sheet 21 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 30 metres of B1145 as is within Work No.6 as shown on sheet 21e and 21f on sheet 21 of the streets to be stopped up plan
District of Broadland	Private track	Approximately 100 metres of Private track as is within Work No.6 as shown on sheet 21g and 21h on sheet 21 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 50 metres of B1145 as is within Work No.6 as shown on sheet 22a and 22b on sheet 22 of the streets to be stopped up plan
District of Broadland	WOOD DALLING ROAD	Approximately 50 metres of WOOD DALLING ROAD as is within Work No.6 as shown on sheet 22c and 22d on sheet 22 of the streets to be stopped up plan
District of Broadland	WOOD DALLING ROAD	Approximately 30 metres of WOOD DALLING ROAD as is within Work No.6 as shown on sheet 22e and 22f on sheet 22 of the streets to be stopped up plan
District of Broadland	Private track	Approximately 50 metres of Private track as is within Work

District of Broadland	KERDISTON ROAD	No.6 as shown on sheet 22g and 22h on sheet 22 of the streets to be stopped up plan Approximately 50 metres of KERDISTON ROAD as is within Work No.6 as shown on sheet 23a and 23b on sheet 23 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 50 metres of B1145 as is within Work No.6 as shown on sheet 24a and 24b on sheet 24 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 30 metres of B1145 as is within Work No.6 as shown on sheet 24c and 24d on sheet 24 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 30 metres of B1145 as is within Work No.6 as shown on sheet 24e and 24f on sheet 24 of the streets to be stopped up plan
District of Broadland	B1145	Approximately 30 metres of B1145 as is within Work No.6 as shown on sheet 24g and 24h on sheet 24 of the streets to be stopped up plan
District of Broadland	Private track	Approximately 50 metres of Private track as is within Work No.6 as shown on sheet 24i and 24j on sheet 24 of the streets to be stopped up plan
District of Broadland	NOWHERE LANE	Approximately 50 metres of NOWHERE LANE as is within Work No.6 as shown on sheet 24k and 24l on sheet 24/25 of the streets to be stopped up plan
District of Broadland	JORDAN LANE	Approximately 50 metres of JORDAN LANE as is within Work No.6 as shown on sheet 25a and 25b on sheet 25 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 26a and 26b on sheet 26 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 26c and 26d on sheet 26 of the streets to be stopped up plan

District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 26e and 26f on sheet 26 of the streets to be stopped up plan
District of Breckland	WELL LANE	Approximately 70 metres of WELL LANE as is within Work No.7 as shown on sheet 27a and 27b on sheet 26/27 of the streets to be stopped up plan
District of Breckland	FAKENHAM ROAD (A1067)	Approximately 50 metres of FAKENHAM ROAD (A1067) as is within Work No.7 as shown on sheet 27c and 27d on sheet 27 of the streets to be stopped up plan
District of Breckland	LIME KILN ROAD	Approximately 100 metres of LIME KILN ROAD as is within Work No.7 as shown on sheet 27e and 27f on sheet 27 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 70 metres of Private track as is within Work No.7 as shown on sheet 27g and 27h on sheet 27 of the streets to be stopped up plan
District of Breckland	LIME KILN ROAD	Approximately 60 metres of LIME KILN ROAD as is within Work No.7 as shown on sheet 27i and 27j on sheet 27 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 28a and 28b on sheet 28 of the streets to be stopped up plan
District of Breckland	ELSING LANE	Approximately 50 metres of ELSING LANE as is within Work No.7 as shown on sheet 28c and 28d on sheet 28 of the streets to be stopped up plan
District of Breckland	BYLAUGH ROAD	Approximately 30 metres of BYLAUGH ROAD as is within Work No.7 as shown on sheet 28e and 28f on sheet 28 of the streets to be stopped up plan
District of Breckland	ELSING ROAD	Approximately 30 metres of ELSING ROAD as is within Work No.7 as shown on sheet 29a and 29b on sheet 29 of the streets to be stopped up plan

District of Breckland	ELSING ROAD	Approximately 50 metres of ELSING ROAD as is within Work No.7 as shown on sheet 29c and 29d on sheet 29 of the streets to be stopped up plan
District of Breckland	WOODGATE ROAD	Approximately 20 metres of WOODGATE ROAD as is within Work No.7 as shown on sheet 30a and 30b on sheet 30 of the streets to be stopped up plan
District of Breckland	Frog's Hall Lane	Approximately 50 metres of Frog's Hall Lane as is within Work No.7 as shown on sheet 30c and 30d on sheet 30/31 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 30e and 30f on sheet 30 of the streets to be stopped up plan
District of Breckland	NORWICH ROAD	Approximately 50 metres of NORWICH ROAD as is within Work No.7 as shown on sheet 31a and 31b on sheet 31 of the streets to be stopped up plan
District of Breckland	DEREHAM ROAD	Approximately 80 metres of DEREHAM ROAD as is within Work No.7 as shown on sheet 31c and 31d on sheet 31/32 of the streets to be stopped up plan
District of Breckland	SWANTON ROAD	Approximately 50 metres of SWANTON ROAD as is within Work No.7 as shown on sheet 31e and 31f on sheet 31/32 of the streets to be stopped up plan
District of Breckland	Dirty Lane (Private track)	Approximately 60 metres of Dirty Lane as is within Work No.7 as shown on sheet 32a and 32b on sheet 32 of the streets to be stopped up plan
District of Breckland	HOE ROAD SOUTH	Approximately 30 metres of HOE ROAD SOUTH as is within Work No.7 as shown on sheet 32c and 32d on sheet 32 of the streets to be stopped up plan
District of Breckland	HOE ROAD SOUTH	Approximately 30 metres of HOE ROAD SOUTH as is within Work No.7 as shown on sheet 32e and 32f on sheet 32

District of Breckland	Private track	of the streets to be stopped up plan Approximately 100 metres of Private track as is within Work No.7 as shown on sheet 33a and 33b on sheet 33 of the streets to be stopped up plan
District of Breckland	BACK LANE	Approximately 30 metres of BACK LANE as is within Work No.7 as shown on sheet 33c and 33d on sheet 33 of the streets to be stopped up plan
District of Breckland	BACK LANE	Approximately 50 metres of BACK LANE as is within Work No.7 as shown on sheet 33e and 33f on sheet 33 of the streets to be stopped up plan
District of Breckland	HOLT ROAD (B1146)	Approximately 30 metres of HOLT ROAD (B1146) as is within Work No.7 as shown on sheet 34a and 34b on sheet 34 of the streets to be stopped up plan
District of Breckland	HOLT ROAD (B1146)	Approximately 50 metres of HOLT ROAD (B1146) as is within Work No.7 as shown on sheet 34c and 34d on sheet 34 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 34e and 34f on sheet 34 of the streets to be stopped up plan
District of Breckland	CHURCH LANE	Approximately 30 metres of CHURCH LANE as is within Work No.7 as shown on sheet 35a and 35b on sheet 35 of the streets to be stopped up plan
District of Breckland	CHURCH LANE	Approximately 50 metres of CHURCH LANE as is within Work No.7 as shown on sheet 35c and 35d on sheet 35 of the streets to be stopped up plan
District of Breckland	LONGHAM ROAD	Approximately 50 metres of LONGHAM ROAD as is within Work No.7 as shown on sheet 36a and 36b on sheet 36 of the streets to be stopped up plan
District of Breckland	DALE ROAD	Approximately 50 metres of DALE ROAD as is within Work No.7 as shown on sheet 37a and 37b on sheet 37 of the streets to be stopped up plan

District of Breckland	DEREHAM ROAD	Approximately 40 metres of DEREHAM ROAD as is within Work No.7 as shown on sheet 37c and 37d on sheet 37 of the streets to be stopped up plan
District of Breckland	DALE ROAD	Approximately 50 metres of DALE ROAD as is within Work No.7 as shown on sheet 37e and 37f on sheet 37 of the streets to be stopped up plan
District of Breckland	DEREHAM ROAD	Approximately 40 metres of DEREHAM ROAD as is within Work No.7 as shown on sheet 37g and 37h on sheet 37 of the streets to be stopped up plan
District of Breckland	BRADENHAM LANE	Approximately 40 metres of BRADENHAM LANE as is within Work No.7 as shown on sheet 38a and 38b on sheet 38 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.7 as shown on sheet 38c and 38d on sheet 38 of the streets to be stopped up plan
District of Breckland	BRADENHAM LANE	Approximately 30 metres of BRADENHAM LANE as is within Work No.7 as shown on sheet 38e and 38f on sheet 38 of the streets to be stopped up plan
District of Breckland	HULVER STREET	Approximately 50 metres of HULVER STREET as is within Work No.7 as shown on sheet 38g and 38h on sheet 38 of the streets to be stopped up plan
District of Breckland	HAGGARDS WAY	NOT USED: 39a and 39b
District of Breckland	HAGGARDS WAY	Approximately 70 metres of HAGGARDS WAY as is within Work No.7 as shown on sheet 39c and 39d on sheet 39 of the streets to be stopped up plan
District of Breckland	Private track	NOT USED: 39e and 39f
District of Breckland	Smugglers Lane	NOT USED: 39g and 39h
District of Breckland	Smugglers lane	Approximately 50 metres of Smugglers lane as is within Work No.7 as shown on sheet 39i and 39j on sheet 39 of the streets to be stopped up plan
District of Breckland	Private track	NOT USED: 39k and 39l

District of Breckland	Smugglers lane	Approximately 70 metres of Private track as is within Work No.7 as shown on sheet 39n and 39m on sheet 39 of the streets to be stopped up plan
District of Breckland	Goggles Lane	Approximately 50 metres of Goggles Lane as is within Work No.7 as shown on sheet 40a and 40b on sheet 40 of the streets to be stopped up plan
District of Breckland	Private track	NOT USED: 40c and 40d
District of Breckland	Private track	Approximately 360 metres of Private track as is within Works No.8B and 9 as shown on sheet 40e and 40f on sheet 40 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.9 as shown on sheet 41a and 41b on sheet 41 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Work No.9 as shown on sheet 41c and 41d on sheet 41 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Works No.9 and 10C as shown on sheet 41e and 41f on sheet 41 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 50 metres of Private track as is within Works No.9 and 12 as shown on sheet 41g and 41h on sheet 41 of the streets to be stopped up plan
District of Breckland	A47	Approximately 470 metres of A47 as is within Works No.12 as shown on sheet 41i and 41j on sheet 41 of the streets to be stopped up plan
District of Breckland	A47	Approximately 50 metres of A47 as is within Site Side Access as shown on sheet 41k and 41l on sheet 41 of the streets to be stopped up plan
District of Breckland	Private track	Approximately 150 metres of Private track as is within Works No.10A as shown on sheet 41m and 41n on sheet 41 of the streets to be stopped up plan

District of Breckland	Private track	Approximately 170 metres of Private track as is within Works No.10B and 11 as shown on sheet 41o and 41p on sheet 41 of the streets to be stopped up plan
District of Breckland	A47	Approximately 125 metres of the A47 (located within National Grid overhead line temporary works area and overhead line modification corridor (Work No 11 and Work No 11A) between point 41q and 41r as shown on sheet 41/42 of the streets to be stopped up plan
District of Breckland	A47	Approximately 470 metres of A47 as is within Work No.12 as shown on sheet 42a and 42b on sheet 42 of the streets to be stopped up plan

SCHEDULE 5

Article 12

Access to Works

<i>(1) Area</i>	<i>(2) Description of access</i>
District of North Norfolk	Vehicular access from Whimpwell Green to the North marked point at AC1 on the access to works plan
District of North Norfolk	Vehicular access from Whimpwell Street to the North marked point at AC2 on the access to works plan
District of North Norfolk	Vehicular access from Whimpwell Street to the East & West marked point at AC3 on the access to works plan
District of North Norfolk	Vehicular access from Grub Street to the North marked point at AC4 on the access to works plan
District of North Norfolk	Vehicular access from Grub Street to the East & West marked point at AC5 on the access to works plan
District of North Norfolk	Vehicular access from Grub Street to the South marked point at AC6 on the access to works plan
District of North Norfolk	Vehicular access from private track to the West marked point at AC7 on the access to works plan
District of North Norfolk	Vehicular access from private track to the North & South marked point at AC8 on the access to works plan

District of North Norfolk	Vehicular access from private track to the North East marked point at AC9 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC10 on the access to works plan
District of North Norfolk	Vehicular access from B1159 to the East & West marked point at AC11 on the access to works plan
District of North Norfolk	Vehicular access from North Walsham Road to the South marked point at AC12 on the access to works plan
District of North Norfolk	Vehicular access from North Walsham Road to the South marked point at AC13 on the access to works plan
District of North Norfolk	Vehicular access from The Street to the East & West marked point at AC14 on the access to works plan
District of North Norfolk	Vehicular access from Happisburgh Road to the South marked point at AC15 on the access to works plan
District of North Norfolk	Vehicular access from Happisburgh Road to the East & West marked point at AC16 on the access to works plan
District of North Norfolk	Vehicular access from Happisburgh Road to the North marked point at AC17 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC18 on the access to works plan
District of North Norfolk	Vehicular access from private track to the North marked point at AC19 on the access to works plan
District of North Norfolk	Vehicular access from Edingthorpe to the South marked point at AC20 on the access to works plan
District of North Norfolk	Vehicular access from Bacton Road to the East & West marked point at AC21 on the access to works plan
District of North Norfolk	Vehicular access from Edingthorpe to the East & West marked point at AC22 on the access to works plan
District of North Norfolk	Vehicular access from Edingthorpe to the North marked point at AC23 on the access to works plan
District of North Norfolk	Vehicular access from Edingthorpe to the North marked point at AC24 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East marked point at AC25 on the access to works plan
District of North Norfolk	Vehicular access from private track to the West marked point at AC26 on the access to works plan

District of North Norfolk	Vehicular access from North Walsham Road to the South marked point at AC27 on the access to works plan
District of North Norfolk	Vehicular access from Walsham Road to the East & West marked point at AC28 on the access to works plan
District of North Norfolk	Vehicular access from North Walsham Road to the South marked point at AC29 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East marked point at AC30 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East marked point at AC30a on the access to works plan
District of North Norfolk	Vehicular access from private track to the West marked point at AC31 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC32 on the access to works plan
District of North Norfolk	Vehicular access from North Walsham Road to the North marked point at AC33 on the access to works plan
District of North Norfolk	Vehicular access from Hall Lane to the North marked point at AC34 on the access to works plan
District of North Norfolk	Vehicular access from Hall Lane to the East & West marked point at AC35 on the access to works plan
District of North Norfolk	Vehicular access from Little London Road to the North marked point at AC36 on the access to works plan
District of North Norfolk	Vehicular access from London Road to the East & West marked point at AC37 on the access to works plan
District of North Norfolk	Vehicular access from B1145 to the West marked point at AC38 on the access to works plan
District of North Norfolk	Vehicular access from Lyngate Road to the North marked point at AC39 on the access to works plan
District of North Norfolk	Vehicular access from Lyngate Road to the North marked point at AC40 on the access to works plan
District of North Norfolk	Vehicular access from Lyngate Road to the North marked point at AC41 on the access to works plan
District of North Norfolk	Vehicular access from Lyngate Road to the North marked point at AC42 on the access to works plan
District of North Norfolk	Vehicular access from Bradfield Road to the East & West marked point at AC43 on the access to works plan

District of North Norfolk	Vehicular access from Lyngate Road to the North marked point at AC44 on the access to works plan
District of North Norfolk	Vehicular access from Lyngate Road to the North marked point at AC45 on the access to works plan
District of North Norfolk	Vehicular access from Lyngate Road to the East & West marked point at AC46 on the access to works plan
District of North Norfolk	Vehicular access from Cromer Road A149 to the East & West marked point at AC47 on the access to works plan
District of North Norfolk	Vehicular access from footpath Felmingham BR12 off Cromer Road to the East & West marked point at AC48 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC49 on the access to works plan
District of North Norfolk	Vehicular access from private track to the West marked point at AC50 on the access to works plan
District of North Norfolk	Vehicular access from Brick Kiln Lane to the South marked point at AC51 on the access to works plan
District of North Norfolk	Vehicular access from Brick Kiln Lane to the South marked point at AC52 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East marked point at AC53 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC54 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC55 on the access to works plan
District of North Norfolk	Vehicular access from private track to the West marked point at AC56 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East marked point at AC57 on the access to works plan
District of North Norfolk	Vehicular access from private track to the East & West marked point at AC58 on the access to works plan
District of North Norfolk	Vehicular access from private track to the South West marked point at AC59 on the access to works plan
District of North Norfolk	Vehicular access from private track off Church Road to the East & West marked point at AC60 on the access to works plan
District of North Norfolk	Vehicular access from private track off Colby Road to the East & West marked point at AC61 on the access to works plan

District of North Norfolk	Vehicular access from private track to the East & West marked point at AC62 on the access to works plan
District of North Norfolk	Vehicular access from private track to the South & East marked point at AC63 on the access to works plan
District of Broadland	Vehicular access from B1145 to the North marked point at AC64 on the access to works plan
District of Broadland	Vehicular access from A140 to the East marked point at AC65 on the access to works plan
District of Broadland	Vehicular access from A140 to the East & West marked point at AC66 on the access to works plan
District of Broadland	Vehicular access from A140 to the West marked point at AC67 on the access to works plan
District of Broadland	Vehicular access from Drabblegate to the West marked point at AC68 on the access to works plan
District of Broadland	Vehicular access from Drabblegate to the South marked point at AC69 on the access to works plan
District of Broadland	Vehicular access from Drabblegate to the East marked point at AC70 on the access to works plan
District of Broadland	Vehicular access from Cromer Road to the East marked point at AC71 on the access to works plan
District of Broadland	Vehicular access from Cromer Road to the East & West marked point at AC72 on the access to works plan
District of Broadland	Vehicular access from Cromer Road to the West marked point at AC73 on the access to works plan
District of Broadland	Vehicular access from Cromer Road to the North marked point at AC74 on the access to works plan
District of Broadland	Vehicular access from private track to the South marked point at AC75 on the access to works plan
District of Broadland	Vehicular access from Blickling Road to the North marked point at AC76 on the access to works plan
District of Broadland	Vehicular access from Blickling Road to the East & West marked point at AC77 on the access to works plan
District of Broadland	Vehicular access from Blickling Road to the South marked point at AC78 on the access to works plan
District of Broadland	Vehicular access from Silvergate Lane to the East marked point at AC79 on the access to works plan
District of Broadland	Vehicular access from Silvergate Lane to the East & West marked point at AC80 on the access to works plan

District of Broadland	Vehicular access from private track to the South marked point at AC81 on the access to works plan
District of Broadland	Vehicular access from Aylsham Road to the North & South marked point at AC82 on the access to works plan
District of Broadland	Vehicular access from Aylsham Road to the South marked point at AC83 on the access to works plan
District of Broadland	Vehicular access from private track to the North East & South West marked point at AC84 on the access to works plan
District of Broadland	Vehicular access from private track to the South marked point at AC85 on the access to works plan
District of Broadland	Vehicular access from private track to the South marked point at AC86 on the access to works plan
District of Broadland	Vehicular access from private track to the South marked point at AC87 on the access to works plan
District of Broadland	Vehicular access from The Street to the East marked point at AC88 on the access to works plan
District of Broadland	Vehicular access from B1149 to the East & West marked point at AC89 on the access to works plan
District of Broadland	Vehicular access from B1149 to the South marked point at AC90 on the access to works plan
District of Broadland	Vehicular access from private track to the East marked point at AC91 on the access to works plan
District of Broadland	Vehicular access from private track to the East & West marked point at AC92 on the access to works plan
District of Broadland	Vehicular access from private track to the North marked point at AC93 on the access to works plan
District of Broadland	Vehicular access from Heydon Lane to the East & West marked point at AC94 on the access to works plan
District of Broadland	Vehicular access from Heydon Lane to the West marked point at AC95 on the access to works plan
District of Broadland	Vehicular access from private track to the East & West marked point at AC96 on the access to works plan
District of Broadland	Vehicular access from private track to the North marked point at AC97 on the access to works plan
District of Broadland	Vehicular access from private track to the North marked point at AC98 on the access to works plan
District of Broadland	NOT USED: AC99

District of Broadland	Vehicular access from B1145 to the North marked point at AC100 on the access to works plan
District of Broadland	Vehicular access from private track off Cawston Road to the East & West marked point at AC101 on the access to works plan
District of Broadland	Vehicular access from B1145 to the East & West marked point at AC102 on the access to works plan
District of Broadland	Vehicular access from B1145 to the South marked point at AC103 on the access to works plan
District of Broadland	Vehicular access from B1145 to the North marked point at AC104 on the access to works plan
District of Broadland	Vehicular access from B1145 to the East & West marked point at AC105 on the access to works plan
District of Broadland	Vehicular access from B1145 to the East marked point at AC106 on the access to works plan
District of Broadland	Vehicular access from private track to the East & West marked point at AC107 on the access to works plan
District of Broadland	Vehicular access from Wood Dalling Road to the West marked point at AC108 on the access to works plan
District of Broadland	Vehicular access from Kerdiston Road to the East & West marked point at AC109 on the access to works plan
District of Broadland	Vehicular access from B1145 to the West marked point at AC110 on the access to works plan
District of Broadland	Vehicular access from B1145 to the South marked point at AC111 on the access to works plan
District of Broadland	Vehicular access from B1145 to the East marked point at AC112 on the access to works plan
District of Broadland	Vehicular access from private track to the North marked point at AC113 on the access to works plan
District of Broadland	Vehicular access from private track to the East & West marked point at AC114 on the access to works plan
District of Broadland	Vehicular access from private track to the North marked point at AC115 on the access to works plan
District of Broadland	Vehicular access from private track to the East marked point at AC116 on the access to works plan
District of Broadland	Vehicular access from private track to the North & South marked point at AC117 on the access to works plan

District of Broadland	Vehicular access from private track to the South marked point at AC118 on the access to works plan
District of Breckland	Vehicular access from Well Lane to the North marked point at AC119 on the access to works plan
District of Breckland	Vehicular access from Well Lane to the North & South marked point at AC120 on the access to works plan
District of Breckland	Vehicular access from Well Lane to the East marked point at AC121 on the access to works plan
District of Breckland	Vehicular access from Lime Kiln Road to the East & West marked point at AC122 on the access to works plan
District of Breckland	Vehicular access from Lime Kiln Road to the East & West marked point at AC123 on the access to works plan
District of Breckland	Vehicular access from Lime Kiln Road to the West marked point at AC124 on the access to works plan
District of Breckland	Vehicular access from Lime Kiln Road to the North & South marked point at AC125 on the access to works plan
District of Breckland	Vehicular access from Elsing Lane to the East & West marked point at AC126 on the access to works plan
District of Breckland	Vehicular access from private track to the South marked point at AC127 on the access to works plan
District of Breckland	Vehicular access from Elsing Road to the East & West marked point at AC128 on the access to works plan
District of Breckland	Vehicular access from Elsing Road to the West marked point at AC129 on the access to works plan
District of Breckland	Vehicular access from Elsing Road to the West marked point at AC130 on the access to works plan
District of Breckland	Vehicular access from Elsing Road to the North marked point at AC131 on the access to works plan
District of Breckland	Vehicular access from private track to the East marked point at AC132 on the access to works plan
District of Breckland	Vehicular access from Frogs Hall Lane to the East & West marked point at AC133 on the access to works plan
District of Breckland	Vehicular access from Frogs Hall Lane to the East marked point at AC134 on the access to works plan
District of Breckland	Vehicular access from B1147 to the North marked point at AC135 on the access to works plan

District of Breckland	Vehicular access from Norwich Road to the East & West marked point at AC136 on the access to works plan
District of Breckland	Vehicular access from B1147 to the East & West marked point at AC137 on the access to works plan
District of Breckland	Vehicular access from Swanton Road to the East & West marked point at AC138 on the access to works plan
District of Breckland	Vehicular access from Swanton Road to the South marked point at AC139 on the access to works plan
District of Breckland	Vehicular access from Hoe Road S to the South marked point at AC140 on the access to works plan
District of Breckland	Vehicular access from Swanton Road to the North marked point at AC141 on the access to works plan
District of Breckland	Vehicular access from private track to the South marked point at AC142 on the access to works plan
District of Breckland	Vehicular access from private track to the South marked point at AC143 on the access to works plan
District of Breckland	Vehicular access from private track to the South marked point at AC144 on the access to works plan
District of Breckland	Vehicular access from private track to the East & West marked point at AC145 on the access to works plan
District of Breckland	Vehicular access from B1146 to the North marked point at AC146 on the access to works plan
District of Breckland	Vehicular access from B1146 to the East & West marked point at AC147 on the access to works plan
District of Breckland	Vehicular access from B1146 to the West marked point at AC148 on the access to works plan
District of Breckland	Vehicular access from B1146 to the South marked point at AC149 on the access to works plan
District of Breckland	Vehicular access from unnamed track to the West marked point at AC150 on the access to works plan
District of Breckland	Vehicular access from Mill Lane to the East marked point at AC151 on the access to works plan
District of Breckland	Vehicular access from Dereham to the South marked point at AC152 on the access to works plan
District of Breckland	Vehicular access from Dereham to the East & West marked point at AC153 on the access to works plan

District of Breckland	Vehicular access from private track to the East & West marked point at AC154 on the access to works plan
District of Breckland	Vehicular access from private track to the South marked point at AC155 on the access to works plan
District of Breckland	Vehicular access from private track to the South marked point at AC156 on the access to works plan
District of Breckland	Vehicular access from private track to the North & West marked point at AC157 on the access to works plan
District of Breckland	Vehicular access from private track to the South & West marked point at AC158 on the access to works plan
District of Breckland	Vehicular access from private track to the North marked point at AC159 on the access to works plan
District of Breckland	Vehicular access from private track to the West marked point at AC160 on the access to works plan
District of Breckland	Vehicular access from Dale Road to the West marked point at AC161 on the access to works plan
District of Breckland	Vehicular access from Dale Road to the North & South marked point at AC162 on the access to works plan
District of Breckland	Vehicular access from Dereham Road to the North marked point at AC163 on the access to works plan
District of Breckland	Vehicular access from Dale Road to the East & West marked point at AC164 on the access to works plan
District of Breckland	Vehicular access from Dereham Road to the East & West marked point at AC165 on the access to works plan
District of Breckland	Vehicular access from Bradenham Lane to the North marked point at AC166 on the access to works plan
District of Breckland	Vehicular access from Bradenham Lane to the North marked point at AC167 on the access to works plan
District of Breckland	Vehicular access from Bradenham Lane to the North marked point at AC168 on the access to works plan
District of Breckland	Vehicular access from Hulver Street to the East & West marked point at AC169 on the access to works plan
District of Breckland	Vehicular access from private track to the North marked point at AC170 on the access to works plan
District of Breckland	Vehicular access from private track off Haggards Way to the East & West marked point at AC171 on the access to works plan
District of Breckland	NOT USED: AC172

District of Breckland	Vehicular access from private track off Haggards Way to the West marked point at AC173 on the access to works plan
District of Breckland	NOT USED: AC174
District of Breckland	Vehicular access from private track off Smugglers Lane to the East & West marked point at AC174a on the access to works plan
District of Breckland	Vehicular access from Goggles Lane to the East & West marked point at AC175 on the access to works plan
District of Breckland	Vehicular access from Goggles Lane to the South marked point at AC176 on the access to works plan
District of Breckland	NOT USED: AC177
District of Breckland	Vehicular access from private track off Lodge Lane to the North & South marked point at AC178 on the access to works plan
District of Breckland	Vehicular access from private track off A47 to the East & West marked point at AC179 on the access to works plan
District of Breckland	Vehicular access from private track off A47 to the East & West marked point at AC180 on the access to works plan
District of Breckland	Vehicular access from A47 to the East marked point at AC181 on the access to works plan
District of Breckland	Vehicular access from A47 to the North marked point at AC182 on the access to works plan
District of Breckland	Vehicular access from A47 to the East & West marked point at AC183 on the access to works plan

SCHEDULE 6

Article 20

Land in which only New Rights etc., may be acquired

<i>(1) Number of land shown on land plan</i>	<i>(2) Purpose for which rights may be acquired</i>
Landfall Plots 01/01, 01/02, 01/03, 01/04, 01/05, 01/06, 01/07, 01/08, 01/09, 01/10, 01/11, 01/13, 01/17, 01/18, 01/19, 01/20, 02/01, 02/02, 02/03	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—</p> <p>(a) construct, lay and install by way of drilling and / or trenching and repair, renew, upgrade, inspect, remove and replace underground electrical cables and ducts, jointing works including transition joint bays and other apparatus together with such telemetry and fibre optic lines, structures, ducting and other apparatus, protection and safety measures and equipment which is ancillary to the purposes of transmitting electricity along such electrical cables (which collectively for the purposes of</p>

this schedule are referred to as the “cables”);

- (b) effect access to offshore apparatus and carry out works for the purposes of construction, installation, operation, maintenance and decommissioning of the parts of the authorised project that communicate between the onshore and offshore elements of the authorised project;
- (c) install, retain, and connect apparatus to connect onshore transmission apparatus to offshore transmission apparatus;
- (d) enter and be upon the land and remain with or without plant, vehicles, vessels, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity along the cables, or use of the cables, cable ducts and jointing works;
- (e) retain and use the cables, cable ducts and jointing works for the purpose of the transmission of telecommunications and electricity;
- (f) pass and repass with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying down, installing, adjusting, altering, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables, cable ducts and jointing works;
- (g) pass and repass with or without vehicles, plant, equipment, materials and machinery to access adjoining land and highway for the purposes of laying, installing, adjusting, altering, constructing, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables, cable ducts and jointing works;
- (h) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables, cable ducts and jointing works;
- (i) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and

removing the cables, cable ducts and jointing works;

- (j) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduit or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers); and
- (l) alter, lop, uproot and replant trees, shrubs and hedges and other vegetation for the purposes of enabling the right to pass and repass.

Access tracks

Plots 01/14, 01/15, 01/16, 02/06, 02/07, 02/08, 02/10, 02/15, 02/17, 02/20, 03/03, 03/12, 04/04, 05/02, 05/05, 05/09, 05/11, 06/06, 06/08, 06/09, 06/11, 06/13, 07/02, 07/05, 07/07, 07/08, 07/12, 08/03, 08/04, 08/06, 08/12, 09/06, 09/09, 09/10, 09/13, 09/14, 10/07, 10/08, 10/09, 10/10, 11/02, 11/04, 11/07, 11/08, 11/11, 11/15, 12/01, 12/07, 12/09, 13/01, 13/04, 13/06, 13/07, 13/12, 14/01, 14/06, 14/11, 14/13, 14/16, 14/19, 14/22, 14/24, 15/08, 15/10, 15/12, 15/14, 16/01, 16/02, 16/04, 16/06, 16/07, 16/11, 16/14, 17/06, 18/06, 18/07, 18/09, 18/10, 18/11, 18/12, 19/01, 19/02, 19/03, 19/06, 19/08, 19/09, 20/04, 20/05, 20/08, 20/11, 20/18, 21/04, 21/05, 21/07, 21/09, 21/12, 21/13, 21/14, 21/15, 21/16, 22/02, 22/08, 22/09, 22/10, 22/11, 22/16, 23/02, 24/02, 24/03, 24/06, 24/07, 24/13, 24/14, 24/15, 24/17, 24/18, 25/01, 25/03, 25/05, 26/02, 26/04, 26/05, 26/06, 26/08, 26/10, 26/11, 26/13, 27/02, 27/04, 27/06, 27/13, 28/04, 28/05, 29/05, 29/07, 29/09, 29/10, 29/12, 30/02, 30/03, 30/04, 30/05, 30/06, 30/10, 30/11, 31/02, 31/03, 31/04, 31/05, 32/02, 32/03, 32/06, 32/09, 32/12, 32/13, 32/14, 32/15, 33/02, 33/03, 33/04, 33/12, 34/03, 34/04, 34/08, 34/09, 34/10, 34/11, 34/13, 35/11, 35/12, 36/02, 36/05, 36/06, 36/08, 36/09, 36/10, 36/11, 36/14, 36/15, 36/16, 36/17, 36/21, 37/05, 37/13, 37/14, 38/02, 38/03, 38/05, 38/06, 38/08, 38/12, 39/04, 39/05, 39/06, 39/07, 39/15, 39/16, 40/02, 40/03, 41/08, 41/10, 41/11, 41/13, 41/16, 41/22.

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) pass and repass with or without vehicles, plant, equipment, materials and machinery to access adjoining land and highway for the purposes of laying, installing, adjusting, altering, constructing, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables, cable ducts and jointing works;
- (b) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of access to adjoining land and highway;
- (c) retain, maintain and use temporary supporting or protective structures and erect temporary supporting or protective structures (including the bridging over or protection of the apparatus of the statutory undertakers) for the purposes of access to adjoining land and highway;
- (d) alter, lop, uproot and replant trees, shrubs and hedges and other vegetation for the purposes of enabling the right to pass and repass to and from adjoining land;
- (e) retain and maintain existing temporary permissive paths and lay out temporary permissive paths for public use (if applicable);
- (f) effect access and egress to and from the highway;

- (g) retain, maintain, straighten, widen, repair, alter, upgrade and use existing access routes for the purposes of accessing adjoining land and highway;
- (h) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal works are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the end of each period of the exercise of the rights); and
- (i) construct, install, use, retain, maintain, inspect, modify, improve, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in any drains, watercourses and culverts.

“adjoining land” for the purposes of this paragraph 1 means such other parts of the land within the Order limits required for the authorised project.

Full cable rights

Plots 01/12, 02/04, 02/05, 02/09, 02/12, 02/14, 02/18, 02/21, 02/22, 02/23, 03/01, 03/02, 03/04, 03/05, 03/07, 03/08, 03/11, 03/13, 04/01, 04/02, 04/03, 04/05, 04/08, 04/10, 04/12, 05/01, 05/04, 05/06, 05/08, 05/10, 06/01, 06/03, 06/05, 06/14, 07/01, 07/04, 07/06, 07/10, 08/02, 08/08, 08/13, 08/17, 08/20, 08/23, 09/03, 09/07, 09/08, 09/12, 09/16, 10/02, 10/05, 10/14, 10/16, 10/17, 11/01, 11/05, 11/06, 11/09, 11/12, 11/14, 12/02, 12/04, 12/06, 13/02, 13/08, 13/10, 13/11, 13/13, 14/02, 14/05, 14/07, 14/09, 14/15, 14/20, 14/27, 15/02, 15/05, 15/07, 15/13, 15/15, 16/03, 16/08, 16/09, 16/10, 16/13, 17/01, 17/02, 17/03, 17/04, 17/07, 18/01, 18/04, 18/05, 18/08, 18/13, 18/14, 19/04, 19/07, 20/01, 20/03, 20/07, 20/10, 20/17, 20/20, 21/01, 21/08, 22/01, 22/04, 22/06, 22/07, 22/12, 22/13, 22/14, 22/15, 23/01, 23/05, 23/06, 23/08, 23/09, 23/11, 23/13, 23/14, 24/01, 24/04, 24/08, 24/11, 24/19, 25/02, 25/06, 25/07, 26/01, 26/03, 26/07, 26/09, 26/14, 26/15, 27/01, 27/07, 27/09, 27/11, 27/15, 27/16, 28/01, 28/03, 29/02, 29/08, 29/13, 30/01, 30/07, 30/08, 30/12, 31/01, 31/07, 31/09, 31/11, 31/13, 32/01, 32/05, 32/07, 32/08, 32/11, 33/01, 33/08, 33/14, 33/16, 34/01, 34/07, 35/01, 35/04, 35/05, 35/07, 35/16, 36/01, 36/04, 36/07, 36/12, 36/13, 36/18, 36/20, 37/09, 37/16, 37/18, 37/22, 38/01, 38/04, 38/09, 38/11, 39/01, 39/02, 39/09, 39/10, 39/12, 39/13, 40/01, 40/04,

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables by way of drilling and / or trenching;
- (b) construct, install, use, retain, maintain, inspect, modify, improve, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in any drains, watercourse and culverts;
- (c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, cable ducts and jointing works;
- (d) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of constructing, laying, installing, adjusting, altering, using

40/11, 40/12, 40/14, 40/20, 40/23, 41/03, 41/14,
41/15

maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, cable ducts and jointing works;

- (e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables, or use of the cable ducts and jointing works;
- (f) retain and use the cables for the purposes of the transmission of telecommunications and electricity;
- (g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables, cable ducts and jointing works;
- (h) install and maintain cable marker posts to identify the location of the cables, cable ducts and jointing works as required for routine integrity testing;
- (i) remove, store and stockpile materials (including excavated material) within the Order land;
- (j) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the end of each period of the exercise of the rights);
- (k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);
- (l) carry out works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;
- (m) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);

- (n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables, cable ducts and jointing works;
- (o) carry out environmental mitigation, remediation and enhancement works;
- (p) install, construct, use and remove temporary welfare facilities during any periods of construction, maintenance, repair, replacement, renewal, upgrade and removal of the cables, cable ducts and jointing works;
- (q) when the cables are temporarily unusable, to lay down, install, use, maintain and inspect on the surface of the land electric lines, telecommunications, ancillary equipment and associated works and other conducting media together with conduits or pipes for containing the same in and under the land; and
- (r) place temporarily and use plant, machinery and structures on the land in connection with the lighting of the land and the authorised project.

2. The right to enter and remain on the land for the purposes of the construction, installation, operation, maintenance and decommissioning of the authorised project, and to—

- (a) enter upon the land and to create temporary secure areas;
- (b) place equipment on the land, including portakabins and welfare equipment;
- (c) store plant, materials and equipment;
- (d) create car parking sites, site offices, site areas for temporary security and welfare facilities;
- (e) effect access and egress to and from the highway;
- (f) create fuel storage and bunded facilities for the storage of materials ancillary to the implementation of the authorised project; and
- (g) access the underground electrical cables, cable ducts and jointing works and any other land used or to be used in connection with the installation and use of the underground electrical cables, cable ducts and jointing works, over the temporary secure area within the land,

for purposes in connection with the installation and use of the underground electrical cables.

3. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) pass and repass with or without vehicles, plant, equipment, materials and machinery to access adjoining land and highway for the purposes of laying, installing, adjusting, altering, constructing, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables, cable ducts and jointing works;
- (b) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of access to adjoining land and highway;
- (c) erect temporary supporting or protective structures (including the bridging over or protection of the apparatus of the statutory undertakers) for the purposes of access to adjoining land and highway;
- (d) alter, lop, uproot and replant trees, shrubs and hedges and other vegetation for the purposes of enabling the right to pass and repass to and from adjoining land;
- (e) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (f) effect access and egress to and from the highway;
- (g) retain, maintain, straighten, widen, repair, alter, upgrade and use existing access routes for the purposes of accessing adjoining land and highway;
- (h) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the exercise of the rights); and

- (i) retain, maintain, install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in any drains, watercourses and culverts.

“adjoining land” for the purposes of this paragraph 3 means such other parts of the land within the Order limits required for the authorised project.

4. A restrictive covenant over the land for the benefit of the remainder of the Order land to—

- (a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction or erection of works of any kind (including the foundations, footings or other supportive structures thereto);
- (b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);
- (c) prevent mole draining or anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;
- (d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project) provided that the

growing within the land of any pre-existing trees, shrubs or underwood do not require the consent of the undertaker; and

- (e) prevent anything to be done in or upon the Order land or any part thereof which shall or which it is reasonably foreseeable may interfere with the exercise of the other rights set out in this Schedule or the use of the authorised project or in any way render the authorised project or any part thereof in breach of any statute or regulation for the time being in force and applicable thereto.

Crossings required to be undertaken by trenchless crossing

Plots 08/19, 35/13, 37/01, 37/07.

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables by way of horizontal drilling or other trenchless techniques;
- (b) construct, install, use, retain, maintain, inspect, modify, improve, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in any drains, watercourse and culverts;
- (c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, cable ducts and jointing works;
- (d) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, cable ducts and jointing works;
- (e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables, or use of the cable ducts and jointing works;

- (f) retain and use the cables for the purposes of the transmission of telecommunications and electricity;
- (g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables, cable ducts and jointing works;
- (h) install and maintain cable marker posts to identify the location of the cables, cable ducts and jointing works as required for routine integrity testing;
- (i) remove, store and stockpile materials (including excavated material) within the Order land;
- (j) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the end of each period of the exercise of the rights);
- (k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);
- (l) carry out works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;
- (m) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables, cable ducts and jointing works;
- (o) carry out environmental mitigation, remediation and enhancement works;
- (p) install, construct, use and remove temporary welfare facilities during any periods of construction, maintenance, repair, replacement, renewal, upgrade

and removal of the cables, cable ducts and jointing works;

- (q) when the cables are temporarily unusable, to lay down, install, use, maintain and inspect on the surface of the land electric lines, telecommunications, ancillary equipment and associated works and other conducting media together with conduits or pipes for containing the same in and under the land; and
- (r) place temporarily and use plant, machinery and structures on the land in connection with the lighting of the land and the authorised project.

2. The right to enter and remain on the land for the purposes of the construction, installation, operation, maintenance and decommissioning of the authorised project, and to—

- (a) enter upon the land and to create temporary secure areas;
- (b) place equipment on the land, including portakabins and welfare equipment;
- (c) store plant, materials and equipment;
- (d) create car parking sites, site offices, site areas for temporary security and welfare facilities;
- (e) effect access and egress to and from the highway;
- (f) create fuel storage and bunded facilities for the storage of materials ancillary to the implementation of the authorised project; and
- (g) access the underground electrical cables, cable ducts and jointing works and any other land used or to be used in connection with the installation and use of the underground electrical cables, cable ducts and jointing works, over the temporary secure area within the land, for purposes in connection with the installation and use of the underground electrical cables.

3. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) pass and repass with or without vehicles, plant, equipment, materials and machinery to access adjoining land and highway for the purposes of laying, installing, adjusting, altering, constructing, using, maintaining,

- repairing, renewing, upgrading, inspecting, removing and replacing the cables, cable ducts and jointing works;
- (b) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of access to adjoining land and highway;
- (c) erect temporary supporting or protective structures (including the bridging over or protection of the apparatus of the statutory undertakers) for the purposes of access to adjoining land and highway;
- (d) alter, lop, uproot and replant trees, shrubs and hedges and other vegetation for the purposes of enabling the right to pass and repass to and from adjoining land;
- (e) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (f) effect access and egress to and from the highway;
- (g) retain, maintain, straighten, widen, repair, alter, upgrade and use existing access routes for the purposes of accessing adjoining land and highway;
- (h) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the exercise of the rights); and
- (i) retain, maintain, install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in any drains, watercourses and culverts.
- (j) “adjoining land” for the purposes of this paragraph 3 means such other parts of the land within the Order limits required for the authorised project.

4. A restrictive covenant over the land for the benefit of the remainder of the Order land to—

- (a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction or erection of works of any kind (including the foundations, footings or other supportive structures thereto);
- (b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);
- (c) prevent mole draining or anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;
- (d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project) provided that the growing within the land of any pre-existing trees, shrubs or underwood do not require the consent of the undertaker; and
- (e) prevent anything to be done in or upon the Order land or any part thereof which shall or which it is reasonably foreseeable may interfere with the exercise of the other rights set out in this Schedule or the use of the authorised project or in any way render the authorised project or any part thereof in breach of any statute or

regulation for the time being in force and applicable thereto.

Minor crossings inc. highway

Plots 02/11, 02/13, 02/16, 02/19, 03/06, 03/09, 03/10, 04/09, 04/11, 05/03, 05/07, 06/02, 06/04, 06/10, 07/03, 07/09, 08/05, 08/07, 08/15, 08/21, 09/11, 09/15, 10/01, 10/15, 11/03, 11/10, 11/13, 12/03, 12/05, 13/05, 13/09, 14/03, 14/04, 14/12, 14/26, 15/11, 16/05, 16/12, 17/05, 18/02, 19/05, 20/02, 20/06, 20/09, 20/19, 21/03, 22/03, 22/05, 23/03, 24/05, 24/16, 25/04, 26/12, 27/05, 27/10, 27/14, 28/02, 29/11, 30/09, 31/06, 31/08, 31/12, 32/04, 32/10, 33/09, 33/11, 33/15, 34/05, 34/06, 35/06, 35/15, 36/03, 37/11, 37/17, 37/19, 37/21, 38/07, 39/03, 41/05

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables by way of drilling and / or trenching;
- (b) retain, maintain, install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in any drains, watercourse and culverts;
- (c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables and cable ducts;
- (d) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables and cable ducts;
- (e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables and cable ducts;
- (f) retain and use the cables for the purposes of the transmission of telecommunications and electricity;
- (g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables and cable ducts;
- (h) install and maintain cable marker posts to identify the location of the cables and cable ducts as required for routine integrity testing;

- (i) remove store and stockpile materials (including excavated material) within the Order land;
- (j) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the end of each period of the exercise of the rights);
- (k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);
- (l) carry out works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;
- (m) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables and cable ducts;
- (o) carry out environmental mitigation, remediation and enhancement works;
- (p) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables and cable ducts;
- (q) when the cables are temporarily unusable, to lay down, install, use, maintain and inspect on the surface of the land electric lines, telecommunications, ancillary equipment and associated works and other conducting media together with conduits or pipes for containing the same in and under the land; and
- (r) place temporarily and use plant, machinery and structures on the land in connection with the lighting of the land and the authorised project.

Minor crossings inc. highway required to be undertaken by trenchless crossing

Plots 08/10, 10/11, 12/10, 14/18, 27/08, 28/08, 35/03, 35/09.

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables by way of horizontal drilling or other trenchless techniques;
- (b) retain, maintain, install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in any drains, watercourse and culverts;
- (c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables and cable ducts;
- (d) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables and cable ducts;
- (e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables and cable ducts;
- (f) retain and use the cables for the purposes of the transmission of telecommunications and electricity;
- (g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables and cable ducts;
- (h) install and maintain cable marker posts to identify the location of the cables and cable ducts as required for routine integrity testing;
- (i) remove store and stockpile materials (including excavated material) within the Order land;

- (j) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the end of each period of the exercise of the rights);
- (k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);
- (l) carry out works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;
- (m) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables and cable ducts;
- (o) carry out environmental mitigation, remediation and enhancement works;
- (p) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables and cable ducts;
- (q) when the cables are temporarily unusable, to lay down, install, use, maintain and inspect on the surface of the land electric lines, telecommunications, ancillary equipment and associated works and other conducting media together with conduits or pipes for containing the same in and under the land; and
- (r) place temporarily and use plant, machinery and structures on the land in connection with the lighting of the land and the authorised project

Major crossings (railway, dual carriageway)

1. The right to enter onto and remain on the land for the purposes of construction, installation,

Plots 10/04, 15/03, 15/04, 23/07, 24/10, 33/06,
37/02, 37/08, 37/20

operation, maintenance and decommissioning of
the authorised project and to—

- (a) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables by way of horizontal drilling or other trenchless techniques;
- (b) retain, maintain, install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in any drains, watercourse and culverts;
- (c) enter the land with or without machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables and cable ducts;
- (d) retain and use the cables for the purposes of the transmission of telecommunications and electricity; and
- (e) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers).

Balancing pond works

Plots 41/23, 41/24, 41/25

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) with or without vehicles, plant and equipment to enter the land to construct the authorised project and thereafter to use, retain, inspect, maintain, repair, alter, renew and replace or remove the authorised project;
- (b) with or without vehicles, plant and equipment to enter the land to construct or modify drainage apparatus, flood works, water attenuation works or other works, and to construct in, on, over or under the land drains, conduits or pipes to allow existing attenuation works to communicate with the authorised project;
- (c) with or without vehicles, plant and equipment to enter the land to fell, trim or lop trees and bushes which may obstruct or interfere with the rights exercised by the undertaker;
- (d) with or without vehicles, plant and equipment to enter the land to access

any adjoining land for the purposes of the authorised project;

- (e) with or without vehicles, plant and equipment to enter the land to exercise the rights over and across any access route; and
- (f) to carry out any activities ancillary or incidental thereto.

2. A restrictive covenant over the land for the benefit of the remainder of the Order land to—

- (a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction or erection of works of any kind (including the foundations, footings or other supportive structures thereto);
- (b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);
- (c) prevent mole draining or anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;
- (d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project) provided that the growing within the land of any pre-existing trees, shrubs or underwood do

not require the consent of the undertaker; and

- (e) prevent anything to be done in or upon the Order land or any part thereof which shall or which it is reasonably foreseeable may interfere with the exercise of the other rights set out in this Schedule or the use of the authorised project or in any way render the authorised project or any part thereof in breach of any statute or regulation for the time being in force and applicable thereto..

Connection into cable sealing ends

41/33

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to—

- (a) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables by way of drilling and / or trenching or by over ground construction;
- (b) construct, lay and install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove any apparatus necessary to connect the cables into cable sealing ends and to facilitate the connection to electrical apparatus;
- (c) construct, install, use, retain, maintain, inspect, modify, improve, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in any drains, watercourse and culverts;
- (d) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, cable ducts and jointing works;
- (e) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, cable ducts and jointing works;
- (f) enter and be upon the land and remain with or without plant, vehicles,

machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables, or use of the cable ducts and jointing works;

- (g) retain and use the cables for the purposes of the transmission of telecommunications and electricity;
- (h) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables, cable ducts and jointing works;
- (i) install and maintain cable marker posts to identify the location of the cables, cable ducts and jointing works as required for routine integrity testing;
- (j) remove, store and stockpile materials (including excavated material) within the Order land;
- (k) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the end of each period of the exercise of the rights);
- (l) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);
- (m) carry out works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;
- (n) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (o) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables, cable ducts and jointing works;

- (p) carry out environmental mitigation, remediation and enhancement works;
- (q) install, construct, use and remove temporary welfare facilities during any periods of construction, maintenance, repair, replacement, renewal, upgrade and removal of the cables, cable ducts and jointing works;
- (r) when the cables are temporarily unusable, to lay down, install, use, maintain and inspect on the surface of the land electric lines, telecommunications, ancillary equipment and associated works and other conducting media together with conduits or pipes for containing the same in and under the land; and
- (s) place temporarily and use plant, machinery and structures on the land in connection with the lighting of the land and the authorised project.

2. The right to enter and remain on the land for the purposes of the construction, installation, operation, maintenance and decommissioning of the authorised project, and to—

- (a) enter upon the land and to create temporary secure areas;
- (b) place equipment on the land, including portakabins and welfare equipment;
- (c) store plant, materials and equipment;
- (d) create car parking sites, site offices, site areas for temporary security and welfare facilities;
- (e) effect access and egress to and from the highway;
- (f) create fuel storage and bunded facilities for the storage of materials ancillary to the implementation of the authorised project; and
- (g) access the underground electrical cables, cable ducts and jointing works and any other land used or to be used in connection with the installation and use of the underground electrical cables, cable ducts and jointing works, over the temporary secure area within the land, for purposes in connection with the installation and use of the underground electrical cables.

3. The right to enter onto and remain on the land for the purposes of construction, installation,

operation, maintenance and decommissioning of the authorised project and to—

- (a) pass and repass with or without vehicles, plant, equipment, materials and machinery to access adjoining land and highway for the purposes of laying, installing, adjusting, altering, constructing, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables, cable ducts and jointing works;
- (b) retain and maintain existing hardstandings and lay down, use, repair, alter and remove hardstandings for the purposes of access to adjoining land and highway;
- (c) erect temporary supporting or protective structures (including the bridging over or protection of the apparatus of the statutory undertakers) for the purposes of access to adjoining land and highway;
- (d) alter, lop, uproot and replant trees, shrubs and hedges and other vegetation for the purposes of enabling the right to pass and repass to and from adjoining land;
- (e) retain and maintain existing temporary permissive paths or lay out temporary permissive paths for public use (if applicable);
- (f) effect access and egress to and from the highway;
- (g) retain, maintain, straighten, widen, repair, alter, upgrade and use existing access routes for the purposes of accessing adjoining land and highway;
- (h) remove fences, hedges or other barriers during any period in which construction, maintenance, upgrading, improvement, renewal or removal are being carried out and for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the exercise of the rights); and
- (i) retain, maintain, install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent

drainage and manage waterflows in any drains, watercourses and culverts.

“adjoining land” for the purposes of this paragraph 3 means such other parts of the land within the Order limits required for the authorised project.

Overhead line alterations

40/26, 40/27, 40/31, 40/33a, 41/01a, 41/28, 41/30b, 41/30c, 41/30d, 41/40

1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and—

- (a) to enter the land with or without vehicles plant and equipment to erect the electric lines and thereafter retain, inspect, maintain, repair, alter, renew, replace and remove the overhead lines;
- (b) with or without vehicles, plant and equipment and in a proper and woodman like manner to fell, trim or lop all trees and bushes on the land which obstruct or interfere with the exercise of the undertaker’s rights;
- (c) enter the land to access any adjoining land;
- (d) to use the overhead lines.

2. A restrictive covenant over the land for the benefit of the remainder of the Order land to—

- (a) not do or suffer to be done anything upon the land which may in any way interfere with, damage or cause injury to the overhead lines or interfere with or obstruct access thereto or use thereof, and to take all reasonable precautions to prevent such interference, obstruction, damage or injury;
- (b) not erect any building or structure (whether temporary or permanent) or plant or allow to grow any plant or tree on the land within 5.3 metres of any conductors when they are at a maximum temperature and/or swing;
- (c) not erect any building or structure (whether temporary or permanent) or plant or allow any plant or tree within or under any towers or within 5 metres of the outer edge of each of the foundations of any towers without the written consent of the undertaker (such consent not to be unreasonably withheld or delayed and which consent may be granted subject to reasonable conditions);
- (d) not store or place within or under any towers or within 5 metres of the outer

edge of the foundations of any towers
any goods or materials whatsoever
without the written consent of the
undertaker (such consent not to be
unreasonably withheld or delayed and
which consent may be granted subject
to reasonable conditions);

- (e) not raise the level of the surface of the land so as to make the distance between the level of the ground and the lowest conductor at any point of the span less than 7.6 metres; and
- (f) not carry out any works or excavations on the land or otherwise which may endanger the stability, safety and integrity of the overhead lines.

SCHEDULE 7

Article 20

Modification of compensation and compulsory purchase enactments for creation of new rights

Compensation enactments

1. The enactments for the time being in force with respect to compensation for the compulsory purchase of land apply, with the necessary modifications as respects compensation, in the case of a compulsory acquisition under this Order of a right by the creation of a new right or the imposition of a restrictive covenant as they apply as respects compensation on the compulsory purchase of land and interests in land.

2.—(1) Without prejudice to the generality of paragraph 1, the Land Compensation Act 1973(a) has effect subject to the modifications set out in sub-paragraph (2).

(2) In section 44(1) (compensation for injurious affection), as it applies to compensation for injurious affection under section 7 of the 1965 Act as substituted by paragraph 4—

- (a) for the words “land is acquired or taken” there is substituted the words “a right or restrictive covenant over land is purchased from or imposed on”; and
- (b) for the words “acquired or taken from him” there is substituted the words “over which the right is exercisable or the restrictive covenant enforceable”.

Application of the 1965 Act

3.—(1) The 1965 Act has effect with the modifications necessary to make it apply to the compulsory acquisition under this Order of a right by the creation of a new right, or to the imposition under this Order of a restrictive covenant, as it applies to the compulsory acquisition under this Order of land, so that, in appropriate contexts, references in that Act to land are read (according to the requirements of the particular context) as referring to, or as including references to—

- (a) the right acquired or to be acquired; or
- (b) the land over which the right is or is to be exercisable.

(2) Without prejudice to the generality of sub-paragraph (1), Part 1 of the 1965 Act applies in relation to the compulsory acquisition under this Order of a right by the creation of a new right with the modifications specified in the following provisions of this Schedule.

(a) 1973 c.26.

4. For section 7 of the 1965 Act (measure of compensation) there is substituted the following section—

“7. In assessing the compensation to be paid by the acquiring authority under this Act, regard must be had not only to the extent (if any) to which the value of the land over which the right is to be acquired or the restrictive covenant is to be imposed is depreciated by the acquisition of the right or the imposition of the covenant but also to the damage (if any) to be sustained by the owner of the land by reason of its severance from other land of the owner, or injuriously affecting that other land by the exercise of the powers conferred by this or the special Act”

5. Section 8(1) of the Compulsory Purchase Act 1965 has effect as if references to acquiring land were to acquiring a right in the land, and Schedule 2A to that Act is to be read as if, for that Schedule, there were substituted—

“SCHEDULE 2A

Counter-Notice Requiring Purchase of Land

Introduction

1.—(1) This Schedule applies where an undertaker serves a notice to treat in respect of a right over the whole or part of a house, building or factory.

(2) But see section 2A of the Acquisition of Land Act 1981 (under which a compulsory purchase order can exclude from this Schedule land that is 9 metres or more below the surface).

2. In this Schedule “house” includes any park or garden belonging to a house.

Counter-notice requiring purchase of land

3. A person who is able to sell the house, building or factory (“the owner”) may serve a counter-notice requiring the undertaker to purchase the owner’s interest in the house, building or factory.

4. A counter-notice under paragraph 3 must be served within the period of 28 days beginning with the day on which the notice to treat was served.

Response to counter-notice

5. On receiving a counter-notice the undertaker must decide whether to—

- (a) withdraw the notice to treat,
- (b) accept the counter-notice, or
- (c) refer the counter-notice to the Upper Tribunal.

6. The undertaker must serve notice of their decision on the owner within the period of 3 months beginning with the day on which the counter-notice is served (“the decision period”).

7. If the undertaker decides to refer the counter-notice to the Upper Tribunal they must do so within the decision period.

8. If the undertaker does not serve notice of a decision within the decision period they are to be treated as if they had served notice of a decision to withdraw the notice to treat at the end of that period.

9. If the undertaker serves notice of a decision to accept the counter-notice, the compulsory purchase order and the notice to treat are to have effect as if they included the owner’s interest in the house, building or factory.

Determination by Upper Tribunal

10. On a referral under paragraph 7 the Upper Tribunal must determine whether the acquisition of the right would—

- (a) in the case of a house, building or factory, cause material detriment to the house, building or factory, or
- (b) in the case of a park or garden, seriously affect the amenity or convenience of the house to which the park or garden belongs.

11. In making its determination, the Upper Tribunal must take into account—

- (a) the effect of the acquisition of the right,
- (b) the proposed use of the right, and
- (c) if the right is proposed to be acquired for works or other purposes extending to other land, the effect of the whole of the works and the use of the other land.

12. If the Upper Tribunal determines that the acquisition of the right would have either of the consequences described in paragraph 10 it must determine how much of the house, building or factory the authority ought to be required to take.

13. If the Upper Tribunal determines that the undertaker ought to be required to take some or all of the house, building or factory the compulsory purchase order and the notice to treat are to have effect as if they included the owner's interest in that land.

14.—(1) If the Upper Tribunal determines that the undertaker ought to be required to take some or all of the house, building or factory, the authority may at any time within the period of 6 weeks beginning with the day on which the Upper Tribunal makes its determination withdraw the notice to treat in relation to that land.

(2) If the undertaker withdraws the notice to treat under this paragraph they must pay the person on whom the notice was served compensation for any loss or expense caused by the giving and withdrawal of the notice.

(3) Any dispute as to the compensation is to be determined by the Upper Tribunal.”

6. The following provisions of the 1965 Act (which state the effect of a deed poll executed in various circumstances where there is no conveyance by persons with interests in the land), that is to say—

- (a) section 9(4) (failure by owners to convey);
- (b) paragraph 10(3) of Schedule 1 (owners under incapacity);
- (c) paragraph 2(3) of Schedule 2 (absent and untraced owners); and
- (d) paragraphs 2(3) and 7(2) of Schedule 4 (common land),

is so modified as to secure that, as against persons with interests in the land which are expressed to be overridden by the deed, the right which is to be compulsorily acquired or the restrictive covenant which is to be imposed is vested absolutely in the acquiring authority.

7. Section 11 of the 1965 Act (powers of entry) is so modified as to secure that, as from the date on which the acquiring authority has served notice to treat in respect of any right it has power, exercisable in equivalent circumstances and subject to equivalent conditions, to enter for the purpose of exercising that right or enforcing that restrictive covenant (which is deemed for this purpose to have been created on the date of service of the notice); and sections 12 (penalty for unauthorised entry) and 13 (entry on warrant in the event of obstruction) of the 1965 Act is modified correspondingly.

8. Section 20 of the 1965 Act (protection for interests of tenants at will, etc.) applies with the modifications necessary to secure that persons with such interests in land as are mentioned in that section are compensated in a manner corresponding to that in which they would be compensated on a compulsory acquisition under this Order of that land, but taking into account only the extent (if any) of such interference with such an interest as is actually caused, or likely to be caused, by the exercise of the right or the enforcement of the restrictive covenant in question.

9. Section 22 of the 1965 Act (protection of acquiring authority's possession where by inadvertence an estate, right or interest has not been got in) is so modified as to enable the acquiring authority, in circumstances corresponding to those referred to in that section, to continue to be entitled to exercise the right acquired, subject to compliance with that section as respects compensation.

SCHEDULE 8

Article 26

Land of which temporary possession may be taken

<i>(1) Area</i>	<i>(2) Number of land shown on land plan</i>	<i>(3) Purpose for which temporary possession may be taken</i>	<i>(4) Part of the authorised project</i>
District of North Norfolk	01/07, 01/08, 01/09, 01/10, 01/11, 02/01, 02/02	Facilitating construction and carrying out the authorised project; construction compounds for carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 4B, 4C and 5
District of North Norfolk	01/01, 01/02, 01/03, 01/04, 01/05, 01/06, 01/13, 01/17, 01/18, 01/19, 01/20, 02/03, 01/12, 02/04, 02/05, 02/09, 02/11, 02/12, 02/13, 02/14, 02/16, 02/18, 02/19, 02/21, 02/22, 02/23, 03/01, 03/02, 03/04, 03/05, 03/06, 03/07, 03/08, 03/09, 03/10, 03/11, 03/13, 04/01, 04/02, 04/03, 04/05, 04/08, 04/09, 04/10, 04/11, 04/12, 05/01, 05/03, 05/04, 05/06, 05/07, 05/08, 05/10, 06/01, 06/02, 06/03, 06/04, 06/05, 06/10, 06/14, 07/01, 07/03, 07/04, 07/06, 07/09, 07/10, 08/02, 08/05, 08/07, 08/08, 08/10, 08/13, 08/15, 08/17, 08/19, 08/20, 08/21, 08/23, 09/03, 09/07, 09/08, 09/11, 09/12, 09/15, 09/16, 10/01, 10/02, 10/04, 10/05, 10/11, 10/14, 10/15, 10/16, 10/17, 11/01, 11/03, 11/05, 11/06, 11/09, 11/10, 11/12, 11/13, 11/14, 12/02, 12/03, 12/04, 12/05, 12/06, 12/10, 13/02, 13/05,	Facilitating construction and carrying out the authorised project; carrying out the authorised project; access for carrying out the authorised project.	Work No. 4A, 4B, 4C and 5

	13/08, 13/09, 13/10, 13/11, 13/13, 14/02, 14/03, 14/04, 14/05		
District of North Norfolk	01/14, 01/15, 01/16, 02/06, 02/07, 02/08, 02/10, 02/15, 02/17, 02/20, 03/03, 03/12, 04/04, 05/02, 05/05, 05/09, 05/11, 06/06, 06/08, 06/09, 06/11, 06/13, 07/02, 07/05, 07/07, 07/08, 07/12, 08/03, 08/04, 08/06, 08/12, 09/06, 09/09, 09/10, 09/13, 09/14, 10/07, 10/08, 10/09, 10/10, 11/02, 11/04, 11/07, 11/08, 11/11, 11/15, 12/01, 12/07, 12/09, 13/01, 13/04, 13/06, 13/07, 13/12, 14/01, 14/06	Laying of hardstanding and improvements to tracks; access for carrying out the authorised project.	Work Nos. 4B, 4C, 5 and 6
District of North Norfolk	04/06, 04/07, 09/04, 09/05, 10/12	Facilitating construction and carrying out Work No. 5; mobilisation zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 4C and 5
District of North Norfolk	06/07, 07/11, 08/01, 08/07, 08/09, 08/11, 08/14, 08/16, 08/18, 08/22, 08/24, 09/01, 09/02, 10/03, 10/06, 10/13, 12/08, 12/11, 13/03	Facilitating construction and carrying out Work No. 5; trenchless crossing zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work No. 5
District of North Norfolk	06/12	Facilitating construction and carrying out Work No. 5; mobilisation zone and trenchless crossing zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work No. 5
Districts of North Norfolk and Broadland	14/07	Facilitating construction and carrying out the authorised project; carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 5 and 6
Districts of North Norfolk and Broadland	14/08	Facilitating construction and carrying out Work Nos. 5 and 6; trenchless crossing zone for construction and laydown and carrying out the authorised	Work Nos. 5 and 6

		project; access for carrying out the authorised project.	
District of Broadland	14/09, 14/12, 14/15, 14/18, 14/20, 14/26, 14/27, 15/02, 15/03, 15/04, 15/05, 15/07, 15/11, 15/13, 15/15, 16/03, 16/05, 16/08, 16/09, 16/10, 16/12, 16/13, 17/01, 17/02, 17/03, 17/04, 17/05, 17/07, 18/01, 18/02, 18/04, 18/05, 18/08, 18/13, 18/14, 19/04, 19/05, 19/07, 20/01, 20/02, 20/03, 20/06, 20/07, 20/09, 20/10, 20/17, 20/19, 20/20, 21/01, 21/03, 21/08, 22/01, 22/03, 22/04, 22/05, 22/06, 22/07, 22/12, 22/13, 22/14, 22/15, 23/01, 23/03, 23/05, 23/06, 23/07, 23/08, 23/09, 23/11, 23/13, 23/14, 24/01, 24/04, 24/05, 24/08, 24/10, 24/11, 24/16, 24/19, 25/02, 25/04, 25/06, 25/07, 26/01	Facilitating construction and carrying out the authorised project; carrying out the authorised project; access for carrying out the authorised project.	Work No. 6
District of Broadland	14/10, 14/21, 14/23, 14/25, 14/28, 15/01, 15/06, 15/09, 21/10, 21/11, 21/17, 23/04, 23/10, 23/12, 24/09, 24/12	Facilitating construction and carrying out Work No. 6; trenchless crossing zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work No. 6
District of Broadland	14/11, 14/13, 14/16, 14/19, 14/22, 14/24, 15/08, 15/10, 15/12, 15/14, 16/01, 16/02, 16/04, 16/06, 16/07, 16/11, 16/14, 17/06, 18/06, 18/07, 18/09, 18/10, 18/11, 18/12, 19/01, 19/02, 19/03, 19/06, 19/08, 19/09, 20/04, 20/05, 20/08, 20/11, 20/12, 20/13, 20/14, 20/15, 20/16, 20/18, 21/04, 21/05, 21/07, 21/09, 21/12, 21/13, 21/14, 21/15, 21/16, 22/02, 22/08, 22/09, 22/10, 22/11, 22/16, 23/02, 24/02, 24/03, 24/06, 24/07,	Laying of hardstanding and improvements to tracks; access for carrying out the authorised project.	Work Nos. 5, 6 and 7

	24/13, 24/14, 24/15, 24/17, 24/18, 25/01, 25/03, 25/05, 26/02, 26/04		
District of Broadland	14/14	Facilitating construction and carrying out Work No. 6; mobilisation zone and trenchless crossing zone for construction, laydown, and carrying out the authorised project; access for carrying out the authorised project.	Work No. 6
District of Broadland	18/03, 20/21, 21/02, 21/06	Facilitating construction and carrying out Work No. 6; mobilisation zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work No. 6
District of Broadland	18/15, 18/16	Temporary storage site; worksites for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 5, 6, 7
Districts of Broadland and Breckland	26/03	Facilitating construction and carrying out the authorised project; carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 6 and 7.
District of Breckland	26/05, 26/06, 26/08, 26/10, 26/11, 26/13, 27/02, 27/04, 27/06, 27/13, 28/04, 28/05, 29/05, 29/07, 29/09, 29/10, 29/12, 30/02, 30/03, 30/04, 30/05, 30/06, 30/10, 30/11, 31/02, 31/03, 31/04, 31/05, 32/02, 32/03, 32/06, 32/09, 32/12, 32/13, 32/14, 32/15, 33/02, 33/03, 33/04, 33/12, 34/03, 34/04, 34/08, 34/09, 34/10, 34/11, 34/13, 35/11, 35/12, 36/02, 36/05, 36/06, 36/08, 36/09, 36/10, 36/11, 36/14, 36/15, 36/16, 36/17, 36/21, 37/05, 37/13, 37/14, 38/02, 38/03, 38/05, 38/06, 38/08, 41/08, 41/10, 41/11, 41/13, 41/16, 41/22, 39/07, 40/02, 40/03	Laying of hardstanding and improvements to tracks; access for carrying out the authorised project.	Work Nos. 6, 7

District of Breckland	26/07, 26/09, 26/12, 26/14, 26/15, 27/01, 27/05, 27/07, 27/08, 27/09, 27/10, 27/11, 27/14, 27/15, 27/16, 28/01, 28/02, 28/03, 28/08, 29/02, 29/08, 29/11, 29/13, 30/01, 30/07, 30/08, 30/09, 30/12, 31/01, 31/06, 31/07, 31/08, 31/09, 31/11, 31/12, 31/13, 32/01, 32/04, 32/05, 32/07, 32/08, 32/10, 32/11, 33/01, 33/06, 33/08, 33/09, 33/11, 33/14, 33/15, 33/16, 34/01, 34/05, 34/06, 34/07, 35/01, 35/03, 35/04, 35/05, 35/06, 35/07, 35/09, 35/13, 35/15, 35/16, 36/01, 36/03, 36/04, 36/07, 36/12, 36/13, 36/18, 36/20, 37/01, 37/02, 37/07, 37/08, 37/09, 37/11, 37/16, 37/17, 37/18, 37/19, 37/20, 37/21, 37/22, 38/01, 38/04, 38/07, 38/09, 39/10, 40/11, 40/14, 40/20, 40/23, 41/03, 41/14, 41/15, 38/11, 38/12, 39/01, 39/02, 39/03, 39/04, 39/05, 39/06, 39/09, 39/12, 39/13, 39/15, 39/16, 40/01, 40/04, 40/12, 41/05	Facilitating construction and carrying out the authorised project; carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 7
District of Breckland	27/03, 27/12, 31/10, 33/17, 34/02, 37/04, 37/12, 37/15	Facilitating construction and carrying out Work Nos. 7; mobilisation zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 7
District of Breckland	27/08, 28/06, 28/07, 28/09, 28/10, 29/01, 29/03, 29/04, 29/06, 33/05, 33/07, 33/09, 33/10, 33/13, 34/12, 35/02, 35/08, 35/10, 35/14, 36/19, 37/10	Facilitating construction and carrying out Work Nos. 7; trenchless crossing zone for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 7
District of Breckland	37/03, 37/06	Facilitating construction and carrying out Work Nos. 7; mobilisation zone and trenchless crossing zone for	Work Nos. 7

		construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	
District of Breckland	40/16	Construction compound; worksites for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 7, 8A, 8B, 9 and 12
District of Breckland	40/26, 40/26a 40/27, 40/27a, 40/28, 40/31, 40/31a, 40/32, 40/33, 40/33a, 40/33b, 41/01, 41/01a, 41/01b, 41/07, 41/09, 41/17, 41/18, 41/27, 41/28, 41/30, 41/30b, 41/30c, 41/30d, 41/30e, 41/30f, 41/39, 41/40, 41/40a, 41/41, 41/42, 41/43, 41/44, 41/45, 41/46, 41/47, 41/48, 42/04	Facilitating construction and carrying out the authorised project and works to the National Grid overhead lines; worksites for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 7, 8A, 8B, 9, 10A, 10B, 10C, 11, 11A and 12
District of Breckland	41/07, 41/09, 41/17, 41/18	Construction compound and carrying out the authorised project; worksites for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 9, 10A, 10B, 10C, 11 and 12
District of Breckland	41/12, 42/05, 42/06	Facilitation construction and carrying out Work No. 12; worksites for construction and laydown and carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 10C and 12
District of Breckland	41/23, 41/24, 41/25	Facilitating construction and carrying out Work No. 10B; carrying out the authorised project; access for carrying out the authorised project.	Work Nos. 8B, 9, 10A, 10B, 10C, 11, 11A and 12
District of Breckland	41/33	Facilitating construction and carrying out Work No. 11 and Work No. 11A; carrying out the authorised project; access for carrying out the authorised project.	Work No. 11, and Work No. 11A
District of Breckland	42/02, 42/03	Facilitating construction and carrying out Work No. 12; worksites for construction and laydown and carrying out the authorised project; park and ride offload area for substation construction;	Work Nos. 8A, 8B, 9 and 12

SCHEDULE 9

Article 32

Deemed Licence under the 2009 Act – Generation Assets (Licence 1 – Phase 1)

PART 1

Interpretation

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004;

“the 2017 Regulations” means the Conservation of Offshore Marine Habitats and Species Regulations 2017(a);

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“accommodation platform” means a fixed structure providing offshore accommodation for personnel

“authorised deposits” means the substances and articles specified in paragraph 5 of Part 2 of this licence;

“authorised scheme” means Work No. 1 described in Part 3 of this licence or any part of that work;

“cable protection” means measures for offshore cable crossings and where cable burial is not possible due to ground conditions or approaching offshore structures, to protect cables and fibre optic cables and prevent loss of seabed sediment by use of grout bags, protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science or any successor body to its function;

“commence” means the first carrying out of any part of the licensed activities save for pre-construction surveys and monitoring and “commenced” and “commencement” must be construed accordingly;

“condition” means a condition in Part 4 of this licence;

“Defence Infrastructure Organisation Safeguarding” means Ministry of Defence Safeguarding, Defence Infrastructure Organisation, Kingston Road, Sutton Coldfield, West Midlands B75 7RL and any successor body to its functions;

“Development Principles” means the document certified as the Development Principles by the Secretary of State for the purposes of the Order;

“draft marine mammal mitigation protocol” means the document certified as the draft marine mammal mitigation protocol by the Secretary of State for the purposes of this Order;

“draught height” means the distance between the lowest point of the rotating blade of the wind turbine generator and MHWS;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the 2009 Act;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order;

“gravity base system” means a structure principally of steel, concrete, or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Norfolk Vanguard Southern North Sea Special area of Conservation Site Integrity Plan by the Secretary of State for the purposes of this Order;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at three or more points with steel pin piles or steel suction caissons and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO for the purposes of this licence;

“HAT” means highest astronomical tide;

“licence 2 (generation)” means the licence set out in Schedule 10 (deemed licence under the 2009 Act – generation assets (licence 2 – phase 2));

“licensed activities” means the activities specified in Part 3 of this licence;

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace (but only in relation to any of the ancillary works in Part 2 of Schedule 1 (ancillary works), any cable, and any component part of any wind turbine generator, offshore electrical substation, accommodation platform or meteorological mast described in Part 1 of Schedule 1 (authorised development) not including the alteration, removal or replacement of foundations), to the extent assessed in the environmental statement; and “maintenance” is construed accordingly;

“Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence;

“marker buoy” means any floating device used for marker or navigation purposes, including LIDAR buoys and wave buoys;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“measurement buoy” means any floating device used for measurement purposes, including LIDAR buoys and wave buoys;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“monopile foundation” means a steel pile, typically cylindrical, driven and/or drilled into the seabed and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“Norfolk Vanguard East” means the eastern area located in the offshore Order limits within which wind turbine generators will be situated;

“Norfolk Vanguard West” means the western area located in the offshore Order limits within which wind turbine generators will be situated;

“notice to mariners” means a notice issued by the undertaker to mariners to inform them of issues that affect the safety of navigation;

“offshore cables” means any cables offshore;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State for the purposes of this Order;

“offshore Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out, whose grid coordinates are set out in Part 2 of this licence;

“the Order” means the Norfolk Vanguard Offshore Wind Farm Order 201X;

“outline fisheries liaison and co-existence plan” means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State for the purposes of this Order;

“outline marine traffic monitoring strategy” means the document certified as the outline marine traffic monitoring strategy by the Secretary of State for the purposes of this Order;

“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State for the purposes of the Order;

“outline written scheme of investigation (offshore)” means the document certified as the outline written scheme of investigation (offshore) by the Secretary of State for the purposes of this Order;

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure steel jacket foundations;

“relevant site” means a European offshore marine site and a European site;

“scour protection” means measures to prevent loss of seabed sediment around any marine structure placed in or on the seabed by use of protective aprons, mattresses with or without frond devices, or rock and gravel placement.

“single offshore phase” means carrying out all offshore works as a single construction operation;

“statutory historic body” means Historic Buildings and Monuments Commission for England (Historic England) or its successor in function;

“statutory nature conservation body” means an organisation charged by government with advising on nature conservation matters;

“suction caisson” means a large diameter steel cylindrical shell which penetrates the seabed assisted by a hydrostatic pressure differential for fixity of foundations;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“two offshore phases” means carrying out the offshore works as two separate construction operations;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Norfolk Vanguard Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” means a structure comprising a tower, rotor with up to three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include corrosion protection systems, helicopter landing facilities and other associated equipment, fixed to a foundation;

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

2. A reference to any statute, order, regulation or similar instrument is construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

3. Unless otherwise indicated—

- (a) all times are taken to be Greenwich Mean Time (GMT);
- (b) all co-ordinates are taken to be latitude and longitude degrees and minutes to two decimal places.

4. Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence are—

(a) Marine Management Organisation

Marine Licensing
Lancaster House
Hampshire Court
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032;

(b) Marine Management Organisation (local office)

Lowestoft Office
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 573 149;

(c) Trinity House

Tower Hill
London
EC3N 4DH
Tel: 020 7481 6900;

(d) The United Kingdom Hydrographic Office

Admiralty Way
Taunton
Somerset
TA1 2DN
Tel: 01823 337 900;

(e) Maritime and Coastguard Agency

Navigation Safety Branch
Bay 2/20, Spring Place
105 Commercial Road
Southampton
SO15 1EG
Tel: 020 3817 2426;

(f) Centre for Environment, Fisheries and Aquaculture Science

Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 562 244;

(g) Natural England
Area 1C, Nobel House
17 Smith Square
London
SW1P 2AL
Tel: 0300 060 4911;

(h) Historic England
Cannon Bridge
House 25
Dowgate Hill
London
EC4R 2YA
Tel: 020 7973 3700

PART 2

Licensed Marine Activities – General

1. This licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

2. The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) relating to the transfer of the licence only apply to a transfer not falling within article 6 (benefit of the Order).

3. With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this Schedule, the approved details, plan or scheme are taken to include any amendments that may subsequently be approved in writing by the MMO.

4. Any amendments to or variations from the approved plans, protocols or statements must demonstrate that the subject matter of the approval sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

5. The substances or articles authorised for deposit at sea are—

- (a) iron and steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;

- (f) material extracted from within the offshore Order limits during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

6. The grid coordinates for the authorised scheme are specified below—

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 55' 0.308" N	3° 4' 42.589" E	6	53° 2' 36.817" N	2° 34' 16.309" E
2	52° 49' 53.975" N	3° 5' 22.789" E	7	52° 49' 38.834" N	2° 34' 15.809" E
3	52° 46' 19.050" N	3° 2' 16.682" E	8	52° 48' 47.472" N	2° 33' 28.343" E
4	52° 45' 10.584" N	2° 45' 33.989" E	9	52° 48' 3.133" N	2° 26' 37.427" E
5	52° 51' 41.636" N	2° 45' 34.220" E	10	52° 56' 9.089" N	2° 18' 33.231" E

PART 3

Details of Licensed Marine Activities

1. Subject to the licence conditions at Part 4, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) of the 2009 Act—

- (a) the deposit at sea of the substances and articles specified in paragraph 5 of Part 2 of this licence;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (d) the disposal of up to 37,854,712 m³ of inert material of natural origin within the offshore Order limits produced during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works at disposal site references HU215 and HU216 within the extent of the Order limits seaward of MHWS, comprising—
 - (i) 36,000,000 m³ for cable and fibre optic cable installation;
 - (ii) 1,767,146 m³ for the wind turbine generators;
 - (iii) 75,000 m³ for the accommodation platform; and
 - (iv) 12,566 m³ for the meteorological masts; and
- (e) the removal of static fishing equipment; and
- (f) the disposal of drill arisings in connection with any foundation drilling up to 400,624 m³

2.—(1) Such activities are authorised in relation to the construction, maintenance and operation of—

- (a) Work No. 1 (phase 1)—
 - (i) an offshore wind turbine generating station with an electrical export capacity of up to 1,800 MW at the point of connection to the offshore electrical platform(s) referred to at Work No. 2 comprising up to 180 wind turbine generators each fixed to the seabed by one of the following foundation types: monopile (piled or suction caisson), jacket

(piled or suction caisson), or gravity base fitted with rotating blades and situated within the area shown on the works plan and further comprising (b) to (e) below;

- (ii) up to two accommodation platforms fixed to the seabed within the area shown on the works plan by one of the following foundation types: jacket (piled or suction caisson) or gravity base;
- (iii) up to two meteorological masts fixed to the seabed within the area shown on the works plan by one of the following foundation types: monopile (piled or suction caisson), jacket (piled or suction caisson) or gravity base;
- (iv) up to two LIDAR measurement buoys fixed to the seabed within the area shown on the works plan by one of the following foundation types: monopile (piled) or floating and up to two wave measurement buoys fixed to the seabed within the area shown on the works plan by one foundation type (floating); and
- (v) a network of subsea array cables and fibre optic cables within the area shown on the works plan between the wind turbine generators, and between the wind turbine generators and Work No.2 including one or more offshore cable crossings.

(2) In connection with such Work No. 1 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement and the provisions of this licence including:

- (a) scour protection around the foundations of the offshore structures;
- (b) cable protection measures such as the placement of rock and/or concrete mattresses, with or without frond devices;
- (c) the removal of material from the seabed required for the construction of Work No. 1 and the disposal of up to 37,854,712 cubic metres of inert material of natural origin within the Order limits produced during construction drilling, seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching and excavation of horizontal directional drilling exit pits; and
- (d) removal of static fishing equipment;

(3) In connection with such Work No. 1, ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised scheme; and
- (b) beacons, fenders and other navigational warning or ship impact protection works.

PART 4

Conditions

Design parameters

1.—(1) Subject to paragraph (2), each wind turbine generator forming part of the authorised scheme must not—

- (a) exceed a height of 350 metres when measured from HAT to the tip of the vertical blade;
- (b) exceed a height of 198.5 metres to the height of the centreline of the generator shaft forming part of the hub when measured from HAT;
- (c) exceed a rotor diameter of 303 metres;
- (d) be less than 760 metres from the nearest wind turbine generator in either direction perpendicular to the approximate prevailing wind direction (crosswind) or be less than 760

metres from the nearest wind turbine generator in either direction which is in line with the approximate prevailing wind direction (downwind);

(e) have a draught height of less than 27 metres from MHWS.

(2) References to the location of a wind turbine generator in paragraph (1) above are references to the centre point of that turbine.

(3) The total number of wind turbine generators must not exceed 180 and must be configured such that at any time—

(a) no more than two-thirds of the total number of wind turbine generators (rounded to the nearest whole number) must be located in Norfolk Vanguard West; and

(b) no more than one-half of the total number of wind turbine generators (rounded to the nearest whole number) must be located in Norfolk Vanguard East.

2.—(1) The dimensions of any accommodation platform forming part of the authorised scheme must not exceed 100 metres in height when measured from HAT, 90 metres in length and 60 metres in width.

(2) Each meteorological mast must not exceed a height of 200 metres above HAT.

(3) Each meteorological mast must not have more than one supporting foundation.

3. The total length of the cables and the area and volume of their cable protection must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection (m² and m³)</i>
Work No. 1(e) (array)	600 kilometres	400,000m ² 204,000 m ³

4.—(1) In relation to a wind turbine generator, each foundation using piles must not have—

(a) more than four driven piles;

(b) in the case of single pile structures, a pile diameter which is more than 15 metres; or

(c) in the case of two or more pile structures, have a pile diameter which is more than five metres.

(2) In relation to a wind turbine generator, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 1,963 m².

5.—(1) In relation to a meteorological mast, each foundation using piles must not have—

(a) more than four driven piles;

(b) in the case of single pile structures, a pile diameter which is more than 10 metres;

(c) in the case of two or more pile structures, have a pile diameter which is more than three metres.

(2) In relation to a meteorological mast, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 314 m².

6.—(1) In relation to an accommodation platform, each foundation using piles must not have—

(a) more than six driven piles;

(b) a pile diameter which is more than three metres.

(2) In relation to an accommodation platform, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 7,500 m².

7.—(1) In relation to any LIDAR measurement buoys, each foundation using piles must not have a pile diameter of greater than 10 metres.

(2) In relation to any LIDAR measurement buoys, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 79m² per buoy and 157 m² in total.

(3) In relation to any wave measurement buoys, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 150m² per buoy and 300 m² in total.

Phasing of the authorised scheme

8.—(1) Taken together with works authorised and proposed to be constructed pursuant to licence 2 (generation)—

- (a) the total electrical export capacity of the authorised scheme must not exceed 1,800MW at the point of connection to the offshore electrical platform(s);
- (b) the total number of wind turbine generators forming part of the authorised scheme must not exceed 180;
- (c) the total number of accommodation platforms forming part of the authorised scheme must not exceed two;
- (d) the total number of meteorological masts forming part of the authorised scheme must not exceed two;
- (e) the total number of LIDAR measurement buoys forming part of the authorised scheme must not exceed two;
- (f) the total number of wave measurement buoys forming part of the authorised scheme must not exceed two;
- (g) the total amount of scour protection for the wind turbine generators, accommodation platform(s), meteorological masts and measurement buoys forming part of the authorised scheme must not exceed 5,463,752m² and 27,318,759 m³;
- (h) the total amount of inert material of natural origin disposed within the offshore Order limits as part of the authorised scheme must not exceed 37,854,712 m³;
- (i) the total amount of disposal for drill arisings in connection with any foundation drilling must not exceed 400,624 m³; and
- (j) the total length of cable and the amount of cable protection must not exceed the figures stated in condition 3 of this licence.

(2) Prior to the commencement of the authorised scheme the undertaker must give notice to the MMO detailing—

- (a) whether the authorised scheme will be constructed—
 - (i) in a single offshore phase under this licence; or
 - (ii) in two offshore phases under this licence and licence 2 (generation); and
- (b) where the authorised scheme will be constructed in two offshore phases—
 - (i) prior to the commencement of phase 1, the total number of wind turbine generators accommodation platforms, meteorological masts, LIDAR measurement buoys and wave measurement buoys to be constructed in that phase; and
 - (ii) prior to the commencement of phase 2, the total number of wind turbine generators accommodation platforms, meteorological masts, LIDAR measurement buoys and wave measurement buoys to be constructed in that phase.

Notifications and inspections

9.—(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
 - (i) all agents and contractors notified to the MMO in accordance with condition 17; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 17;

- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above must provide a completed confirmation form to the MMO confirming receipt of this licence.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 17 are permitted to carry out the licensed activities.
- (3) Copies of this licence must also be available for inspection at the following locations—
- (a) the undertaker's registered address;
 - (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
 - (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b) above.
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.
- (6) The undertaker must inform the MMO Coastal Office in writing at least five days prior to the commencement of the licensed activities or any part of them, and within five days of completion of the licensed activities.
- (7) The undertaker must inform the Kingfisher Information Service of Seafish by email to kingfisher@seafish.co.uk of details regarding the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part—
- (a) at least fourteen days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
 - (b) as soon as reasonably practicable and no later than 24 hours of completion of construction of all offshore activities.

Confirmation of notification must be provided to the MMO within five days.

(8) A notice to mariners must be issued at least ten days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 1 (wind turbine generators or other offshore construction activities including array cables and fibre optic cables) and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, MCA and UKHO within five days.

(9) The notices to mariners must be updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under condition 14(1)(b). Copies of all notices must be provided to the MMO and UKHO within five days.

(10) The undertaker must notify the UK Hydrographic Office both of the commencement (within ten days), progress and completion of construction (within ten days) of the licensed activities in order that all necessary amendments to nautical charts are made and the undertaker must send a copy of such notifications to the MMO within five days.

(11) In case of damage to, or destruction or decay of the authorised scheme seaward of MHWS or any part thereof, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UK Hydrographic Office.

(12) In case of exposure of cables on or above the seabed, the undertaker must within three business days or five days whichever is the sooner following the receipt by the undertaker of the final survey report from the periodic burial survey, notify mariners by issuing a notice to mariners

and by informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO and MCA within five days.

Aids to navigation

10.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and to take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

(2) The undertaker must during the period from the start of construction of the authorised scheme to completion of decommissioning seaward of MHWS keep Trinity House and the MMO informed of progress of the authorised scheme seaward of MHWS including the following—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation as set out in the aids to navigation management plan agreed pursuant to condition 14(1)(k) using the reporting system provided by Trinity House.

(4) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 9(11) and condition 9(12) are invoked, the undertaker must lay down such marker buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

Colouring of structures

11.—(1) Except as otherwise required by Trinity House the undertaker must colour all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height directed by Trinity House, or must colour the structure as directed by Trinity House from time to time.

(2) Subject to sub-paragraph (1) above, unless the MMO otherwise directs, the undertaker must paint the remainder of the structures submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

12.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme, including any chemical agents placed within any monopile void, must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (as amended).

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) The undertaker must inform the MMO of the location and quantities of material disposed of each month under this licence. This information must be submitted to the MMO by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(5) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of or seabed preparation for foundations, and drilling mud is disposed of within

disposal site references HU215 and HU216 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(6) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(7) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the District Marine Office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it.

(8) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained to prevent run off entering the water through the freeing ports.

(9) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 14(1)(d)(i).

(10) All dropped objects must be reported to the MMO using the Dropped Object Procedure Form as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident. On receipt of the Dropped Object Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

Force majeure

13.—(1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to make a deposit which is not authorised under this licence, whether within or outside of the Order limits, because the safety of human life and/or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

Pre-construction plans and documentation

14.—(1) The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows, in accordance with the Development Principles—
 - (i) the proposed location and choice of foundation of all wind turbine generators, offshore electrical platforms, accommodation platforms and meteorological masts;
 - (ii) the height to the tip of the vertical blade of all wind turbine generators;
 - (iii) the height to the centreline of the generator shaft forming part of the hub of all wind turbine generators;
 - (iv) the rotor diameter and spacing of all wind turbine generators;
 - (v) the height of all lattice towers forming part of all meteorological masts;
 - (vi) the height, length and width of all accommodation platforms;
 - (vii) the dimensions of all foundations;
 - (viii) the length and arrangement of all cables (including fibre optic cables) comprising Work No. 1(e);
 - (ix) the proposed layout of all wind turbine generators (in accordance with the recommendations for layout contained in MGN543 and its annexes), accommodation

platforms and meteorological masts including any exclusion zones identified under sub-paragraph (1)(h)(iv);

- (x) a plan showing the indicative layout of all wind turbine generators, accommodation platforms and meteorological masts including all exclusion zones (insofar as not shown in (ix) above) and showing the indicative programming of particular works as set out in the indicative programme to be provided under sub-paragraph (1)(b)(iv);
- (xi) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph (1)(i); and
- (xii) the grid coordinates of the centre point of the proposed location for each wind turbine generator, offshore electrical platform, substation and meteorological mast.

to ensure conformity with the description of Work No. 1 and compliance with conditions 1 to 8 above.

- (b) A construction programme and monitoring plan (which accords with the offshore in principle monitoring plan) to include details of—

- (i) the proposed construction start date;
- (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
- (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction surveys and monitoring and related reporting in accordance with sub-paragraph (1)(h) and conditions 17, 18, 19 and 20; and
- (iv) an indicative written construction programme for all wind turbine generators accommodation platforms, meteorological masts, measurement buoys and cables (including fibre optic cables) comprised in the works in Part 3 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above);

with details pursuant to paragraph (iii) above to be submitted to the MMO in accordance with the following—

- (aa) at least four months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed pre-construction monitoring;
- (bb) at least four months prior to construction, detail on construction monitoring;
- (cc) at least four months prior to commissioning, detail of post-construction (and operational) monitoring;

unless otherwise agreed in writing with the MMO.

- (c) A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—

- (i) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation works, and having regard to any mitigation scheme pursuant to sub-paragraph (1)(i);
- (ii) soft start procedures with specified duration periods;
- (iii) cable (including fibre optic cable) installation
- (iv) contractors;
- (v) vessels, vessels maintenance and vessels transit corridors; and
- (vi) associated and ancillary works.

- (d) A project environmental management plan (in accordance with the outline project environmental management plan) covering the period of construction and operation to include details of—

- (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised scheme in relation to all activities carried out;

- (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;
 - (iv) the appointment and responsibilities of a fisheries liaison officer;
 - (v) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 9 and to address the interaction of the licensed activities with fishing activities; and
 - (vi) procedures to be followed within vessels transit corridors to minimise disturbance to red-throated diver during operation and maintenance activities.
- (e) A scour protection and cable protection plan (in accordance with the outline scour protection and cable protection plan) providing details of the need, type, sources, quantity, distribution and installation methods for scour protection and cable (including fibre optic cable) protection. For the avoidance of doubt “distribution” in this sub-paragraph must include quantities in respect of each structure comprised in the offshore works and intended to be subject to scour protection.
- (f) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’ are proposed to be used, a marine mammal mitigation protocol, in accordance with the draft marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals and following current best practice as advised by the relevant statutory nature conservation bodies.
- (g) A cable specification, installation and monitoring plan, to include—
- (i) technical specification of offshore cables (including fibre optic cables) below MHWS, including a desk-based assessment of attenuation of electro-magnetic field strengths, shielding and cable burial depth in accordance with industry good practice;
 - (ii) a detailed cable (including fibre optic cables) laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques, including cable protection; and
 - (iii) proposals for monitoring offshore cables (including fibre optic cables) including cable protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of unburied or shallow buried cables.
- (h) An archaeological written scheme of investigation in relation to the offshore Order limits seaward of mean low water, which must accord with the outline written scheme of investigation (offshore) and industry good practice, in consultation with the statutory historic body to include—
- (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (ii) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (iii) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
 - (iv) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
 - (v) monitoring of archaeological exclusion zones during and post construction;
 - (vi) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting a Historic England OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;

- (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (viii) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the offshore Order Limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities.
- (i) A mitigation scheme for any habitats of principal importance identified by the survey referred to in condition 18(2)(a) and in accordance with the offshore in principle monitoring plan.
- (j) An offshore operations and maintenance plan, in accordance with the outline offshore operations and maintenance plan, to be submitted to the MMO at least four months prior to commencement of operation of the licensed activities and to provide for review and resubmission every three years during the operational phase.
- (k) An aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House, to include details of how the undertaker will comply with the provisions of condition 10 for the lifetime of the authorised scheme.
- (l) An ornithological monitoring plan setting out the aims, objectives and methods for ornithological monitoring as agreed in consultation with the MMO and relevant statutory nature conservation bodies and in accordance with the offshore in principle monitoring plan.
- (m) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or 'blue hammer', are proposed to be used, a site integrity plan which accords with the principles set out in the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan and which the MMO is satisfied would provide such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.
- (n) A lighting and marking plan.
- (o) An operation and maintenance programme.

(2) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation which is itself in accordance with the details set out in the outline offshore written scheme of investigation (offshore), and which has been submitted to and approved by the MMO.

(3) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed 5,000kJ.

15.—(1) Any archaeological reports produced in accordance with condition 14(h)(iii) must be agreed with the MMO in consultation with the statutory historic body.

(2) The design plan required by condition 14(1)(a) must be prepared by the undertaker and determined by the MMO in accordance with the Development Principles.

(3) Each programme, statement, plan, protocol or scheme required to be approved under condition 14 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(4) No licensed activity may commence until for that licensed activity the MMO has approved in writing any relevant programme, statement, plan, protocol or scheme required to be approved under condition 14 or approval has been given following an appeal in accordance with sub-paragraph (6).

(5) Unless otherwise agreed in writing with the undertaker, the MMO must use reasonable endeavours to determine an application for approval made under condition 14 as soon as practicable and in any event within a period of four months commencing on the date the application is received by the MMO.

(6) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 14, unless otherwise agreed in writing by the MMO.

(7) No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes.

Post-construction plans and documents

16. The undertaker must conduct a swath bathymetric survey to IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out and provide the data and survey report(s) to the MCA and UKHO.

Reporting of engaged agents, contractors and vessels

17.—(1) The undertaker must provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) Any changes to the supplied details must be notified to the MMO in writing prior to the agent, contractor or vessel engaging in the licensed activities.

Pre-construction monitoring and surveys

18.—(1) The undertaker must, in discharging condition 14(1)(b), submit details (which accord with the offshore in principle monitoring plan) for written approval by the MMO in consultation with the relevant statutory bodies of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report; and—

- (a) the survey proposals must specify each survey’s objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 reef habitats of principal importance in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;
- (b) a full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a, and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works; and
- (c) any ornithological monitoring required by the ornithological monitoring plan submitted in accordance with condition 14(1)(l).

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation bodies.

Construction monitoring

19.—(1) The undertaker must, in discharging condition 14(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In the event that driven or part-driven pile foundations are proposed, such monitoring must include measurements of noise generated by the installation of the first four piled foundations of each piled foundation type to be installed unless the MMO otherwise agrees in writing.

(2) The undertaker must carry out the surveys approved under sub-paragraph (1), including any further noise monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(3) The results of the initial noise measurements monitored in accordance with sub-paragraph (1) must be provided to the MMO within six weeks of the installation of the first four piled foundations of each piled foundation type. The assessment of this report by the MMO will determine whether any further noise monitoring is required. If, in the opinion of the MMO in consultation with Natural England, the assessment shows significantly different impacts to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.

(4) Construction monitoring must include traffic monitoring in accordance with the outline marine traffic monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MMO in consultation with the MCA and Trinity House.

(5) In the event that piled foundations are proposed to be used, the details submitted in accordance with the offshore in principle monitoring plan must include proposals for monitoring marine mammals.

Post construction

20.—(1) The undertaker must, in discharging condition 14(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with relevant statutory bodies of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) a survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance constituting Annex 1 reef habitats identified in the pre-construction survey in the parts of the Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey;
- (b) within twelve months of completion of the licensed activities, one full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected;
- (c) any ornithological monitoring required by the ornithological monitoring plan submitted in accordance with condition 14(1)(l); and
- (d) post-construction traffic monitoring in accordance with the outline marine traffic monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MMO in consultation with the MCA and Trinity House.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(4) Following installation of cables (including fibre optic cables), the cable monitoring plan required under condition 14(1)(g)(iii) must be updated with the results of the post installation surveys. The plan must be implemented during the operational lifetime of the authorised scheme and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.

Reporting of impact pile driving

21.—(1) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the UK Marine Noise Registry—

- (a) prior to the commencement of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
- (b) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements; and
- (c) within 12 weeks of completion of impact pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements.

(2) The undertaker must notify the MMO of the successful submission of Forward Look or Close Out data pursuant to paragraph (1) above within 7 days of the submission.

(3) For the purpose of this condition—

- (a) “Marine Noise Registry” means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas;
- (b) “Forward Look” and “Close Out” requirements are as set out in the UK Marine Noise Registry Information Document Version 1 (July 2015) or any updated information document.

Reporting of cable protection

22.—(1) Not more than 4 months following completion of the construction phase of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection used for the authorised scheme.

(2) The report must include the following information—

- (a) location of the cable protection;
- (b) volume of cable protection; and
- (c) any other information relating to the cable protection as agreed between the MMO and the undertaker.

Deemed Licence under the 2009 Act – Generation Assets (Licence 2 –
Phase 2)

PART 1

Interpretation

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004;

“the 2017 Regulations” means the Conservation of Offshore Marine Habitats and Species Regulations 2017(a);

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“accommodation platform” means a fixed structure providing offshore accommodation for personnel

“authorised deposits” means the substances and articles specified in paragraph 5 of Part 2 of this licence;

“authorised scheme” means Work No. 1 described in Part 3 of this licence or any part of that work;

“cable protection” means measures for offshore cable crossings and where cable burial is not possible due to ground conditions or approaching offshore structures, to protect cables and fibre optic cables and prevent loss of seabed sediment by use of grout bags, protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science or any successor body to its function;

“commence” means the first carrying out of any part of the licensed activities save for pre-construction surveys and monitoring and “commenced” and “commencement” must be construed accordingly;

“condition” means a condition in Part 4 of this licence;

“Defence Infrastructure Organisation Safeguarding” means Ministry of Defence Safeguarding, Defence Infrastructure Organisation, Kingston Road, Sutton Coldfield, West Midlands B75 7RL and any successor body to its functions;

“Development Principles” means the document certified as the Development Principles by the Secretary of State for the purposes of the Order;

“draft marine mammal mitigation protocol” means the document certified as the draft marine mammal mitigation protocol by the Secretary of State for the purposes of this Order;

“draught height” means the distance between the lowest point of the rotating blade of the wind turbine generator and MHWS;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the 2009 Act;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order;

“gravity base system” means a structure principally of steel, concrete, or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, transition piece, corrosion

(a) S.I. 2017/1013

protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Norfolk Vanguard Southern North Sea Special area of Conservation Site Integrity Plan by the Secretary of State for the purposes of this Order;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at three or more points with steel pin piles or steel suction caissons and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO for the purposes of this licence;

“HAT” means highest astronomical tide;

“licence 1 (generation)” means the licence set out in Schedule 9 (deemed licence under the 2009 Act – generation assets (licence 1 – phase 1));

“licensed activities” means the activities specified in Part 3 of this licence;

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace (but only in relation to any of the ancillary works in Part 2 of Schedule 1 (ancillary works), any cable and any component part of any wind turbine generator, offshore electrical substation, accommodation platform or meteorological mast described in Part 1 of Schedule 1 (authorised development) not including the alteration, removal or replacement of foundations), to the extent assessed in the environmental statement; and “maintenance” is construed accordingly;

“Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence;

“marker buoy” means any floating device used for marker or navigation purposes, including LIDAR buoys and wave buoys;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“measurement buoy” means any floating device used for measurement purposes, including LIDAR buoys and wave buoys;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“monopile foundation” means a steel pile, typically cylindrical, driven and/or drilled into the seabed and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“Norfolk Vanguard East” means the eastern area located in the offshore Order limits within which wind turbine generators will be situated;

“Norfolk Vanguard West” means the western area located in the offshore Order limits within which wind turbine generators will be situated;

“notice to mariners” means a notice issued by the undertaker to mariners to inform them of issues that affect the safety of navigation;

“offshore cables” means any cables offshore;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State for the purposes of this Order;

“offshore Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out, whose grid coordinates are set out in Part 2 of this licence;

“the Order” means the Norfolk Vanguard Offshore Wind Farm Order 201X;

“outline fisheries liaison and co-existence plan” means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State for the purposes of this Order;

“outline marine traffic monitoring strategy” means the document certified as the outline marine traffic monitoring strategy by the Secretary of State for the purposes of this Order;

“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State for the purposes of the Order;

“outline written scheme of investigation (offshore)” means the document certified as the outline written scheme of investigation (offshore) by the Secretary of State for the purposes of this Order;

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure steel jacket foundations;

“relevant site” means a European offshore marine site and a European site;

“scour protection” means measures to prevent loss of seabed sediment around any marine structure placed in or on the seabed by use of protective aprons, mattresses with or without frond devices, or rock and gravel placement.

“single offshore phase” means carrying out all offshore works as a single construction operation;

“statutory historic body” means Historic Buildings and Monuments Commission for England (Historic England) or its successor in function;

“statutory nature conservation body” means an organisation charged by government with advising on nature conservation matters;

“suction caisson” means a large diameter steel cylindrical shell which penetrates the seabed assisted by a hydrostatic pressure differential for fixity of foundations;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“two offshore phases” means carrying out the offshore works as two separate construction operations;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Norfolk Vanguard Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” means a structure comprising a tower, rotor with up to three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include corrosion protection systems, helicopter landing facilities and other associated equipment, fixed to a foundation;

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

2. A reference to any statute, order, regulation or similar instrument is construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

3. Unless otherwise indicated—

- (a) all times are taken to be Greenwich Mean Time (GMT);
- (b) all co-ordinates are taken to be latitude and longitude degrees and minutes to two decimal places.

4. Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence are—

- (a) Marine Management Organisation
Marine Licensing
Lancaster House
Hampshire Court
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032;
- (b) Marine Management Organisation (local office)
Lowestoft Office
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 573 149;
- (c) Trinity House
Tower Hill
London
EC3N 4DH
Tel: 020 7481 6900;
- (d) The United Kingdom Hydrographic Office
Admiralty Way
Taunton
Somerset
TA1 2DN
Tel: 01823 337 900;
- (e) Maritime and Coastguard Agency
Navigation Safety Branch
Bay 2/20, Spring Place
105 Commercial Road
Southampton
SO15 1EG
Tel: 020 3817 2426;
- (f) Centre for Environment, Fisheries and Aquaculture Science
Pakefield Road
Lowestoft
Suffolk
NR33 0HT

Tel: 01502 562 244;

(g) Natural England
Area 1C, Nobel House
17 Smith Square
London
SW1P 2AL
Tel: 0300 060 4911;

(h) Historic England
Cannon Bridge
House 25
Dowgate Hill
London
EC4R 2YA
Tel: 020 7973 3700

PART 2

Licensed Marine Activities – General

1. This licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

2. The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72 (7) relating to the transfer of the licence only apply to a transfer not falling within article 6 (benefit of the Order).

3. With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this Schedule, the approved details, plan or scheme are taken to include any amendments that may subsequently be approved in writing by the MMO.

4. Any amendments to or variations from the approved plans, protocols or statements must demonstrate that the subject matter of the approval sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

5. The substances or articles authorised for deposit at sea are—

- (a) iron and steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the offshore Order limits during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

6. The grid coordinates for the authorised scheme are specified below—

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 55' 0.308" N	3° 4' 42.589" E	6	53° 2' 36.817" N	2° 34' 16.309" E
2	52° 49' 53.975" N	3° 5' 22.789" E	7	52° 49' 38.834" N	2° 34' 15.809" E
3	52° 46' 19.050" N	3° 2' 16.682" E	8	52° 48' 47.472" N	2° 33' 28.343" E
4	52° 45' 10.584" N	2° 45' 33.989" E	9	52° 48' 3.133" N	2° 26' 37.427" E
5	52° 51' 41.636" N	2° 45' 34.220" E	10	52° 56' 9.089" N	2° 18' 33.231" E

PART 3

Details of Licensed Marine Activities

1. Subject to the licence conditions at Part 4, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) of the 2009 Act—

- (a) the deposit at sea of the substances and articles specified in paragraph 5 of Part 2 of this licence;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (d) the disposal of up to 37,854,712 m³ of inert material of natural origin within the offshore Order limits produced during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works at disposal site references HU215 and HU216 within the extent of the Order limits seaward of MHWS, comprising—
 - (i) 36,000,000 m³ for cable and fibre optic cable installation;
 - (ii) 1,767,146 m³ for the wind turbine generators;
 - (iii) 75,000 m³ for the accommodation platform; and
 - (iv) 12,566 m³ for the meteorological masts; and
- (e) the removal of static fishing equipment; and
- (f) The disposal of drill arisings in connection with any foundation drilling up to a total of 400,624m³.

2. Such activities are authorised in relation to the construction, maintenance and operation of—

(1) Work No. 1 (phase 2)—

- (a) an offshore wind turbine generating station with an electrical export capacity of up to 1,800 MW at the point of connection to the offshore electrical platform(s) referred to at Work No. 2 comprising up to 180 wind turbine generators each fixed to the seabed by one of the following foundation types: monopile (piled or suction caisson), jacket (piled or suction caisson), or gravity base fitted with rotating blades and situated within the area shown on the works plan and further comprising (b) to (e) below;
- (b) up to two accommodation platforms fixed to the seabed within the area shown on the works plan by one of the following foundation types: jacket (piled or suction caisson) or gravity base;

- (c) up to two meteorological masts fixed to the seabed within the area shown on the works plan by one of the following foundation types: monopile (piled or suction caisson), jacket (piled or suction caisson) or gravity base;
- (d) up to two LIDAR measurement buoys fixed to the seabed within the area shown on the works plan by one of the following foundation types: monopile (piled) or floating and up to two wave measurement buoys fixed to the seabed within the area shown on the works plan by one foundation type (floating); and
- (e) a network of subsea array cables and fibre optic cables within the area shown on the works plan between the wind turbine generators, and between the wind turbine generators and Work No.2 including one or more offshore cable crossings.

(2) In connection with such Work No. 1 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement and the provisions of this licence including:

- (a) scour protection around the foundations of the offshore structures;
- (b) cable protection measures such as the placement of rock and/or concrete mattresses, with or without frond devices;
- (c) the removal of material from the seabed required for the construction of Work No. 1 and the disposal of up to 37,854,712 cubic metres of inert material of natural origin within the Order limits produced during construction drilling, seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching and excavation of horizontal directional drilling exit pits; and
- (d) removal of static fishing equipment;

(3) In connection with such Work No. 1, ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised scheme; and
- (b) beacons, fenders and other navigational warning or ship impact protection works.

PART 4

Conditions

Design parameters

1.—(1) Subject to paragraph (2), each wind turbine generator forming part of the authorised scheme must not—

- (a) exceed a height of 350 metres when measured from HAT to the tip of the vertical blade;
- (b) exceed a height of 198.5 metres to the height of the centreline of the generator shaft forming part of the hub when measured from HAT;
- (c) exceed a rotor diameter of 303 metres;
- (d) be less than 760 metres from the nearest wind turbine generator in either direction perpendicular to the approximate prevailing wind direction (crosswind) or be less than 760 metres from the nearest wind turbine generator in either direction which is in line with the approximate prevailing wind direction (downwind);
- (e) have a draught height of less than 27 metres from MHWS.

(2) References to the location of a wind turbine generator in paragraph (1) above are references to the centre point of that turbine.

(3) The total number of wind turbine generators must not exceed 180 and must be configured such that at any time—

- (a) no more than two-thirds of the total number of wind turbine generators (rounded to the nearest whole number) must be located in Norfolk Vanguard West; and
- (b) no more than one-half of the total number of wind turbine generators (rounded to the nearest whole number) must be located in Norfolk Vanguard East.

2.—(1) The dimensions of any accommodation platform forming part of the authorised scheme must not exceed 100 metres in height when measured from HAT, 90 metres in length and 60 metres in width.

(2) Each meteorological mast must not exceed a height of 200 metres above HAT.

(3) Each meteorological mast must not have more than one supporting foundation.

3. The total length of the cables and the area and volume of their cable protection must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection (m² and m³)</i>
Work No. 1(e) (array)	600 kilometres	400,000m ² 204,000 m ³

4.—(1) In relation to a wind turbine generator, each foundation using piles must not have—

- (a) more than four driven piles;
- (b) in the case of single pile structures, a pile diameter which is more than 15 metres; or
- (c) in the case of two or more pile structures, have a pile diameter which is more than five metres.

(2) In relation to a wind turbine generator, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 1,963 m².

5.—(1) In relation to a meteorological mast, each foundation using piles must not have—

- (a) more than four driven piles;
- (b) in the case of single pile structures, a pile diameter which is more than 10 metres;
- (c) in the case of two or more pile structures, have a pile diameter which is more than three metres.

(2) In relation to a meteorological mast, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 314 m².

6.—(1) In relation to an accommodation platform, each foundation using piles must not have—

- (a) more than six driven piles;
- (b) a pile diameter which is more than three metres.

(2) In relation to an accommodation platform, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 7,500 m².

7.—(1) In relation to any LIDAR measurement buoys, each foundation using piles must not have a pile diameter of greater than 10 metres.

(2) In relation to any LIDAR measurement buoys, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 79m² per buoy and 157 m² in total.

(3) In relation to any wave measurement buoys, each foundation must not have a seabed footprint area (excluding scour protection) of greater than 150m² per buoy and 300 m² in total.

Phasing of the authorised scheme

8.—(1) Taken together with works authorised and proposed to be constructed pursuant to licence 1 (generation)—

- (a) the total electrical export capacity of the authorised scheme must not exceed 1,800MW at the point of connection to the offshore electrical platform(s);
 - (b) the total number of wind turbine generators forming part of the authorised scheme must not exceed 180;
 - (c) the total number of accommodation platforms forming part of the authorised scheme must not exceed two;
 - (d) the total number of meteorological masts forming part of the authorised scheme must not exceed two;
 - (e) the total number of LIDAR measurement buoys forming part of the authorised scheme must not exceed two;
 - (f) the total number of wave measurement buoys forming part of the authorised scheme must not exceed two;
 - (g) the total amount of scour protection for the wind turbine generators, accommodation platform(s), meteorological masts and measurement buoys forming part of the authorised scheme must not exceed 5,463,752 m² and 27,318,759 m³; and
 - (h) the total amount of inert material of natural origin disposed within the offshore Order limits as part of the authorised scheme must not exceed 37,854,712 m³;
 - (i) the total amount of disposal for drill arisings in connection with any foundation drilling must not exceed 400,624 m³; and
 - (j) the total length of cable and the amount of cable protection must not exceed the figures stated in condition 3 of this licence.
- (2) Prior to the commencement of the authorised scheme the undertaker must give notice to the MMO detailing—
- (a) whether the authorised scheme will be constructed—
 - (i) in a single offshore phase under this licence; or
 - (ii) in two offshore phases under this licence and licence 1 (generation); and
 - (b) where the authorised scheme will be constructed in two offshore phases—
 - (i) prior to the commencement of phase 1, the total number of wind turbine generators accommodation platforms, meteorological masts, LIDAR measurement buoys and wave measurement buoys to be constructed in that phase; and
 - (ii) prior to the commencement of phase 2, the total number of wind turbine generators accommodation platforms, meteorological masts, LIDAR measurement buoys and wave measurement buoys to be constructed in that phase.

Notifications and inspections

9.—(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
 - (i) all agents and contractors notified to the MMO in accordance with condition 17; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 17;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above must provide a completed confirmation form to the MMO confirming receipt of this licence.

(2) Only those persons and vessels notified to the MMO in accordance with condition 17 are permitted to carry out the licensed activities.

(3) Copies of this licence must also be available for inspection at the following locations—

- (a) the undertaker's registered address;

- (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
- (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.

(4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b) above.

(5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.

(6) The undertaker must inform the MMO Coastal Office in writing at least five days prior to the commencement of the licensed activities or any part of them, and within five days of completion of the licensed activities.

(7) The undertaker must inform the Kingfisher Information Service of Seafish by email to kingfisher@seafish.co.uk of details regarding the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part—

- (a) at least fourteen days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
- (b) as soon as reasonably practicable and no later than 24 hours of completion of construction of all offshore activities.

Confirmation of notification must be provided to the MMO within five days.

(8) A notice to mariners must be issued at least ten days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 1 (wind turbine generators or other offshore construction activities including array cables and fibre optic cables) and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, the MCA and UKHO within five days.

(9) The notices to mariners must be updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under condition 14(1)(b). Copies of all notices must be provided to the MMO and UKHO within five days.

(10) The undertaker must notify the UK Hydrographic Office both of the commencement (within ten days), progress and completion of construction (within ten days) of the licensed activities in order that all necessary amendments to nautical charts are made and the undertaker must send a copy of such notifications to the MMO within five days.

(11) In case of damage to, or destruction or decay of the authorised scheme seaward of MHWS or any part thereof, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UK Hydrographic Office.

(12) In case of exposure of cables on or above the seabed, the undertaker must within three business days or five days whichever is the sooner following the receipt by the undertaker of the final survey report from the periodic burial survey, notify mariners by issuing a notice to mariners and by informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO and MCA within five days.

Aids to navigation

10.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and to take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

(2) The undertaker must during the period from the start of construction of the authorised scheme to completion of decommissioning seaward of MHWS keep Trinity House and the MMO informed of progress of the authorised scheme seaward of MHWS including the following—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation as set out in the aids to navigation management plan agreed pursuant to condition 14(1)(k) using the reporting system provided by Trinity House.

(4) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 9(11) and condition 9(12) are invoked, the undertaker must lay down such marker buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

Colouring of structures

11.—(1) Except as otherwise required by Trinity House the undertaker must colour all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height directed by Trinity House, or must colour the structure as directed by Trinity House from time to time.

(2) Subject to sub-paragraph (1) above, unless the MMO otherwise directs, the undertaker must paint the remainder of the structures submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

12.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme, including any chemical agents placed within any monopile void, must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (as amended).

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) The undertaker must inform the MMO of the location and quantities of material disposed of each month under this licence. This information must be submitted to the MMO by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(5) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of or seabed preparation for foundations, and drilling mud is disposed of within disposal site references HU215 and HU216 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(6) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(7) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the District Marine Office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it.

(8) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained to prevent run off entering the water through the freeing ports.

(9) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 14(1)(d)(i).

(10) All dropped objects must be reported to the MMO using the Dropped Object Procedure Form as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident. On receipt of the Dropped Object Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

Force majeure

13.—(1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to make a deposit which is not authorised under this licence, whether within or outside of the Order limits, because the safety of human life and/or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

Pre-construction plans and documentation

14.—(1) The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows, in accordance with the Development Principles—
 - (i) the proposed location and choice of foundation of all wind turbine generators, offshore electrical platforms, accommodation platforms and meteorological masts;
 - (ii) the height to the tip of the vertical blade of all wind turbine generators;
 - (iii) the height to the centreline of the generator shaft forming part of the hub of all wind turbine generators;
 - (iv) the rotor diameter and spacing of all wind turbine generators;
 - (v) the height of all lattice towers forming part of all meteorological masts;
 - (vi) the height, length and width of all accommodation platforms;
 - (vii) the dimensions of all foundations;
 - (viii) the length and arrangement of all cables (including fibre optic cables) comprising Work No. 1(e);
 - (ix) the proposed layout of all wind turbine generators (in accordance with the recommendations for layout contained in MGN543 and its annexes), accommodation platforms and meteorological masts including any exclusion zones identified under sub-paragraph (1)(h)(iv);
 - (x) a plan showing the indicative layout of all wind turbine generators, accommodation platforms and meteorological masts including all exclusion zones (insofar as not shown in (ix) above) and showing the indicative programming of particular works as set out in the indicative programme to be provided under sub-paragraph (1)(b)(iv);
 - (xi) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph (1)(i); and

- (xii) the grid coordinates of the centre point of the proposed location for each wind turbine generator, offshore electrical platform, substation and meteorological mast.
- to ensure conformity with the description of Work No. 1 and compliance with conditions 1 to 8 above.
- (b) A construction programme and monitoring plan (which accords with the offshore in principle monitoring plan) to include details of—
 - (i) the proposed construction start date;
 - (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction surveys and monitoring and related reporting in accordance with sub-paragraph (1)(h) and conditions 17, 18, 19 and 20; and
 - (iv) an indicative written construction programme for all wind turbine generators accommodation platforms, meteorological masts, measurement buoys and cables (including fibre optic cables) comprised in the works in Part 3 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above);
 with details pursuant to paragraph (iii) above to be submitted to the MMO in accordance with the following—
 - (aa) at least four months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed pre-construction monitoring;
 - (bb) at least four months prior to construction, detail on construction monitoring;
 - (cc) at least four months prior to commissioning, detail of post-construction (and operational) monitoring;
 unless otherwise agreed in writing with the MMO.
 - (c) A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—
 - (i) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation works, and having regard to any mitigation scheme pursuant to sub-paragraph (1)(i);
 - (ii) soft start procedures with specified duration periods;
 - (iii) cable (including fibre optic cable) installation;
 - (iv) contractors;
 - (v) vessels, vessels maintenance and vessels transit corridors; and
 - (vi) associated and ancillary works.
 - (d) A project environmental management (in accordance with the outline project environmental management plan) plan covering the period of construction and operation to include details of—
 - (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised scheme in relation to all activities carried out;
 - (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;
 - (iv) the appointment and responsibilities of a fisheries liaison officer;
 - (v) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 9 and to address the interaction of the licensed activities with fishing activities; and

- (vi) procedures to be followed within vessels transit corridors to minimise disturbance to red-throated diver during operation and maintenance activities.
- (e) A scour protection and cable protection plan (in accordance with the outline scour protection and cable protection plan) providing details of the need, type, sources, quantity, distribution and installation methods for scour protection and cable (including fibre optic cable) protection. For the avoidance of doubt “distribution” in this sub-paragraph must include quantities in respect of each structure comprised in the offshore works and intended to be subject to scour protection.
- (f) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’ are proposed to be used, a marine mammal mitigation protocol, in accordance with the draft marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals and following current best practice as advised by the relevant statutory nature conservation bodies.
- (g) A cable specification, installation and monitoring plan, to include—
 - (i) technical specification of offshore cables (including fibre optic cables) below MHWS, including a desk-based assessment of attenuation of electro-magnetic field strengths, shielding and cable burial depth in accordance with industry good practice;
 - (ii) a detailed cable (including fibre optic cables) laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques, including cable protection; and
 - (iii) proposals for monitoring offshore cables (including fibre optic cables) including cable protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of unburied or shallow buried cables.
- (h) An archaeological written scheme of investigation in relation to the offshore Order limits seaward of mean low water, which must accord with the outline written scheme of investigation (offshore) and industry good practice, in consultation with the statutory historic body to include—
 - (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (ii) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (iii) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
 - (iv) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
 - (v) monitoring of archaeological exclusion zones during and post construction;
 - (vi) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting a Historic England OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
 - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
 - (viii) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the offshore Order Limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities.
- (i) A mitigation scheme for any habitats of principal importance identified by the survey referred to in condition 18(2)(a) and in accordance with the offshore in principle monitoring plan.

- (j) An offshore operations and maintenance plan, in accordance with the outline offshore operations and maintenance plan, to be submitted to the MMO at least four months prior to commencement of operation of the licensed activities and to provide for review and resubmission every three years during the operational phase.
- (k) An aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House, to include details of how the undertaker will comply with the provisions of condition 10 for the lifetime of the authorised scheme.
- (l) An ornithological monitoring plan setting out the aims, objectives and methods for ornithological monitoring as agreed in consultation with the MMO and relevant statutory nature conservation bodies and in accordance with the offshore in principle monitoring plan.
- (m) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’, are proposed to be used, a site integrity plan which accords with the principles set out in the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan and which the MMO is satisfied would provide such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.
- (n) A lighting and marking plan.
- (o) An operation and maintenance programme.

(2) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation which is itself in accordance with the details set out in the outline offshore written scheme of investigation (offshore), and which has been submitted to and approved by the MMO.

(3) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed 5,000kJ.

15.—(1) Any archaeological reports produced in accordance with condition 14(h)(iii) must be agreed with the MMO in consultation with the statutory historic body.

(2) The design plan required by condition 14(1)(a) must be prepared by the undertaker and determined by the MMO in accordance with the Development Principles.

(3) Each programme, statement, plan, protocol or scheme required to be approved under condition 14 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(4) No licensed activity may commence until for that licensed activity the MMO has approved in writing any relevant programme, statement, plan, protocol or scheme required to be approved under condition 14 or approval has been given following an appeal in accordance with sub-paragraph (6).

(5) Unless otherwise agreed in writing with the undertaker, the MMO must use reasonable endeavours to determine an application for approval made under condition 14 as soon as practicable and in any event within a period of four months commencing on the date the application is received by the MMO.

(6) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 14, unless otherwise agreed in writing by the MMO.

(7) No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes.

Post-construction plans and documents

16. The undertaker must conduct a swath bathymetric survey to IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out and provide the data and survey report(s) to the MCA and UKHO.

Reporting of engaged agents, contractors and vessels

17.—(1) The undertaker must provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) Any changes to the supplied details must be notified to the MMO in writing prior to the agent, contractor or vessel engaging in the licensed activities.

Pre-construction monitoring and surveys

18.—(1) The undertaker must, in discharging condition 14(1)(b), submit details (which accord with the offshore in principle monitoring plan) for written approval by the MMO in consultation with the relevant statutory bodies of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report; and—

- (a) the survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 reef habitats of principal importance in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;
- (b) a full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a, and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works; and
- (c) any ornithological monitoring required by the ornithological monitoring plan submitted in accordance with condition 14(1)(l).

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation bodies.

Construction monitoring

19.—(1) The undertaker must, in discharging condition 14(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In the event that driven or part-driven pile foundations are proposed, such monitoring must include measurements of noise generated by the installation of the first four

piled foundations of each piled foundation type to be installed unless the MMO otherwise agrees in writing.

(2) The undertaker must carry out the surveys approved under sub-paragraph (1), including any further noise monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(3) The results of the initial noise measurements monitored in accordance with sub-paragraph (1) must be provided to the MMO within six weeks of the installation of the first four piled foundations of each piled foundation type. The assessment of this report by the MMO will determine whether any further noise monitoring is required. If, in the opinion of the MMO in consultation with Natural England, the assessment shows significantly different impacts to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.

(4) Construction monitoring must include traffic monitoring in accordance with the outline marine traffic monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MMO in consultation with the MCA and Trinity House.

(5) In the event that piled foundations are proposed to be used, the details submitted in accordance with the offshore in principle monitoring plan must include proposals for monitoring marine mammals.

Post construction

20.—(1) The undertaker must, in discharging condition 14(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with relevant statutory bodies of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) a survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance constituting Annex 1 reef habitats identified in the pre-construction survey in the parts of the Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey;
- (b) within twelve months of completion of the licensed activities, one full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected;
- (c) any ornithological monitoring required by the ornithological monitoring plan submitted in accordance with condition 14(1)(l); and
- (d) post-construction traffic monitoring in accordance with the outline marine traffic monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MMO in consultation with the MCA and Trinity House.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(4) Following installation of cables (including fibre optic cables), the cable monitoring plan required under condition 14(1)(g)(iii) must be updated with the results of the post installation surveys. The plan must be implemented during the operational lifetime of the authorised scheme and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.

Reporting of impact pile driving

21.—(1) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the UK Marine Noise Registry—

- (a) prior to the commencement of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
- (b) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements; and
- (c) within 12 weeks of completion of impact pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements.

(2) The undertaker must notify the MMO of the successful submission of Forward Look or Close Out data pursuant to paragraph (1) above within 7 days of the submission.

(3) For the purpose of this condition—

- (a) “Marine Noise Registry” means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas;
- (b) “Forward Look” and “Close Out” requirements are as set out in the UK Marine Noise Registry Information Document Version 1 (July 2015) or any updated information document.

Reporting of cable protection

22.—(1) Not more than 4 months following completion of the construction phase of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection used for the authorised scheme.

(2) The report must include the following information—

- (a) location of the cable protection;
- (b) volume of cable protection; and
- (c) any other information relating to the cable protection as agreed between the MMO and the undertaker.

23.

SCHEDULE 11

Article 32

Deemed Licence under the 2009 Act – Transmission Assets (Licence 1 – Phase 1)

PART 1

Interpretation

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004;

“the 2017 Regulations” means the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007(a);

(a) S.I. 2011/934

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“authorised deposits” means the substances and articles specified in paragraph 5 of Part 2 of this licence;

“authorised scheme” means Work Nos. 2, 3, 4A, and 4B described in Part 3 of this licence or any part of that work;

“cable protection” means measures for offshore cable crossings and where cable burial is not possible due to ground conditions or approaching offshore structures, to protect cables and fibre optic cables and prevent loss of seabed sediment by use of grout bags, protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science or any successor body to its function;

“commence” means the first carrying out of any part of the licensed activities save for pre-construction surveys and monitoring and “commenced” and “commencement” must be construed accordingly;

“condition” means a condition in Part 4 of this licence;

“Defence Infrastructure Organisation Safeguarding” means Ministry of Defence Safeguarding, Defence Infrastructure Organisation, Kingston Road, Sutton Coldfield, West Midlands B75 7RL and any successor body to its functions;

“Development Principles” means the document certified as the Development Principles by the Secretary of State for the purposes of the Order;

“draft marine mammal mitigation protocol” means the document certified as the draft marine mammal mitigation protocol by the Secretary of State for the purposes of this Order;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the 2009 Act;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order;

“gravity base system” means a structure principally of steel, concrete, or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State for the purposes of this Order;

“in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan by the Secretary of State for the purposes of this Order;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at three or more points with steel pin piles or steel suction caissons and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO for the purposes of this licence;

“HAT” means highest astronomical tide;

“licence 2 (transmission)” means the licence set out in Schedule 12 (deemed licence under the 2009 Act – transmission assets (licence 2 – phase 2));

“licensed activities” means the activities specified in Part 3 of this licence;

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace (but only in relation to any of the ancillary works in Part 2 of Schedule 1 (ancillary works), any cable and any component part of any wind turbine generator, offshore electrical platform, accommodation platform or meteorological mast described in Part 1 of Schedule 1 (authorised development) not including the alteration, removal or replacement of foundations), to the extent assessed in the environmental statement; and “maintenance” is construed accordingly;

“Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“notice to mariners” means a notice issued by the undertaker to mariners to inform them of issues that affect the safety of navigation;

“offshore cables” means any cables offshore;

“offshore electrical platform” means a platform attached to the seabed by means of a foundation, with one or more decks, whether open or fully clad, accommodating electrical power transformers, switchgear, instrumentation, protection and control systems and other associated equipment and facilities to enable the transmission of electronic communications and for electricity to be collected at, and exported from, the platform;

“offshore Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out, whose grid coordinates are set out in Part 2 of this licence;

“the Order” means the Norfolk Vanguard Offshore Wind Farm Order 201X;

“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State for the purposes of the Order;

“outline fisheries liaison and co-existence plan” means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State for the purposes of this Order;

“outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation site integrity plan” means the document certified as the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation site integrity plan by the Secretary of State for the purposes of this Order;

“outline written scheme of investigation (offshore)” means the document certified as the outline written scheme of investigation (offshore) by the Secretary of State for the purposes of this Order;

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure steel jacket foundations;

“relevant site” means a European offshore marine site and a European site

“scour protection” means measures to prevent loss of seabed sediment around any marine structure placed in or on the seabed by use of protective aprons, mattresses with or without frond devices, or rock and gravel placement.

“single offshore phase” means carrying out all offshore works as a single construction operation;

“statutory historic body” means Historic Buildings and Monuments Commission for England (Historic England) or its successor in function;

“statutory nature conservation body” means an organisation charged by government with advising on nature conservation matters;

“suction caisson” means a large diameter steel cylindrical shell which penetrates the seabed assisted by a hydrostatic pressure differential for fixity of foundations;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“two offshore phases” means carrying out the offshore works as two separate construction operations;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Norfolk Vanguard Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“Work No. 4C” means the onshore transmission works at the landfall consisting of up to two transition jointing pits and up to four cables to be laid in ducts underground and associated fibre optic cables laid within cable ducts from MHWS at Happisburgh South, North Norfolk; and

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument is construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) Unless otherwise indicated—

(a) all times are taken to be Greenwich Mean Time (GMT);

(b) all co-ordinates are taken to be latitude and longitude degrees and minutes to two decimal places.

(4) Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence are—

(a) Marine Management Organisation

Marine Licensing

Lancaster House

Hampshire Court

Newcastle Business Park

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032;

(b) Marine Management Organisation (local office)

Lowestoft Office

Pakefield Road

Lowestoft

Suffolk

NR33 0HT

Tel: 01502 573 149;

(c) Trinity House

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900;

- (d) The United Kingdom Hydrographic Office
Admiralty Way
Taunton
Somerset
TA1 2DN
Tel: 01823 337 900;
- (e) Maritime and Coastguard Agency
Navigation Safety Branch
Bay 2/20, Spring Place
105 Commercial Road
Southampton
SO15 1EG
Tel: 020 3817 2426;
- (f) Centre for Environment, Fisheries and Aquaculture Science
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 562 244;
- (g) Natural England
Area 1C, Nobel House
17 Smith Square
London
SW1P 2AL
Tel: 0300 060 4911;
- (h) Historic England
Cannon Bridge
House 25
Dowgate Hill
London
EC4R 2YA
Tel: 020 7973 3700

PART 2

Licensed Marine Activities – General

1. This licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

2. The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) relating to the transfer of the licence only apply to a transfer not falling within article 6 (benefit of the Order).

3. With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this Schedule, the approved details, plan or scheme are taken to include any amendments that may subsequently be approved in writing by the MMO.

4. Any amendments to or variations from the approved plans, protocols or statements must demonstrate that the subject matter of the approval sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

5. The substances or articles authorised for deposit at sea are—

- (a) iron and steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the offshore Order limits during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

6. The grid coordinates for the authorised scheme are specified below—

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 55' 0.308" N	3° 4' 42.589" E	269	52° 48' 36.617" N	1° 39' 45.198" E
2	52° 49' 53.975" N	3° 5' 22.789" E	270	52° 48' 36.608" N	1° 39' 45.442" E
3	52° 46' 19.050" N	3° 2' 16.682" E	271	52° 48' 36.111" N	1° 39' 58.227" E
4	52° 45' 10.584" N	2° 45' 33.989" E	272	52° 47' 53.162" N	1° 57' 17.842" E
5	52° 51' 41.636" N	2° 45' 34.220" E	273	52° 47' 51.688" N	1° 57' 48.405" E
6	53° 2' 36.817" N	2° 34' 16.309" E	274	52° 47' 50.436" N	1° 58' 0.642" E
7	52° 49' 38.834" N	2° 34' 15.809" E	275	52° 47' 48.214" N	1° 58' 12.320" E
8	52° 48' 47.472" N	2° 33' 28.343" E	276	52° 47' 42.495" N	1° 58' 33.820" E
9	52° 48' 3.133" N	2° 26' 37.427" E	277	52° 47' 36.793" N	1° 58' 49.157" E
10	52° 56' 9.089" N	2° 18' 33.231" E	278	52° 47' 27.713" N	1° 59' 7.719" E
11	52° 45' 11.467" N	2° 45' 30.454" E	279	52° 47' 19.963" N	1° 59' 19.409" E
12	52° 45' 11.943" N	2° 45' 28.711" E	280	52° 47' 10.581" N	1° 59' 30.409" E
13	52° 45' 12.967" N	2° 45' 25.281" E	281	52° 45' 3.401" N	2° 1' 51.874" E

14	52° 45' 14.081" N	2° 45' 21.928" E	282	52° 45' 3.127" N	2° 1' 52.189" E
15	52° 45' 15.285" N	2° 45' 18.661" E	283	52° 45' 2.287" N	2° 1' 53.183" E
16	52° 45' 15.920" N	2° 45' 17.061" E	284	52° 45' 1.635" N	2° 1' 53.925" E
17	52° 45' 17.254" N	2° 45' 13.933" E	285	52° 45' 1.351" N	2° 1' 54.277" E
18	52° 45' 17.952" N	2° 45' 12.407" E	286	52° 45' 0.388" N	2° 1' 55.510" E
19	52° 45' 19.409" N	2° 45' 9.432" E	287	52° 45' 0.110" N	2° 1' 55.877" E
20	52° 45' 20.533" N	2° 45' 7.335" E	288	52° 44' 59.840" N	2° 1' 56.258" E
21	52° 45' 20.944" N	2° 45' 6.567" E	289	52° 44' 58.926" N	2° 1' 57.587" E
22	52° 45' 21.741" N	2° 45' 5.178" E	290	52° 44' 58.663" N	2° 1' 57.982" E
23	52° 45' 23.389" N	2° 45' 2.488" E	291	52° 44' 58.407" N	2° 1' 58.390" E
24	52° 45' 24.240" N	2° 45' 1.188" E	292	52° 44' 57.545" N	2° 1' 59.812" E
25	52° 45' 25.993" N	2° 44' 58.685" E	293	52° 44' 57.298" N	2° 2' 0.233" E
26	52° 45' 27.812" N	2° 44' 56.313" E	294	52° 44' 57.059" N	2° 2' 0.667" E
27	52° 45' 29.693" N	2° 44' 54.076" E	295	52° 44' 56.253" N	2° 2' 2.175" E
28	52° 45' 31.632" N	2° 44' 51.980" E	296	52° 44' 56.022" N	2° 2' 2.621" E
29	52° 45' 32.623" N	2° 44' 50.985" E	297	52° 44' 55.800" N	2° 2' 3.078" E
30	52° 45' 33.626" N	2° 44' 50.027" E	298	52° 44' 55.053" N	2° 2' 4.667" E
31	52° 45' 35.671" N	2° 44' 48.223" E	299	52° 44' 54.839" N	2° 2' 5.136" E
32	52° 45' 37.763" N	2° 44' 46.570" E	300	52° 44' 54.635" N	2° 2' 5.615" E
33	52° 45' 39.897" N	2° 44' 45.071" E	301	52° 44' 53.950" N	2° 2' 7.278" E
34	52° 45' 42.069" N	2° 44' 43.731" E	302	52° 44' 53.755" N	2° 2' 7.768" E
3	52° 45' 43.168" N	2° 44' 43.121" E	303	52° 44' 53.569" N	2° 2' 8.268" E
36	52° 45' 44.275" N	2° 44' 42.551" E	304	52° 44' 52.949" N	2° 2' 9.998" E
37	52° 45' 46.511" N	2° 44' 41.534" E	305	52° 44' 52.773" N	2° 2' 10.507" E
38	52° 45' 47.638" N	2° 44' 41.087" E	306	52° 44' 52.607" N	2° 2' 11.025" E

39	52° 45' 48.833" N	2° 44' 40.681" E	307	52° 44' 52.053" N	2° 2' 12.816" E
40	52° 46' 9.781" N	2° 44' 40.687" E	308	52° 44' 51.897" N	2° 2' 13.343" E
41	52° 46' 46.724" N	2° 44' 40.696" E	309	52° 44' 51.751" N	2° 2' 13.877" E
42	52° 46' 48.173" N	2° 44' 40.696" E	310	52° 44' 51.267" N	2° 2' 15.722" E
43	52° 46' 52.974" N	2° 44' 40.698" E	311	52° 44' 51.131" N	2° 2' 16.263" E
44	52° 46' 55.152" N	2° 44' 40.698" E	312	52° 44' 51.006" N	2° 2' 16.812" E
45	52° 46' 57.976" N	2° 44' 40.699" E	313	52° 44' 50.593" N	2° 2' 18.703" E
46	52° 47' 0.395" N	2° 44' 40.053" E	314	52° 44' 50.478" N	2° 2' 19.257" E
47	52° 47' 1.558" N	2° 44' 39.624" E	315	52° 44' 50.373" N	2° 2' 19.818" E
48	52° 47' 1.970" N	2° 44' 39.479" E	316	52° 44' 50.034" N	2° 2' 21.747" E
49	52° 47' 2.003" N	2° 44' 39.463" E	317	52° 44' 49.940" N	2° 2' 22.313" E
50	52° 47' 3.144" N	2° 44' 38.936" E	318	52° 44' 49.857" N	2° 2' 22.883" E
51	52° 47' 4.295" N	2° 44' 38.272" E	319	52° 44' 49.592" N	2° 2' 24.844" E
52	52° 47' 4.681" N	2° 44' 38.004" E	320	52° 44' 49.520" N	2° 2' 25.418" E
53	52° 47' 4.998" N	2° 44' 37.816" E	321	52° 44' 49.459" N	2° 2' 25.996" E
54	52° 47' 5.524" N	2° 44' 37.450" E	322	52° 44' 49.268" N	2° 2' 27.980" E
55	52° 47' 6.616" N	2° 44' 36.554" E	323	52° 44' 49.218" N	2° 2' 28.561" E
56	52° 47' 7.671" N	2° 44' 35.546" E	324	52° 44' 49.179" N	2° 2' 29.143" E
57	52° 47' 8.686" N	2° 44' 34.431" E	325	52° 44' 49.065" N	2° 2' 31.144" E
58	52° 47' 9.657" N	2° 44' 33.214" E	326	52° 44' 49.037" N	2° 2' 31.728" E
59	52° 47' 10.579" N	2° 44' 31.898" E	327	52° 44' 49.021" N	2° 2' 32.314" E
60	52° 47' 11.449" N	2° 44' 30.489" E	328	52° 44' 48.989" N	2° 2' 34.021" E
61	52° 47' 12.264" N	2° 44' 28.993" E	329	52° 44' 48.983" N	2° 2' 34.638" E
62	52° 47' 13.021" N	2° 44' 27.415" E	330	52° 44' 49.220" N	2° 15' 49.970" E
63	52° 47' 13.715" N	2° 44' 25.762" E	331	52° 44' 49.236" N	2° 15' 51.345" E

64	52° 47' 14.346" N	2° 44' 24.040" E	332	52° 44' 49.268" N	2° 15' 53.169" E
65	52° 47' 14.910" N	2° 44' 22.257" E	333	52° 44' 49.284" N	2° 15' 53.754" E
66	52° 47' 15.404" N	2° 44' 20.418" E	334	52° 44' 49.311" N	2° 15' 54.339" E
67	52° 47' 15.784" N	2° 44' 18.728" E	335	52° 44' 49.422" N	2° 15' 56.340" E
68	52° 47' 15.918" N	2° 44' 18.041" E	336	52° 44' 49.460" N	2° 15' 56.922" E
69	52° 47' 16.179" N	2° 44' 16.606" E	337	52° 44' 49.509" N	2° 15' 57.503" E
70	52° 47' 16.456" N	2° 44' 14.647" E	338	52° 44' 49.680" N	2° 15' 59.308" E
71	52° 47' 16.520" N	2° 44' 14.023" E	339	52° 44' 49.731" N	2° 15' 59.809" E
72	52° 47' 16.658" N	2° 44' 12.664" E	340	52° 44' 49.791" N	2° 16' 0.309" E
73	52° 47' 16.784" N	2° 44' 10.663" E	341	52° 44' 51.112" N	2° 16' 10.573" E
74	52° 47' 16.834" N	2° 44' 8.653" E	342	52° 44' 51.112" N	2° 16' 10.573" E
75	52° 47' 16.807" N	2° 44' 6.642" E	343	52° 45' 49.555" N	2° 23' 47.080" E
76	52° 47' 16.703" N	2° 44' 4.638" E	344	52° 45' 49.556" N	2° 23' 47.093" E
77	52° 47' 16.559" N	2° 44' 3.046" E	345	52° 45' 49.762" N	2° 23' 48.593" E
78	52° 47' 15.589" N	2° 43' 55.247" E	346	52° 45' 50.105" N	2° 23' 50.522" E
79	52° 47' 14.341" N	2° 43' 45.216" E	347	52° 45' 50.521" N	2° 23' 52.412" E
80	52° 47' 13.615" N	2° 43' 39.381" E	348	52° 45' 51.008" N	2° 23' 54.255" E
81	52° 47' 13.538" N	2° 43' 38.765" E	349	52° 45' 51.565" N	2° 23' 56.044" E
82	52° 43' 46.039" N	2° 16' 19.075" E	350	52° 45' 52.188" N	2° 23' 57.772" E
83	52° 43' 45.182" N	2° 16' 10.004" E	351	52° 45' 52.876" N	2° 23' 59.431" E
84	52° 43' 44.634" N	2° 16' 0.162" E	352	52° 45' 53.626" N	2° 24' 1.017" E
85	52° 43' 44.531" N	2° 15' 54.221" E	353	52° 45' 54.434" N	2° 24' 2.521" E
86	52° 43' 44.490" N	2° 15' 51.462" E	354	52° 45' 55.299" N	2° 24' 3.939" E
87	52° 43' 44.512" N	2° 7' 23.550" E	355	52° 45' 56.215" N	2° 24' 5.265" E
88	52° 42' 44.166" N	2° 3' 14.512" E	356	52° 45' 57.180" N	2° 24' 6.493" E

89	52° 42' 43.152" N	2° 3' 9.802" E	357	52° 45' 58.191" N	2° 24' 7.619" E
90	52° 42' 42.369" N	2° 3' 4.946" E	358	52° 45' 59.242" N	2° 24' 8.639" E
91	52° 42' 31.534" N	2° 1' 44.644" E	359	52° 46' 0.330" N	2° 24' 9.547" E
92	52° 42' 31.056" N	2° 1' 40.338" E	360	52° 46' 1.450" N	2° 24' 10.341" E
93	52° 42' 30.948" N	2° 1' 39.044" E	361	52° 46' 2.598" N	2° 24' 11.017" E
94	52° 42' 30.701" N	2° 1' 34.686" E	362	52° 46' 3.770" N	2° 24' 11.573" E
95	52° 42' 30.654" N	2° 1' 30.309" E	363	52° 46' 4.960" N	2° 24' 12.007" E
96	52° 42' 30.675" N	2° 1' 29.003" E	364	52° 46' 6.165" N	2° 24' 12.317" E
97	52° 42' 30.833" N	2° 1' 25.173" E	365	52° 46' 7.380" N	2° 24' 12.501" E
98	52° 42' 33.173" N	2° 0' 49.768" E	366	52° 46' 8.022" N	2° 24' 12.532" E
99	52° 42' 34.216" N	2° 0' 40.941" E	367	52° 46' 9.762" N	2° 24' 12.670" E
100	52° 42' 34.439" N	2° 0' 39.649" E	368	52° 50' 9.656" N	2° 24' 31.707" E
101	52° 42' 35.302" N	2° 0' 35.379" E	369	52° 51' 3.549" N	2° 34' 15.864" E
102	52° 42' 41.649" N	2° 0' 7.655" E	370	52° 51' 3.486" N	2° 34' 19.188" E
103	52° 42' 43.788" N	2° 0' 0.073" E	371	52° 51' 3.295" N	2° 34' 22.530" E
104	52° 42' 44.149" N	1° 59' 59.016" E	372	52° 51' 2.978" N	2° 34' 25.846" E
105	52° 42' 45.445" N	1° 59' 55.557" E	373	52° 51' 2.535" N	2° 34' 29.122" E
106	52° 42' 55.437" N	1° 59' 30.877" E	374	52° 51' 1.968" N	2° 34' 32.346" E
107	52° 42' 55.855" N	1° 59' 29.924" E	375	52° 51' 1.280" N	2° 34' 35.504" E
108	52° 42' 58.378" N	1° 59' 24.593" E	376	52° 51' 0.473" N	2° 34' 38.585" E
109	52° 42' 58.842" N	1° 59' 23.685" E	377	52° 50' 59.551" N	2° 34' 41.577" E
110	52° 43' 0.673" N	1° 59' 20.588" E	378	52° 50' 58.516" N	2° 34' 44.466" E
111	52° 43' 2.861" N	1° 59' 17.394" E	379	52° 50' 57.374" N	2° 34' 47.243" E
112	52° 43' 17.859" N	1° 58' 57.179" E	380	52° 50' 56.129" N	2° 34' 49.896" E
113	52° 43' 19.625" N	1° 58' 54.953" E	381	52° 50' 54.785" N	2° 34' 52.414" E

114	52° 43' 21.284" N	1° 58' 53.106" E	382	52° 50' 53.348" N	2° 34' 54.787" E
115	52° 43' 21.796" N	1° 58' 52.576" E	383	52° 50' 51.823" N	2° 34' 57.007" E
116	52° 43' 23.547" N	1° 58' 50.895" E	384	52° 50' 50.218" N	2° 34' 59.065" E
117	52° 45' 46.103" N	1° 56' 43.184" E	385	52° 50' 48.537" N	2° 35' 0.952" E
118	52° 46' 2.160" N	1° 56' 27.260" E	386	52° 50' 46.788" N	2° 35' 2.661" E
119	52° 46' 3.532" N	1° 56' 26.078" E	387	52° 50' 44.977" N	2° 35' 4.185" E
120	52° 46' 17.577" N	1° 56' 12.146" E	388	52° 50' 43.112" N	2° 35' 5.518" E
121	52° 46' 37.038" N	1° 55' 33.566" E	389	52° 50' 41.200" N	2° 35' 6.655" E
122	52° 46' 51.513" N	1° 54' 38.977" E	390	52° 50' 39.248" N	2° 35' 7.591" E
123	52° 46' 58.151" N	1° 53' 21.115" E	391	52° 50' 37.265" N	2° 35' 8.323" E
124	52° 46' 59.490" N	1° 52' 52.341" E	392	52° 50' 33.492" N	2° 35' 9.272" E
125	52° 47' 32.039" N	1° 39' 38.159" E	393	52° 50' 32.920" N	2° 35' 9.346" E
126	52° 47' 32.129" N	1° 39' 36.152" E	394	52° 46' 31.498" N	2° 26' 1.301" E
127	52° 47' 32.273" N	1° 39' 33.526" E	395	52° 46' 31.407" N	2° 26' 1.294" E
128	52° 47' 32.388" N	1° 39' 31.565" E	396	52° 46' 31.505" N	2° 26' 1.330" E
129	52° 47' 32.521" N	1° 39' 29.607" E	397	52° 46' 30.476" N	2° 26' 1.280" E
130	52° 47' 32.673" N	1° 39' 27.652" E	398	52° 46' 29.257" N	2° 26' 1.347" E
131	52° 47' 32.844" N	1° 39' 25.702" E	399	52° 46' 28.043" N	2° 26' 1.540" E
132	52° 47' 33.028" N	1° 39' 23.714" E	400	52° 46' 26.839" N	2° 26' 1.859" E
133	52° 47' 33.217" N	1° 39' 21.768" E	401	52° 46' 25.650" N	2° 26' 2.301" E
134	52° 47' 33.425" N	1° 39' 19.828" E	402	52° 46' 24.480" N	2° 26' 2.866" E
135	52° 47' 33.652" N	1° 39' 17.893" E	403	52° 46' 23.333" N	2° 26' 3.551" E
136	52° 47' 33.896" N	1° 39' 15.964" E	404	52° 46' 22.215" N	2° 26' 4.353" E
137	52° 47' 34.155" N	1° 39' 13.999" E	405	52° 46' 21.130" N	2° 26' 5.269" E
138	52° 47' 34.419" N	1° 39' 12.073" E	406	52° 46' 20.230" N	2° 26' 6.150" E

139	52° 47' 34.701" N	1° 39' 10.153" E	407	52° 46' 20.081" N	2° 26' 6.296" E
140	52° 47' 35.001" N	1° 39' 8.241" E	408	52° 46' 19.074" N	2° 26' 7.430" E
141	52° 47' 35.320" N	1° 39' 6.337" E	409	52° 46' 18.112" N	2° 26' 8.665" E
142	52° 47' 35.827" N	1° 39' 3.397" E	410	52° 46' 17.199" N	2° 26' 9.998" E
143	52° 47' 36.193" N	1° 39' 1.398" E	411	52° 46' 16.338" N	2° 26' 11.422" E
144	52° 47' 36.599" N	1° 38' 59.313" E	412	52° 46' 15.534" N	2° 26' 12.933" E
145	52° 47' 37.000" N	1° 38' 57.371" E	413	52° 46' 14.788" N	2° 26' 14.524" E
146	52° 47' 37.497" N	1° 38' 55.056" E	414	52° 46' 14.105" N	2° 26' 16.189" E
147	52° 47' 37.906" N	1° 38' 53.193" E	415	52° 46' 13.486" N	2° 26' 17.921" E
148	52° 47' 38.332" N	1° 38' 51.340" E	416	52° 46' 12.935" N	2° 26' 19.714" E
149	52° 47' 38.777" N	1° 38' 49.499" E	417	52° 46' 12.453" N	2° 26' 21.561" E
150	52° 47' 39.239" N	1° 38' 47.670" E	418	52° 46' 12.042" N	2° 26' 23.454" E
151	52° 48' 59.902" N	1° 33' 32.091" E	419	52° 46' 11.704" N	2° 26' 25.386" E
152	52° 49' 1.602" N	1° 33' 25.973" E	420	52° 46' 11.440" N	2° 26' 27.349" E
153	52° 49' 2.819" N	1° 33' 19.121" E	421	52° 46' 11.252" N	2° 26' 29.335" E
154	52° 49' 3.674" N	1° 33' 13.073" E	422	52° 46' 11.139" N	2° 26' 31.337" E
155	52° 49' 3.797" N	1° 33' 6.096" E	423	52° 46' 11.103" N	2° 26' 33.346" E
156	52° 49' 2.898" N	1° 32' 57.549" E	424	52° 46' 11.144" N	2° 26' 35.356" E
157	52° 49' 4.139" N	1° 32' 54.271" E	425	52° 46' 11.261" N	2° 26' 37.357" E
158	52° 49' 4.845" N	1° 32' 52.212" E	426	52° 46' 11.399" N	2° 26' 38.780" E
159	52° 49' 5.188" N	1° 32' 51.467" E	427	52° 46' 11.399" N	2° 26' 38.781" E
160	52° 49' 6.147" N	1° 32' 49.575" E	428	52° 46' 11.399" N	2° 26' 38.782" E
161	52° 49' 7.035" N	1° 32' 47.473" E	429	52° 47' 4.976" N	2° 33' 42.433" E
162	52° 49' 7.208" N	1° 32' 46.999" E	430	52° 47' 5.398" N	2° 33' 45.780" E
163	52° 49' 8.015" N	1° 32' 44.486" E	431	52° 47' 6.051" N	2° 33' 50.967" E

164	52° 49' 8.663" N	1° 32' 42.319" E	432	52° 47' 6.366" N	2° 33' 53.472" E
165	52° 49' 8.910" N	1° 32' 41.417" E	433	52° 47' 6.366" N	2° 33' 53.472" E
166	52° 49' 9.102" N	1° 32' 41.019" E	434	52° 47' 6.366" N	2° 33' 53.473" E
167	52° 49' 9.635" N	1° 32' 40.648" E	435	52° 47' 6.675" N	2° 33' 55.224" E
168	52° 49' 9.807" N	1° 32' 40.345" E	436	52° 47' 7.088" N	2° 33' 57.116" E
169	52° 49' 9.768" N	1° 32' 39.737" E	437	52° 47' 7.573" N	2° 33' 58.962" E
170	52° 49' 9.855" N	1° 32' 38.941" E	438	52° 47' 8.126" N	2° 34' 0.754" E
171	52° 49' 10.086" N	1° 32' 38.247" E	439	52° 47' 8.747" N	2° 34' 2.485" E
172	52° 49' 10.218" N	1° 32' 37.939" E	440	52° 47' 9.433" N	2° 34' 4.148" E
173	52° 49' 10.691" N	1° 32' 36.993" E	441	52° 47' 10.180" N	2° 34' 5.737" E
174	52° 49' 11.553" N	1° 32' 35.417" E	442	52° 47' 10.987" N	2° 34' 7.246" E
175	52° 49' 12.200" N	1° 32' 33.887" E	443	52° 47' 11.849" N	2° 34' 8.668" E
176	52° 49' 12.742" N	1° 32' 32.736" E	444	52° 47' 12.764" N	2° 34' 9.998" E
177	52° 49' 13.080" N	1° 32' 31.922" E	445	52° 47' 13.727" N	2° 34' 11.230" E
178	52° 49' 13.507" N	1° 32' 31.040" E	446	52° 47' 14.736" N	2° 34' 12.361" E
179	52° 49' 14.325" N	1° 32' 29.767" E	447	52° 47' 15.785" N	2° 34' 13.384" E
180	52° 49' 14.340" N	1° 32' 29.796" E	448	52° 47' 16.872" N	2° 34' 14.297" E
181	52° 49' 15.178" N	1° 32' 31.478" E	449	52° 47' 17.991" N	2° 34' 15.096" E
182	52° 49' 15.638" N	1° 32' 32.401" E	450	52° 47' 19.138" N	2° 34' 15.777" E
183	52° 49' 45.178" N	1° 33' 31.705" E	451	52° 47' 20.309" N	2° 34' 16.338" E
184	52° 49' 45.944" N	1° 33' 33.513" E	452	52° 47' 21.499" N	2° 34' 16.777" E
185	52° 49' 46.772" N	1° 33' 35.540" E	453	52° 47' 22.704" N	2° 34' 17.091" E
186	52° 49' 47.579" N	1° 33' 37.591" E	454	52° 47' 23.918" N	2° 34' 17.280" E
187	52° 49' 48.363" N	1° 33' 39.664" E	455	52° 47' 25.496" N	2° 34' 17.365" E
188	52° 49' 49.126" N	1° 33' 41.760" E	456	52° 48' 2.953" N	2° 26' 36.184" E

189	52° 49' 49.866" N	1° 33' 43.878" E	457	52° 48' 2.518" N	2° 26' 33.730" E
190	52° 49' 50.585" N	1° 33' 46.016" E	458	52° 48' 1.985" N	2° 26' 31.328" E
191	52° 49' 51.280" N	1° 33' 48.175" E	459	52° 48' 1.357" N	2° 26' 28.991" E
192	52° 49' 51.952" N	1° 33' 50.354" E	460	52° 48' 1.009" N	2° 26' 27.849" E
193	52° 49' 52.602" N	1° 33' 52.551" E	461	52° 48' 0.243" N	2° 26' 25.626" E
194	52° 49' 53.228" N	1° 33' 54.767" E	462	52° 47' 59.827" N	2° 26' 24.547" E
195	52° 49' 53.831" N	1° 33' 57.000" E	463	52° 47' 58.931" N	2° 26' 22.461" E
196	52° 49' 54.410" N	1° 33' 59.251" E	464	52° 47' 57.954" N	2° 26' 20.477" E
197	52° 49' 54.965" N	1° 34' 1.518" E	465	52° 47' 57.436" N	2° 26' 19.526" E
198	52° 49' 55.496" N	1° 34' 3.800" E	466	52° 47' 56.343" N	2° 26' 17.712" E
199	52° 49' 56.003" N	1° 34' 6.098" E	467	52° 47' 55.181" N	2° 26' 16.022" E
200	52° 49' 56.486" N	1° 34' 8.409" E	468	52° 47' 53.953" N	2° 26' 14.462" E
210	52° 49' 56.944" N	1° 34' 10.735" E	469	52° 47' 53.316" N	2° 26' 13.734" E
202	52° 49' 57.378" N	1° 34' 13.073" E	470	52° 47' 52.000" N	2° 26' 12.384" E
203	52° 49' 57.786" N	1° 34' 15.423" E	471	52° 47' 51.322" N	2° 26' 11.763" E
204	52° 49' 58.171" N	1° 34' 17.784" E	472	52° 47' 49.931" N	2° 26' 10.635" E
205	52° 49' 58.530" N	1° 34' 20.157" E	473	52° 47' 48.498" N	2° 26' 9.662" E
206	52° 49' 58.864" N	1° 34' 22.539" E	474	52° 47' 47.030" N	2° 26' 8.847" E
207	52° 49' 59.173" N	1° 34' 24.930" E	475	52° 47' 45.531" N	2° 26' 8.195" E
208	52° 49' 59.456" N	1° 34' 27.330" E	476	52° 47' 44.124" N	2° 26' 7.739" E
209	52° 49' 59.714" N	1° 34' 29.738" E	477	52° 47' 42.819" N	2° 26' 7.446" E
210	52° 49' 59.947" N	1° 34' 32.153" E	478	52° 47' 42.518" N	2° 26' 7.422" E
211	52° 50' 0.154" N	1° 34' 34.574" E	479	52° 47' 40.198" N	2° 26' 6.759" E
212	52° 50' 0.336" N	1° 34' 37.001" E	480	52° 47' 32.505" N	2° 26' 6.180" E
213	52° 50' 0.492" N	1° 34' 39.433" E	481	52° 50' 2.151" N	2° 35' 9.316" E

214	52° 50' 0.623" N	1° 34' 41.869" E	482	52° 47' 39.858" N	2° 35' 10.667" E
215	52° 50' 0.727" N	1° 34' 44.308" E	483	52° 47' 38.680" N	2° 35' 10.728" E
216	52° 50' 0.806" N	1° 34' 46.750" E	484	52° 47' 37.466" N	2° 35' 10.917" E
217	52° 50' 0.859" N	1° 34' 49.193" E	485	52° 47' 36.261" N	2° 35' 11.231" E
218	52° 50' 0.887" N	1° 34' 51.638" E	486	52° 47' 35.071" N	2° 35' 11.670" E
219	52° 50' 0.888" N	1° 34' 54.083" E	487	52° 47' 33.900" N	2° 35' 12.231" E
220	52° 50' 0.864" N	1° 34' 56.528" E	488	52° 47' 32.753" N	2° 35' 12.912" E
221	52° 50' 0.814" N	1° 34' 58.972" E	489	52° 47' 31.634" N	2° 35' 13.711" E
222	52° 50' 0.739" N	1° 35' 1.414" E	490	52° 47' 30.547" N	2° 35' 14.623" E
223	52° 50' 0.637" N	1° 35' 3.854" E	491	52° 47' 29.498" N	2° 35' 15.647" E
224	52° 50' 0.510" N	1° 35' 6.290" E	492	52° 47' 28.489" N	2° 35' 16.777" E
225	52° 50' 0.357" N	1° 35' 8.722" E	493	52° 47' 27.525" N	2° 35' 18.010" E
226	52° 50' 0.178" N	1° 35' 11.150" E	494	52° 47' 26.611" N	2° 35' 19.340" E
227	52° 49' 59.974" N	1° 35' 13.572" E	495	52° 47' 25.748" N	2° 35' 20.762" E
228	52° 49' 59.745" N	1° 35' 15.987" E	496	52° 47' 24.942" N	2° 35' 22.271" E
229	52° 49' 59.490" N	1° 35' 18.396" E	497	52° 47' 24.194" N	2° 35' 23.860" E
230	52° 49' 59.209" N	1° 35' 20.797" E	498	52° 47' 23.509" N	2° 35' 25.523" E
231	52° 49' 58.903" N	1° 35' 23.190" E	499	52° 47' 22.888" N	2° 35' 27.254" E
232	52° 49' 58.573" N	1° 35' 25.573" E	500	52° 47' 22.334" N	2° 35' 29.046" E
233	52° 49' 58.217" N	1° 35' 27.947" E	501	52° 47' 21.849" N	2° 35' 30.892" E
234	52° 49' 57.836" N	1° 35' 30.310" E	502	52° 47' 21.436" N	2° 35' 32.784" E
235	52° 49' 57.430" N	1° 35' 32.661" E	503	52° 47' 21.096" N	2° 35' 34.716" E
236	52° 49' 56.999" N	1° 35' 35.001" E	504	52° 47' 20.829" N	2° 35' 36.678" E
237	52° 49' 56.544" N	1° 35' 37.328" E	505	52° 47' 20.638" N	2° 35' 38.665" E
238	52° 49' 56.064" N	1° 35' 39.641" E	506	52° 47' 20.523" N	2° 35' 40.667" E

239	52° 49' 55.560" N	1° 35' 41.940" E	507	52° 47' 20.485" N	2° 35' 42.678" E
240	52° 49' 55.032" N	1° 35' 44.225" E	508	52° 47' 20.523" N	2° 35' 44.688" E
241	52° 49' 54.480" N	1° 35' 46.494" E	509	52° 47' 20.637" N	2° 35' 46.691" E
242	52° 49' 53.904" N	1° 35' 48.746" E	510	52° 47' 20.743" N	2° 35' 47.801" E
243	52° 49' 53.304" N	1° 35' 50.982" E	511	52° 47' 20.744" N	2° 35' 47.806" E
244	52° 49' 52.681" N	1° 35' 53.200" E	512	52° 47' 21.786" N	2° 35' 56.101" E
245	52° 49' 52.034" N	1° 35' 55.400" E	513	52° 48' 20.763" N	2° 43' 47.964" E
246	52° 49' 51.868" N	1° 35' 55.943" E	514	52° 48' 21.026" N	2° 43' 49.928" E
247	52° 48' 40.863" N	1° 39' 22.453" E	515	52° 48' 21.364" N	2° 43' 51.862" E
248	52° 48' 40.702" N	1° 39' 22.924" E	516	52° 48' 21.774" N	2° 43' 53.756" E
249	52° 48' 40.367" N	1° 39' 23.994" E	517	52° 48' 22.256" N	2° 43' 55.605" E
250	52° 48' 40.234" N	1° 39' 24.393" E	518	52° 48' 22.808" N	2° 43' 57.400" E
251	52° 48' 40.107" N	1° 39' 24.797" E	519	52° 48' 23.426" N	2° 43' 59.134" E
252	52° 48' 39.560" N	1° 39' 26.596" E	520	52° 48' 24.109" N	2° 44' 0.800" E
253	52° 48' 39.405" N	1° 39' 27.124" E	521	52° 48' 24.854" N	2° 44' 2.393" E
254	52° 48' 39.261" N	1° 39' 27.661" E	522	52° 48' 25.659" N	2° 44' 3.905" E
255	52° 48' 38.783" N	1° 39' 29.512" E	523	52° 48' 26.519" N	2° 44' 5.331" E
256	52° 48' 38.649" N	1° 39' 30.055" E	524	52° 48' 27.432" N	2° 44' 6.665" E
257	52° 48' 38.525" N	1° 39' 30.606" E	525	52° 48' 28.394" N	2° 44' 7.902" E
258	52° 48' 38.044" N	1° 39' 32.861" E	526	52° 48' 29.401" N	2° 44' 9.037" E
259	52° 48' 37.927" N	1° 39' 33.484" E	527	52° 48' 30.449" N	2° 44' 10.065" E
260	52° 48' 37.569" N	1° 39' 35.557" E	528	52° 48' 31.534" N	2° 44' 10.983" E
261	52° 48' 37.477" N	1° 39' 36.124" E	529	52° 48' 32.652" N	2° 44' 11.786" E
262	52° 48' 37.396" N	1° 39' 36.696" E	530	52° 48' 33.799" N	2° 44' 12.472" E
263	52° 48' 37.137" N	1° 39' 38.662" E	531	52° 48' 34.969" N	2° 44' 13.037" E

264	52° 48' 37.067" N	1° 39' 39.237" E	532	52° 48' 36.158" N	2° 44' 13.481" E
265	52° 48' 37.008" N	1° 39' 39.816" E	533	52° 48' 37.362" N	2° 44' 13.800" E
266	52° 48' 36.824" N	1° 39' 41.805" E	534	52° 48' 38.576" N	2° 44' 13.994" E
267	52° 48' 36.776" N	1° 39' 42.387" E	535	52° 48' 39.226" N	2° 44' 14.030" E
268	52° 48' 36.739" N	1° 39' 42.971" E	536	52° 51' 27.631" N	2° 44' 14.043" E

PART 3

Details of Licensed Marine Activities

1. Subject to the licence conditions at Part 4, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) of the 2009 Act—

- (a) the deposit at sea of the substances and articles specified in paragraph 5 of Part 2 of this licence;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (d) the disposal of up to 11,475,000 m³ of inert material of natural origin within the offshore Order limits produced during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works at disposal site references HU213, HU214, HU215 and HU216 within the extent of the Order limits seaward of MHWS, comprising—
 - (i) 9,000,000 m³ for cable (including fibre optic cable) installation;
 - (ii) 75,000 m³ for the offshore electrical platforms;
 - (iii) 1,900,000 m³ for the export cables (including fibre optic cables) within the Order limits excluding the Haisborough, Hammond and Winterton Special Area of Conservation;
 - (iv) 500,000 m³ for the export cables (including fibre optic cables) within the part of the Haisborough, Hammond and Winterton Special Area of Conservation that falls within the Order limits;
- (e) the removal of static fishing equipment; and
- (f) the disposal of drill arisings in connection with any foundation drilling up to 14,137 m³.

2. Such activities are authorised in relation to the construction, maintenance and operation of—

(1) *Work No. 2 (phase 1)* – up to two offshore electrical platforms fixed to the seabed within the area shown on the works plan by one of the following foundation types: jacket (piled or suction caisson) or gravity base.

(2) *Work No. 3 (phase 1)* – a network of subsea cables and fibre optic cables within the area shown on the works plan comprising Work No. 2 and for the transmission of electricity and electronic communications between the offshore electrical platforms including one or more cable crossings.

(3) *Work No. 4A (phase 1)* – up to four subsea export cables and fibre optic cables between Work No. 2 and Work No. 4B consisting of subsea cables and fibre optic cables along routes within the Order limits seaward of MHWS including one or more offshore cable crossings.

(4) *Work No. 4B* (phase 1) – up to four subsea export cables and fibre optic cables between Work No. 4A and Work No. 4C consisting of subsea cables and fibre optic cables along routes within the Order limits between MLWS and MHWS at Happisburgh South, North Norfolk.

(5) In connection with such Works No. 2, 3, 4A and 4B and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement and the provisions of this licence.

(6) In connection with such Works No. 2, 3, 4A and 4B, ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised scheme; and
- (b) beacons, fenders and other navigational warning or ship impact protection works.

PART 4

Conditions

Design parameters

1.—(1) The dimensions of any offshore electrical platform forming part of the authorised scheme (excluding towers, helipads, masts and cranes) must not exceed 100 metres in height when measured from HAT, 120 metres in length and 80 metres in width.

(2) In relation to an offshore electrical platform, each foundation using piles must not have—

- (a) more than 18 driven piles;
- (b) a pile diameter which is more than five metres.

2. In relation to the offshore electrical platform(s), the foundations must not have a combined seabed footprint area (excluding scour protection) of greater than 15,000m². The total length of the cables and the area and volume of their cable protection must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection (m² and m³)</i>
Work No. 3 (Interconnector link)	150 kilometres	76,000m ² 38,000 m ³
Work No. 4A and 4B (export cable)	400 kilometres	102,086m ² 59,836 m ³

Phasing of the authorised scheme

3.—(1) Taken together with works authorised and proposed to be constructed pursuant to licence 2 (transmission)—

- (a) the total number of offshore electrical platforms forming part of the authorised scheme must not exceed two;
- (b) the total amount of scour protection for the offshore electrical platforms forming part of the authorised scheme must not exceed 20,000m² and 100,000 m³; and
- (c) the total amount of inert material of natural origin disposed within the offshore Order limits as part of the authorised scheme must not exceed 11,475,000 m³;
- (d) the total amount of disposal for drill arisings in connection with any foundation drilling must not exceed 14,137m³;
- (e) the total length of cable and the amount of cable protection must not exceed the figures stated in condition 2 of this licence;

- (f) in the Haisborough, Hammond and Winterton Special Area of Conservation, the total area of cable protection must not exceed 32,000m² and the total volume of cable protection must not exceed 20,800m³; and
 - (g) disposal activities within the Haisborough, Hammond and Winterton Special Area of Conservation Site must not take place until the undertaker has confirmed to the MMO that the particle size composition of the disposal material is within 95% similarity to the particle size composition of the seabed at the disposal location.
- (2) Prior to the commencement of the authorised scheme the undertaker must give notice to the MMO detailing—
- (a) whether the authorised scheme will be constructed—
 - (i) in a single offshore phase under this licence; or
 - (ii) in two offshore phases under this licence and licence 2 (transmission); and
 - (b) where the authorised scheme will be constructed in two offshore phases, the total number of offshore electrical platforms to be constructed in each phase.

Notifications and inspections

4.—(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
 - (i) all agents and contractors notified to the MMO in accordance with condition 12; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 12;
 - (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above must provide a completed confirmation form to the MMO confirming receipt of this licence.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 12 are permitted to carry out the licensed activities.
- (3) Copies of this licence must also be available for inspection at the following locations—
- (a) the undertaker's registered address;
 - (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
 - (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b) above.
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.
- (6) The undertaker must inform the MMO Coastal Office in writing at least five days prior to the commencement of the licensed activities or any part of them, and within five days of completion of the licensed activities.
- (7) The undertaker must inform the Kingfisher Information Service of Seafish by email to kingfisher@seafish.co.uk of details regarding the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part—
- (a) at least fourteen days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and

- (b) as soon as reasonably practicable and no later than 24 hours of completion of construction of all offshore activities.

Confirmation of notification must be provided to the MMO within five days.

(8) A notice to mariners must be issued at least ten days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 2 and the expected vessel routes from the construction ports to the relevant location. A second notice to mariners must be issued advising of the start date of Work Nos. 3, 4A and 4B and the route of the sub-sea cables and fibre optic cables. Copies of all notices must be provided to the MMO, MCA and UKHO within five days.

(9) The notices to mariners must be updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under condition 9(1)(b). Copies of all notices must be provided to the MMO and UKHO within five days.

(10) The undertaker must notify the UK Hydrographic Office both of the commencement (within ten days), progress and completion of construction (within ten days) of the licensed activities in order that all necessary amendments to nautical charts are made and the undertaker must send a copy of such notifications to the MMO within five days.

(11) In case of damage to, or destruction or decay of the authorised scheme seaward of MHWS or any part thereof, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UK Hydrographic Office.

(12) In case of exposure of cables on or above the seabed, the undertaker must within three business days or five days whichever is the sooner following the receipt by the undertaker of the final survey report from the periodic burial survey, notify mariners by issuing a notice to mariners and by informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO and MCA within five days.

Aids to navigation

5.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and to take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

(2) The undertaker must during the period from the start of construction of the authorised scheme to completion of decommissioning seaward of MHWS keep Trinity House and the MMO informed of progress of the authorised scheme seaward of MHWS including the following—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation as set out in the aids to navigation management plan agreed pursuant to condition 9(1)(k) using the reporting system provided by Trinity House.

(4) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 4(11) and condition 4(12) are invoked, the undertaker must lay down such marker buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

Colouring of structures

6.—(1) Except as otherwise required by Trinity House the undertaker must colour all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height directed by Trinity House, or must colour the structure as directed by Trinity House from time to time.

(2) Subject to sub-paragraph (1) above, unless the MMO otherwise directs, the undertaker must paint the remainder of the structures submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

7.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (as amended).

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) The undertaker must inform the MMO of the location and quantities of material disposed of each month under this licence. This information must be submitted to the MMO by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(5) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of or seabed preparation for foundations, and drilling mud is disposed of within disposal site references HU213, HU214, HU215 and HU216 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(6) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(7) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the District Marine Office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it.

(8) The undertaker must undertake the survey agreed under condition 9(1)(h)(iii) following the swath-bathymetry survey referred to in condition 15(2)(b). Should any such obstructions resulting from burial of Work No. 4A or 4B (export cables and fibre optic cables) be identified which, in the reasonable opinion of the MMO, may be considered to interfere with fishing, the undertaker must take such steps to remove them as the MMO in its reasonable opinion may require.

(9) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained to prevent run off entering the water through the freeing ports.

(10) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 14(1)(d)(i).

(11) All dropped objects must be reported to the MMO using the Dropped Object Procedure Form as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident. On receipt of the Dropped Object Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

Force majeure

8.—(1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to make a deposit which is not authorised under this licence, whether within or outside of the Order limits, because the safety of human life and/or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

Pre-construction plans and documentation

9.—(1) The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

(a) A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows, in accordance with the Development Principles—

- (i) the proposed location and choice of foundation of all offshore electrical platforms;
- (ii) the height, length and width of all offshore electrical platforms;
- (iii) the length and arrangement of all cables (including fibre optic cables) comprising Work Nos. 3, 4A and 4B;
- (iv) the dimensions of all foundations;
- (v) the proposed layout of all offshore electrical platforms including any exclusion zones identified under sub-paragraph (1)(h)(iv);
- (vi) a plan showing the indicative layout of all offshore electrical platforms including all exclusion zones (insofar as not shown in (v) above) and showing the indicative programming of particular works as set out in the indicative programme to be provided under sub-paragraph (1)(b)(iv); and
- (vii) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph (1)(i);

to ensure conformity with the description of Works No. 2, 3, 4A and 4B and compliance with conditions 1 to 3 above.

(b) A construction programme and monitoring plan (which accords with the offshore in principle monitoring plan) to include details of—

- (i) the proposed construction start date;
- (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
- (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction surveys and monitoring and related reporting in accordance with sub-paragraph (1)(h) and conditions 12, 13, 14 and 15; and
- (iv) an indicative written construction programme for all offshore electrical platforms and cables including fibre optic cables comprised in the works at Part 3 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above);

with details pursuant to paragraph (iii) above to be submitted to the MMO in accordance with the following—

- (aa) at least four months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed pre-construction monitoring;
- (bb) at least four months prior to construction, detail on construction monitoring;
- (cc) at least four months prior to commissioning, detail of post-construction (and operational) monitoring;

unless otherwise agreed in writing with the MMO.

- (c) A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—
 - (i) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation works and having regard to any mitigation scheme pursuant to sub-paragraph (1)(i);
 - (ii) soft start procedures with specified duration periods;
 - (iii) offshore electrical platform location and installation, including scour protection;
 - (iv) cable (including fibre optic cable) installation ;
 - (v) contractors;
 - (vi) vessels, vessels maintenance and vessels transit corridors; and
 - (vii) associated and ancillary works.
- (d) A project environmental management plan (in accordance with the outline project environmental management plan) covering the period of construction and operation to include details of—
 - (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised scheme in relation to all activities carried out;
 - (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;
 - (iv) the appointment and responsibilities of a fisheries liaison officer; and
 - (v) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 4 and to address the interaction of the licensed activities with fishing activities.
- (e) A scour protection and cable protection plan (in accordance with the outline scour protection and cable protection plan) providing details of the need, type, sources, quantity, distribution and installation methods for scour protection and cable (including fibre optic cable) protection. For the avoidance of doubt “distribution” in this sub-paragraph must include quantities in respect of each structure comprised in the offshore works and intended to be subject to scour protection.
- (f) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’ are proposed to be used, a marine mammal mitigation protocol, in accordance with the draft marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals and following current best practice as advised by the relevant statutory nature conservation bodies.
- (g) A cable specification, installation and monitoring plan, to include—
 - (i) technical specification of offshore cables (including fibre optic cable) below MHWS, including a desk-based assessment of attenuation of electro-magnetic field strengths, shielding and cable burial depth in accordance with industry good practice;
 - (ii) a detailed cable (including fibre optic cable) laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques, including cable landfall and cable protection measures;
 - (iii) proposals for monitoring offshore cables including cable (including fibre optic cable) protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of unburied or shallow buried cables; and
 - (iv) appropriate methods such as a trawl or drift net to be deployed along Work No. 4A and 4B (export cables and fibre optic cables), following the survey referred to in

condition 15(2)(b) to assess any seabed obstructions resulting from burial of the export cables and fibre optic cables.

- (h) An archaeological written scheme of investigation in relation to the offshore Order limits seaward of mean low water, which must accord with the outline written scheme of investigation (offshore) and industry good practice, in consultation with the statutory historic body (and, if relevant, North Norfolk District Council) to include—
 - (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (ii) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (iii) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
 - (iv) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
 - (v) monitoring of archaeological exclusion zones during and post construction;
 - (vi) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting a Historic England OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO (and North Norfolk District Council where the report relates to the intertidal area) that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
 - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
 - (viii) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the offshore Order Limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities.
- (i) A mitigation scheme for any habitats of principal importance identified by the survey referred to in condition 13(2)(a) and in accordance with the offshore in principle monitoring plan.
- (j) An offshore operations and maintenance plan, in accordance with the outline offshore operations and maintenance plan, to be submitted to the MMO at least four months prior to commencement of operation of the licensed activities and to provide for review and resubmission every three years during the operational phase.
- (k) An aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House, to include details of how the undertaker will comply with the provisions of condition 5 for the lifetime of the authorised scheme.
- (l) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’, are proposed to be used, a site integrity plan which accords with the principles set out in the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan and which the MMO is satisfied would provide such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.
- (m) A site integrity plan which accords with the principles set out in the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation Site Integrity Plan and which the MMO (in consultation with the relevant statutory nature conservation body) is satisfied would provide such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that sandbanks and sabellaria spinulosa reefs are a protected feature of that site.

- (n) A lighting and marking plan.
- (o) An operation and maintenance programme.

(2) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation which is itself in accordance with the details set out in the outline offshore written scheme of investigation (offshore), and which has been submitted to and approved by the MMO.

(3) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed 5,000 KJ.

10.—(1) Any archaeological reports produced in accordance with condition 9(1)(h)(iii) must be agreed with the MMO in consultation with the statutory historic body (and, if relevant, North Norfolk District Council).

(2) The design plan required by condition 9(1)(a) must be prepared by the undertaker and determined by the MMO in accordance with the Development Principles.

(3) Each programme, statement, plan, protocol or scheme required to be approved under condition 9 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(4) No licensed activity may commence until for that licensed activity the MMO has approved in writing any relevant programme, statement, plan, protocol or scheme required to be approved under condition 9 or approval has been given following an appeal in accordance with sub-paragraph (6).

(5) Unless otherwise agreed in writing with the undertaker, the MMO must use reasonable endeavours to determine an application for approval made under condition 9 as soon as practicable and in any event within a period of four months commencing on the date the application is received by the MMO.

(6) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 9, unless otherwise agreed in writing by the MMO.

(7) No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes.

Post-construction plans and documents

11. The undertaker must conduct a swath bathymetric survey to IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out and provide the data and survey report(s) to the MCA and UKHO.

Reporting of engaged agents, contractors and vessels

12.—(1) The undertaker must provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) Any changes to the supplied details must be notified to the MMO in writing prior to the agent, contractor or vessel engaging in the licensed activities.

Pre-construction monitoring and surveys

13.—(1) The undertaker must, in discharging condition 9(1)(b), submit details (which accord with the offshore in principle monitoring plan) for written approval by the MMO in consultation with the

relevant statutory bodies of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report; and—

- (a) the survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
 - (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.
- (2) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—
- (a) appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 reef habitats of principal importance in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works; and
 - (b) a full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a, and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works.
- (3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation bodies.

Construction monitoring

14.—(1) The undertaker must, in discharging condition 9(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In the event that driven or part-driven pile foundations are proposed, such monitoring must include measurements of noise generated by the installation of the first four piled foundations of each piled foundation type to be installed unless the MMO otherwise agrees in writing.

(2) The undertaker must carry out the surveys approved under sub-paragraph (1), including any further noise monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(3) The results of the initial noise measurements monitored in accordance with sub-paragraph (1) must be provided to the MMO within six weeks of the installation of the first four piled foundations of each piled foundation type. The assessment of this report by the MMO will determine whether any further noise monitoring is required. If, in the opinion of the MMO in consultation with Natural England, the assessment shows significantly different impacts to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.

(4) In the event that driven or part driven pile foundations are proposed to be used, a marine mammal mitigation protocol will be followed in accordance with the draft marine mammal mitigation protocol and the in principle monitoring plan.

Post construction

15.—(1) The undertaker must, in discharging condition 9(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with relevant statutory bodies of proposed post-construction surveys, including methodologies and timings, and a

proposed format, content and timings for providing reports on the results. The survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake —

- (a) A survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance constituting Annex 1 reef habitats identified in the pre-construction survey in the parts of the Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey.
- (b) within twelve months of completion of the licensed activities, one full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables including fibre optic cables have been buried or protected.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(4) Following installation of cables, the cable (including fibre optic cables) monitoring plan required under condition 9(1)(g)(iii) must be updated with the results of the post installation surveys. The plan must be implemented during the operational lifetime of the authorised scheme and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.

Reporting of impact pile driving

16.—(1) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the UK Marine Noise Registry—

- (a) prior to the commencement of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements;
- (b) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out requirements; and
- (c) within 12 weeks of completion of impact pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out requirements.

(2) The undertaker must notify the MMO of the successful submission of Forward Look or Close Out data pursuant to paragraph (1) above within 7 days of the submission.

(3) For the purpose of this condition—

“Marine Noise Registry” means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas;

“Forward Look” and “Close Out” requirements are as set out in the UK Marine Noise Registry Information Document Version 1 (July 2015) or any updated information document.

Reporting of cable protection

17.—(1) Not more than 4 months following completion of the construction phase of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection used for the authorised scheme.

(2) The report must include the following information—

- (a) location of the cable protection;

- (b) volume of cable protection; and
- (c) any other information relating to the cable protection as agreed between the MMO and the undertaker.

Restriction on cable installation construction works

18. During the months of January to March inclusive, construction activities consisting of cable installation for Work No. 4A and Work No. 4B must only take place with one main cable laying vessel.

SCHEDULE 12

Article 32

Deemed Licence under the 2009 Act – Transmission Assets (Licence 2 – Phase 2)

PART 1

Interpretation

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004;

“the 2017 Regulations” means the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007(a);

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“authorised deposits” means the substances and articles specified in paragraph 5 of Part 2 of this licence;

“authorised scheme” means Work Nos. 2, 3, 4A, and 4B described in Part 3 of this licence or any part of that work;

“cable protection” means measures for offshore cable crossings and where cable burial is not possible due to ground conditions or approaching offshore structures, to protect cables and fibre optic cables and prevent loss of seabed sediment by use of grout bags, protective aprons, mattresses, flow energy dissipation (frond) devices or rock and gravel dumping;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science or any successor body to its function;

“commence” means the first carrying out of any part of the licensed activities save for pre-construction surveys and monitoring and “commenced” and “commencement” must be construed accordingly;

“condition” means a condition in Part 4 of this licence;

“Defence Infrastructure Organisation Safeguarding” means Ministry of Defence Safeguarding, Defence Infrastructure Organisation, Kingston Road, Sutton Coldfield, West Midlands B75 7RL and any successor body to its functions;

“Development Principles” means the document certified as the Development Principles by the Secretary of State for the purposes of the Order;

“draft marine mammal mitigation protocol” means the document certified as the draft marine mammal mitigation protocol by the Secretary of State for the purposes of this Order;

(a) S.I. 2007/1842

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the 2009 Act;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order;

“gravity base system” means a structure principally of steel, concrete, or steel and concrete which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State for the purposes of this Order;

“in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan by the Secretary of State for the purposes of this Order;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at three or more points with steel pin piles or steel suction caissons and associated equipment including scour protection, J-tubes, transition piece, corrosion protection systems, fenders and maintenance equipment, boat access systems, access ladders and access and rest platform(s) and equipment;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO for the purposes of this licence;

“HAT” means highest astronomical tide;

“licence 1 (transmission)” means the licence set out in Schedule 11 (deemed licence under the 2009 Act – transmission assets (licence 1 – phase 1));

“licensed activities” means the activities specified in Part 3 of this licence;

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace (but only in relation to any of the ancillary works in Part 2 of Schedule 1 (ancillary works), any cable and any component part of any wind turbine generator, offshore electrical platform, accommodation platform or meteorological mast described in Part 1 of Schedule 1 (authorised development) not including the alteration, removal or replacement of foundations), to the extent assessed in the environmental statement; and “maintenance” is construed accordingly;

“Marine Management Organisation” or “MMO” means the body created under the 2009 Act which is responsible for the monitoring and enforcement of this licence;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“notice to mariners” means a notice issued by the undertaker to mariners to inform them of issues that affect the safety of navigation;

“offshore cables” means any cables offshore;

“offshore electrical platform” means a platform attached to the seabed by means of a foundation, with one or more decks, whether open or fully clad, accommodating electrical power transformers, switchgear, instrumentation, protection and control systems and other associated equipment and facilities to enable the transmission of electronic communications and for electricity to be collected at, and exported from, the platform;

“offshore Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out, whose grid coordinates are set out in Part 2 of this licence;

“the Order” means the Norfolk Vanguard Offshore Wind Farm Order 201X;

“outline fisheries liaison and co-existence plan” means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State for the purposes of this Order;

“outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation site integrity plan” means the document certified as the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation site integrity plan by the Secretary of State for the purposes of this Order;

“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State for the purposes of the Order;

“outline written scheme of investigation (offshore)” means the document certified as the outline written scheme of investigation (offshore) by the Secretary of State for the purposes of this Order;

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure steel jacket foundations;

“relevant site” means a European offshore marine site and a European site;

“scour protection” means measures to prevent loss of seabed sediment around any marine structure placed in or on the seabed by use of protective aprons, mattresses with or without frond devices, or rock and gravel placement.

“single offshore phase” means carrying out all offshore works as a single construction operation;

“statutory historic body” means Historic Buildings and Monuments Commission for England (Historic England) or its successor in function;

“statutory nature conservation body” means an organisation charged by government with advising on nature conservation matters;

“suction caisson” means a large diameter steel cylindrical shell which penetrates the seabed assisted by a hydrostatic pressure differential for fixity of foundations;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“two offshore phases” means carrying out the offshore works as two separate construction operations;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Norfolk Vanguard Limited;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“Work No. 4C” means the onshore transmission works at the landfall consisting of up to two transition jointing pits and up to four cables to be laid in ducts underground and associated fibre optic cables laid within cable ducts from MHWS at Happisburgh South, North Norfolk; and

“works plan” means the plan certified as the works plan by the Secretary of State for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument is construed as a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) Unless otherwise indicated—

(a) all times are taken to be Greenwich Mean Time (GMT);

(b) all co-ordinates are taken to be latitude and longitude degrees and minutes to two decimal places.

(4) Except where otherwise notified in writing by the relevant organisation, the primary point of contact with the organisations listed below and the address for returns and correspondence are—

(a) Marine Management Organisation

Marine Licensing
Lancaster House
Hampshire Court
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032;

(b) Marine Management Organisation (local office)

Lowestoft Office
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 573 149;

(c) Trinity House

Tower Hill
London
EC3N 4DH
Tel: 020 7481 6900;

(d) The United Kingdom Hydrographic Office

Admiralty Way
Taunton
Somerset
TA1 2DN
Tel: 01823 337 900;

(e) Maritime and Coastguard Agency

Navigation Safety Branch
Bay 2/20, Spring Place
105 Commercial Road
Southampton
SO15 1EG
Tel: 020 3817 2426;

(f) Centre for Environment, Fisheries and Aquaculture Science

Pakefield Road
Lowestoft
Suffolk
NR33 0HT

Tel: 01502 562 244;

(g) Natural England
Area 1C, Nobel House
17 Smith Square
London
SW1P 2AL
Tel: 0300 060 4911;

(h) Historic England
Cannon Bridge
House 25
Dowgate Hill
London
EC4R 2YA
Tel: 020 7973 3700

PART 2

Licensed Marine Activities – General

1. This licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

2. The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) relating to the transfer of the licence only apply to a transfer not falling within article 6 (benefit of the Order).

3. With respect to any condition which requires the licensed activities be carried out in accordance with the plans, protocols or statements approved under this Schedule, the approved details, plan or scheme are taken to include any amendments that may subsequently be approved in writing by the MMO.

4. Any amendments to or variations from the approved plans, protocols or statements must demonstrate that the subject matter of the approval sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

5. The substances or articles authorised for deposit at sea are—

- (a) iron and steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the offshore Order limits during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

6. The grid coordinates for the authorised scheme are specified below—

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 55' 0.308" N	3° 4' 42.589" E	269	52° 48' 36.617" N	1° 39' 45.198" E
2	52° 49' 53.975" N	3° 5' 22.789" E	270	52° 48' 36.608" N	1° 39' 45.442" E
3	52° 46' 19.050" N	3° 2' 16.682" E	271	52° 48' 36.111" N	1° 39' 58.227" E
4	52° 45' 10.584" N	2° 45' 33.989" E	272	52° 47' 53.162" N	1° 57' 17.842" E
5	52° 51' 41.636" N	2° 45' 34.220" E	273	52° 47' 51.688" N	1° 57' 48.405" E
6	53° 2' 36.817" N	2° 34' 16.309" E	274	52° 47' 50.436" N	1° 58' 0.642" E
7	52° 49' 38.834" N	2° 34' 15.809" E	275	52° 47' 48.214" N	1° 58' 12.320" E
8	52° 48' 47.472" N	2° 33' 28.343" E	276	52° 47' 42.495" N	1° 58' 33.820" E
9	52° 48' 3.133" N	2° 26' 37.427" E	277	52° 47' 36.793" N	1° 58' 49.157" E
10	52° 56' 9.089" N	2° 18' 33.231" E	278	52° 47' 27.713" N	1° 59' 7.719" E
11	52° 45' 11.467" N	2° 45' 30.454" E	279	52° 47' 19.963" N	1° 59' 19.409" E
12	52° 45' 11.943" N	2° 45' 28.711" E	280	52° 47' 10.581" N	1° 59' 30.409" E
13	52° 45' 12.967" N	2° 45' 25.281" E	281	52° 45' 3.401" N	2° 1' 51.874" E
14	52° 45' 14.081" N	2° 45' 21.928" E	282	52° 45' 3.127" N	2° 1' 52.189" E
15	52° 45' 15.285" N	2° 45' 18.661" E	283	52° 45' 2.287" N	2° 1' 53.183" E
16	52° 45' 15.920" N	2° 45' 17.061" E	284	52° 45' 1.635" N	2° 1' 53.925" E
17	52° 45' 17.254" N	2° 45' 13.933" E	285	52° 45' 1.351" N	2° 1' 54.277" E
18	52° 45' 17.952" N	2° 45' 12.407" E	286	52° 45' 0.388" N	2° 1' 55.510" E
19	52° 45' 19.409" N	2° 45' 9.432" E	287	52° 45' 0.110" N	2° 1' 55.877" E
20	52° 45' 20.533" N	2° 45' 7.335" E	288	52° 44' 59.840" N	2° 1' 56.258" E
21	52° 45' 20.944" N	2° 45' 6.567" E	289	52° 44' 58.926" N	2° 1' 57.587" E
22	52° 45' 21.741" N	2° 45' 5.178" E	290	52° 44' 58.663" N	2° 1' 57.982" E
23	52° 45' 23.389" N	2° 45' 2.488" E	291	52° 44' 58.407" N	2° 1' 58.390" E
24	52° 45' 24.240" N	2° 45' 1.188" E	292	52° 44' 57.545" N	2° 1' 59.812" E

25	52° 45' 25.993" N	2° 44' 58.685" E	293	52° 44' 57.298" N	2° 2' 0.233" E
26	52° 45' 27.812" N	2° 44' 56.313" E	294	52° 44' 57.059" N	2° 2' 0.667" E
27	52° 45' 29.693" N	2° 44' 54.076" E	295	52° 44' 56.253" N	2° 2' 2.175" E
28	52° 45' 31.632" N	2° 44' 51.980" E	296	52° 44' 56.022" N	2° 2' 2.621" E
29	52° 45' 32.623" N	2° 44' 50.985" E	297	52° 44' 55.800" N	2° 2' 3.078" E
30	52° 45' 33.626" N	2° 44' 50.027" E	298	52° 44' 55.053" N	2° 2' 4.667" E
31	52° 45' 35.671" N	2° 44' 48.223" E	299	52° 44' 54.839" N	2° 2' 5.136" E
32	52° 45' 37.763" N	2° 44' 46.570" E	300	52° 44' 54.635" N	2° 2' 5.615" E
33	52° 45' 39.897" N	2° 44' 45.071" E	301	52° 44' 53.950" N	2° 2' 7.278" E
34	52° 45' 42.069" N	2° 44' 43.731" E	302	52° 44' 53.755" N	2° 2' 7.768" E
3	52° 45' 43.168" N	2° 44' 43.121" E	303	52° 44' 53.569" N	2° 2' 8.268" E
36	52° 45' 44.275" N	2° 44' 42.551" E	304	52° 44' 52.949" N	2° 2' 9.998" E
37	52° 45' 46.511" N	2° 44' 41.534" E	305	52° 44' 52.773" N	2° 2' 10.507" E
38	52° 45' 47.638" N	2° 44' 41.087" E	306	52° 44' 52.607" N	2° 2' 11.025" E
39	52° 45' 48.833" N	2° 44' 40.681" E	307	52° 44' 52.053" N	2° 2' 12.816" E
40	52° 46' 9.781" N	2° 44' 40.687" E	308	52° 44' 51.897" N	2° 2' 13.343" E
41	52° 46' 46.724" N	2° 44' 40.696" E	309	52° 44' 51.751" N	2° 2' 13.877" E
42	52° 46' 48.173" N	2° 44' 40.696" E	310	52° 44' 51.267" N	2° 2' 15.722" E
43	52° 46' 52.974" N	2° 44' 40.698" E	311	52° 44' 51.131" N	2° 2' 16.263" E
44	52° 46' 55.152" N	2° 44' 40.698" E	312	52° 44' 51.006" N	2° 2' 16.812" E
45	52° 46' 57.976" N	2° 44' 40.699" E	313	52° 44' 50.593" N	2° 2' 18.703" E
46	52° 47' 0.395" N	2° 44' 40.053" E	314	52° 44' 50.478" N	2° 2' 19.257" E
47	52° 47' 1.558" N	2° 44' 39.624" E	315	52° 44' 50.373" N	2° 2' 19.818" E
48	52° 47' 1.970" N	2° 44' 39.479" E	316	52° 44' 50.034" N	2° 2' 21.747" E
49	52° 47' 2.003" N	2° 44' 39.463" E	317	52° 44' 49.940" N	2° 2' 22.313" E

50	52° 47' 3.144" N	2° 44' 38.936" E	318	52° 44' 49.857" N	2° 2' 22.883" E
51	52° 47' 4.295" N	2° 44' 38.272" E	319	52° 44' 49.592" N	2° 2' 24.844" E
52	52° 47' 4.681" N	2° 44' 38.004" E	320	52° 44' 49.520" N	2° 2' 25.418" E
53	52° 47' 4.998" N	2° 44' 37.816" E	321	52° 44' 49.459" N	2° 2' 25.996" E
54	52° 47' 5.524" N	2° 44' 37.450" E	322	52° 44' 49.268" N	2° 2' 27.980" E
55	52° 47' 6.616" N	2° 44' 36.554" E	323	52° 44' 49.218" N	2° 2' 28.561" E
56	52° 47' 7.671" N	2° 44' 35.546" E	324	52° 44' 49.179" N	2° 2' 29.143" E
57	52° 47' 8.686" N	2° 44' 34.431" E	325	52° 44' 49.065" N	2° 2' 31.144" E
58	52° 47' 9.657" N	2° 44' 33.214" E	326	52° 44' 49.037" N	2° 2' 31.728" E
59	52° 47' 10.579" N	2° 44' 31.898" E	327	52° 44' 49.021" N	2° 2' 32.314" E
60	52° 47' 11.449" N	2° 44' 30.489" E	328	52° 44' 48.989" N	2° 2' 34.021" E
61	52° 47' 12.264" N	2° 44' 28.993" E	329	52° 44' 48.983" N	2° 2' 34.638" E
62	52° 47' 13.021" N	2° 44' 27.415" E	330	52° 44' 49.220" N	2° 15' 49.970" E
63	52° 47' 13.715" N	2° 44' 25.762" E	331	52° 44' 49.236" N	2° 15' 51.345" E
64	52° 47' 14.346" N	2° 44' 24.040" E	332	52° 44' 49.268" N	2° 15' 53.169" E
65	52° 47' 14.910" N	2° 44' 22.257" E	333	52° 44' 49.284" N	2° 15' 53.754" E
66	52° 47' 15.404" N	2° 44' 20.418" E	334	52° 44' 49.311" N	2° 15' 54.339" E
67	52° 47' 15.784" N	2° 44' 18.728" E	335	52° 44' 49.422" N	2° 15' 56.340" E
68	52° 47' 15.918" N	2° 44' 18.041" E	336	52° 44' 49.460" N	2° 15' 56.922" E
69	52° 47' 16.179" N	2° 44' 16.606" E	337	52° 44' 49.509" N	2° 15' 57.503" E
70	52° 47' 16.456" N	2° 44' 14.647" E	338	52° 44' 49.680" N	2° 15' 59.308" E
71	52° 47' 16.520" N	2° 44' 14.023" E	339	52° 44' 49.731" N	2° 15' 59.809" E
72	52° 47' 16.658" N	2° 44' 12.664" E	340	52° 44' 49.791" N	2° 16' 0.309" E
73	52° 47' 16.784" N	2° 44' 10.663" E	341	52° 44' 51.112" N	2° 16' 10.573" E
74	52° 47' 16.834" N	2° 44' 8.653" E	342	52° 44' 51.112" N	2° 16' 10.573" E

75	52° 47' 16.807" N	2° 44' 6.642" E	343	52° 45' 49.555" N	2° 23' 47.080" E
76	52° 47' 16.703" N	2° 44' 4.638" E	344	52° 45' 49.556" N	2° 23' 47.093" E
77	52° 47' 16.559" N	2° 44' 3.046" E	345	52° 45' 49.762" N	2° 23' 48.593" E
78	52° 47' 15.589" N	2° 43' 55.247" E	346	52° 45' 50.105" N	2° 23' 50.522" E
79	52° 47' 14.341" N	2° 43' 45.216" E	347	52° 45' 50.521" N	2° 23' 52.412" E
80	52° 47' 13.615" N	2° 43' 39.381" E	348	52° 45' 51.008" N	2° 23' 54.255" E
81	52° 47' 13.538" N	2° 43' 38.765" E	349	52° 45' 51.565" N	2° 23' 56.044" E
82	52° 43' 46.039" N	2° 16' 19.075" E	350	52° 45' 52.188" N	2° 23' 57.772" E
83	52° 43' 45.182" N	2° 16' 10.004" E	351	52° 45' 52.876" N	2° 23' 59.431" E
84	52° 43' 44.634" N	2° 16' 0.162" E	352	52° 45' 53.626" N	2° 24' 1.017" E
85	52° 43' 44.531" N	2° 15' 54.221" E	353	52° 45' 54.434" N	2° 24' 2.521" E
86	52° 43' 44.490" N	2° 15' 51.462" E	354	52° 45' 55.299" N	2° 24' 3.939" E
87	52° 43' 44.512" N	2° 7' 23.550" E	355	52° 45' 56.215" N	2° 24' 5.265" E
88	52° 42' 44.166" N	2° 3' 14.512" E	356	52° 45' 57.180" N	2° 24' 6.493" E
89	52° 42' 43.152" N	2° 3' 9.802" E	357	52° 45' 58.191" N	2° 24' 7.619" E
90	52° 42' 42.369" N	2° 3' 4.946" E	358	52° 45' 59.242" N	2° 24' 8.639" E
91	52° 42' 31.534" N	2° 1' 44.644" E	359	52° 46' 0.330" N	2° 24' 9.547" E
92	52° 42' 31.056" N	2° 1' 40.338" E	360	52° 46' 1.450" N	2° 24' 10.341" E
93	52° 42' 30.948" N	2° 1' 39.044" E	361	52° 46' 2.598" N	2° 24' 11.017" E
94	52° 42' 30.701" N	2° 1' 34.686" E	362	52° 46' 3.770" N	2° 24' 11.573" E
95	52° 42' 30.654" N	2° 1' 30.309" E	363	52° 46' 4.960" N	2° 24' 12.007" E
96	52° 42' 30.675" N	2° 1' 29.003" E	364	52° 46' 6.165" N	2° 24' 12.317" E
97	52° 42' 30.833" N	2° 1' 25.173" E	365	52° 46' 7.380" N	2° 24' 12.501" E
98	52° 42' 33.173" N	2° 0' 49.768" E	366	52° 46' 8.022" N	2° 24' 12.532" E
99	52° 42' 34.216" N	2° 0' 40.941" E	367	52° 46' 9.762" N	2° 24' 12.670" E

100	52° 42' 34.439" N	2° 0' 39.649" E	368	52° 50' 9.656" N	2° 24' 31.707" E
101	52° 42' 35.302" N	2° 0' 35.379" E	369	52° 51' 3.549" N	2° 34' 15.864" E
102	52° 42' 41.649" N	2° 0' 7.655" E	370	52° 51' 3.486" N	2° 34' 19.188" E
103	52° 42' 43.788" N	2° 0' 0.073" E	371	52° 51' 3.295" N	2° 34' 22.530" E
104	52° 42' 44.149" N	1° 59' 59.016" E	372	52° 51' 2.978" N	2° 34' 25.846" E
105	52° 42' 45.445" N	1° 59' 55.557" E	373	52° 51' 2.535" N	2° 34' 29.122" E
106	52° 42' 55.437" N	1° 59' 30.877" E	374	52° 51' 1.968" N	2° 34' 32.346" E
107	52° 42' 55.855" N	1° 59' 29.924" E	375	52° 51' 1.280" N	2° 34' 35.504" E
108	52° 42' 58.378" N	1° 59' 24.593" E	376	52° 51' 0.473" N	2° 34' 38.585" E
109	52° 42' 58.842" N	1° 59' 23.685" E	377	52° 50' 59.551" N	2° 34' 41.577" E
110	52° 43' 0.673" N	1° 59' 20.588" E	378	52° 50' 58.516" N	2° 34' 44.466" E
111	52° 43' 2.861" N	1° 59' 17.394" E	379	52° 50' 57.374" N	2° 34' 47.243" E
112	52° 43' 17.859" N	1° 58' 57.179" E	380	52° 50' 56.129" N	2° 34' 49.896" E
113	52° 43' 19.625" N	1° 58' 54.953" E	381	52° 50' 54.785" N	2° 34' 52.414" E
114	52° 43' 21.284" N	1° 58' 53.106" E	382	52° 50' 53.348" N	2° 34' 54.787" E
115	52° 43' 21.796" N	1° 58' 52.576" E	383	52° 50' 51.823" N	2° 34' 57.007" E
116	52° 43' 23.547" N	1° 58' 50.895" E	384	52° 50' 50.218" N	2° 34' 59.065" E
117	52° 45' 46.103" N	1° 56' 43.184" E	385	52° 50' 48.537" N	2° 35' 0.952" E
118	52° 46' 2.160" N	1° 56' 27.260" E	386	52° 50' 46.788" N	2° 35' 2.661" E
119	52° 46' 3.532" N	1° 56' 26.078" E	387	52° 50' 44.977" N	2° 35' 4.185" E
120	52° 46' 17.577" N	1° 56' 12.146" E	388	52° 50' 43.112" N	2° 35' 5.518" E
121	52° 46' 37.038" N	1° 55' 33.566" E	389	52° 50' 41.200" N	2° 35' 6.655" E
122	52° 46' 51.513" N	1° 54' 38.977" E	390	52° 50' 39.248" N	2° 35' 7.591" E
123	52° 46' 58.151" N	1° 53' 21.115" E	391	52° 50' 37.265" N	2° 35' 8.323" E
124	52° 46' 59.490" N	1° 52' 52.341" E	392	52° 50' 33.492" N	2° 35' 9.272" E

125	52° 47' 32.039" N	1° 39' 38.159" E	393	52° 50' 32.920" N	2° 35' 9.346" E
126	52° 47' 32.129" N	1° 39' 36.152" E	394	52° 46' 31.498" N	2° 26' 1.301" E
127	52° 47' 32.273" N	1° 39' 33.526" E	395	52° 46' 31.407" N	2° 26' 1.294" E
128	52° 47' 32.388" N	1° 39' 31.565" E	396	52° 46' 31.505" N	2° 26' 1.330" E
129	52° 47' 32.521" N	1° 39' 29.607" E	397	52° 46' 30.476" N	2° 26' 1.280" E
130	52° 47' 32.673" N	1° 39' 27.652" E	398	52° 46' 29.257" N	2° 26' 1.347" E
131	52° 47' 32.844" N	1° 39' 25.702" E	399	52° 46' 28.043" N	2° 26' 1.540" E
132	52° 47' 33.028" N	1° 39' 23.714" E	400	52° 46' 26.839" N	2° 26' 1.859" E
133	52° 47' 33.217" N	1° 39' 21.768" E	401	52° 46' 25.650" N	2° 26' 2.301" E
134	52° 47' 33.425" N	1° 39' 19.828" E	402	52° 46' 24.480" N	2° 26' 2.866" E
135	52° 47' 33.652" N	1° 39' 17.893" E	403	52° 46' 23.333" N	2° 26' 3.551" E
136	52° 47' 33.896" N	1° 39' 15.964" E	404	52° 46' 22.215" N	2° 26' 4.353" E
137	52° 47' 34.155" N	1° 39' 13.999" E	405	52° 46' 21.130" N	2° 26' 5.269" E
138	52° 47' 34.419" N	1° 39' 12.073" E	406	52° 46' 20.230" N	2° 26' 6.150" E
139	52° 47' 34.701" N	1° 39' 10.153" E	407	52° 46' 20.081" N	2° 26' 6.296" E
140	52° 47' 35.001" N	1° 39' 8.241" E	408	52° 46' 19.074" N	2° 26' 7.430" E
141	52° 47' 35.320" N	1° 39' 6.337" E	409	52° 46' 18.112" N	2° 26' 8.665" E
142	52° 47' 35.827" N	1° 39' 3.397" E	410	52° 46' 17.199" N	2° 26' 9.998" E
143	52° 47' 36.193" N	1° 39' 1.398" E	411	52° 46' 16.338" N	2° 26' 11.422" E
144	52° 47' 36.599" N	1° 38' 59.313" E	412	52° 46' 15.534" N	2° 26' 12.933" E
145	52° 47' 37.000" N	1° 38' 57.371" E	413	52° 46' 14.788" N	2° 26' 14.524" E
146	52° 47' 37.497" N	1° 38' 55.056" E	414	52° 46' 14.105" N	2° 26' 16.189" E
147	52° 47' 37.906" N	1° 38' 53.193" E	415	52° 46' 13.486" N	2° 26' 17.921" E
148	52° 47' 38.332" N	1° 38' 51.340" E	416	52° 46' 12.935" N	2° 26' 19.714" E
149	52° 47' 38.777" N	1° 38' 49.499" E	417	52° 46' 12.453" N	2° 26' 21.561" E

150	52° 47' 39.239" N	1° 38' 47.670" E	418	52° 46' 12.042" N	2° 26' 23.454" E
151	52° 48' 59.902" N	1° 33' 32.091" E	419	52° 46' 11.704" N	2° 26' 25.386" E
152	52° 49' 1.602" N	1° 33' 25.973" E	420	52° 46' 11.440" N	2° 26' 27.349" E
153	52° 49' 2.819" N	1° 33' 19.121" E	421	52° 46' 11.252" N	2° 26' 29.335" E
154	52° 49' 3.674" N	1° 33' 13.073" E	422	52° 46' 11.139" N	2° 26' 31.337" E
155	52° 49' 3.797" N	1° 33' 6.096" E	423	52° 46' 11.103" N	2° 26' 33.346" E
156	52° 49' 2.898" N	1° 32' 57.549" E	424	52° 46' 11.144" N	2° 26' 35.356" E
157	52° 49' 4.139" N	1° 32' 54.271" E	425	52° 46' 11.261" N	2° 26' 37.357" E
158	52° 49' 4.845" N	1° 32' 52.212" E	426	52° 46' 11.399" N	2° 26' 38.780" E
159	52° 49' 5.188" N	1° 32' 51.467" E	427	52° 46' 11.399" N	2° 26' 38.781" E
160	52° 49' 6.147" N	1° 32' 49.575" E	428	52° 46' 11.399" N	2° 26' 38.782" E
161	52° 49' 7.035" N	1° 32' 47.473" E	429	52° 47' 4.976" N	2° 33' 42.433" E
162	52° 49' 7.208" N	1° 32' 46.999" E	430	52° 47' 5.398" N	2° 33' 45.780" E
163	52° 49' 8.015" N	1° 32' 44.486" E	431	52° 47' 6.051" N	2° 33' 50.967" E
164	52° 49' 8.663" N	1° 32' 42.319" E	432	52° 47' 6.366" N	2° 33' 53.472" E
165	52° 49' 8.910" N	1° 32' 41.417" E	433	52° 47' 6.366" N	2° 33' 53.472" E
166	52° 49' 9.102" N	1° 32' 41.019" E	434	52° 47' 6.366" N	2° 33' 53.473" E
167	52° 49' 9.635" N	1° 32' 40.648" E	435	52° 47' 6.675" N	2° 33' 55.224" E
168	52° 49' 9.807" N	1° 32' 40.345" E	436	52° 47' 7.088" N	2° 33' 57.116" E
169	52° 49' 9.768" N	1° 32' 39.737" E	437	52° 47' 7.573" N	2° 33' 58.962" E
170	52° 49' 9.855" N	1° 32' 38.941" E	438	52° 47' 8.126" N	2° 34' 0.754" E
171	52° 49' 10.086" N	1° 32' 38.247" E	439	52° 47' 8.747" N	2° 34' 2.485" E
172	52° 49' 10.218" N	1° 32' 37.939" E	440	52° 47' 9.433" N	2° 34' 4.148" E
173	52° 49' 10.691" N	1° 32' 36.993" E	441	52° 47' 10.180" N	2° 34' 5.737" E
174	52° 49' 11.553" N	1° 32' 35.417" E	442	52° 47' 10.987" N	2° 34' 7.246" E

175	52° 49' 12.200" N	1° 32' 33.887" E	443	52° 47' 11.849" N	2° 34' 8.668" E
176	52° 49' 12.742" N	1° 32' 32.736" E	444	52° 47' 12.764" N	2° 34' 9.998" E
177	52° 49' 13.080" N	1° 32' 31.922" E	445	52° 47' 13.727" N	2° 34' 11.230" E
178	52° 49' 13.507" N	1° 32' 31.040" E	446	52° 47' 14.736" N	2° 34' 12.361" E
179	52° 49' 14.325" N	1° 32' 29.767" E	447	52° 47' 15.785" N	2° 34' 13.384" E
180	52° 49' 14.340" N	1° 32' 29.796" E	448	52° 47' 16.872" N	2° 34' 14.297" E
181	52° 49' 15.178" N	1° 32' 31.478" E	449	52° 47' 17.991" N	2° 34' 15.096" E
182	52° 49' 15.638" N	1° 32' 32.401" E	450	52° 47' 19.138" N	2° 34' 15.777" E
183	52° 49' 45.178" N	1° 33' 31.705" E	451	52° 47' 20.309" N	2° 34' 16.338" E
184	52° 49' 45.944" N	1° 33' 33.513" E	452	52° 47' 21.499" N	2° 34' 16.777" E
185	52° 49' 46.772" N	1° 33' 35.540" E	453	52° 47' 22.704" N	2° 34' 17.091" E
186	52° 49' 47.579" N	1° 33' 37.591" E	454	52° 47' 23.918" N	2° 34' 17.280" E
187	52° 49' 48.363" N	1° 33' 39.664" E	455	52° 47' 25.496" N	2° 34' 17.365" E
188	52° 49' 49.126" N	1° 33' 41.760" E	456	52° 48' 2.953" N	2° 26' 36.184" E
189	52° 49' 49.866" N	1° 33' 43.878" E	457	52° 48' 2.518" N	2° 26' 33.730" E
190	52° 49' 50.585" N	1° 33' 46.016" E	458	52° 48' 1.985" N	2° 26' 31.328" E
191	52° 49' 51.280" N	1° 33' 48.175" E	459	52° 48' 1.357" N	2° 26' 28.991" E
192	52° 49' 51.952" N	1° 33' 50.354" E	460	52° 48' 1.009" N	2° 26' 27.849" E
193	52° 49' 52.602" N	1° 33' 52.551" E	461	52° 48' 0.243" N	2° 26' 25.626" E
194	52° 49' 53.228" N	1° 33' 54.767" E	462	52° 47' 59.827" N	2° 26' 24.547" E
195	52° 49' 53.831" N	1° 33' 57.000" E	463	52° 47' 58.931" N	2° 26' 22.461" E
196	52° 49' 54.410" N	1° 33' 59.251" E	464	52° 47' 57.954" N	2° 26' 20.477" E
197	52° 49' 54.965" N	1° 34' 1.518" E	465	52° 47' 57.436" N	2° 26' 19.526" E
198	52° 49' 55.496" N	1° 34' 3.800" E	466	52° 47' 56.343" N	2° 26' 17.712" E
199	52° 49' 56.003" N	1° 34' 6.098" E	467	52° 47' 55.181" N	2° 26' 16.022" E

200	52° 49' 56.486" N	1° 34' 8.409" E	468	52° 47' 53.953" N	2° 26' 14.462" E
210	52° 49' 56.944" N	1° 34' 10.735" E	469	52° 47' 53.316" N	2° 26' 13.734" E
202	52° 49' 57.378" N	1° 34' 13.073" E	470	52° 47' 52.000" N	2° 26' 12.384" E
203	52° 49' 57.786" N	1° 34' 15.423" E	471	52° 47' 51.322" N	2° 26' 11.763" E
204	52° 49' 58.171" N	1° 34' 17.784" E	472	52° 47' 49.931" N	2° 26' 10.635" E
205	52° 49' 58.530" N	1° 34' 20.157" E	473	52° 47' 48.498" N	2° 26' 9.662" E
206	52° 49' 58.864" N	1° 34' 22.539" E	474	52° 47' 47.030" N	2° 26' 8.847" E
207	52° 49' 59.173" N	1° 34' 24.930" E	475	52° 47' 45.531" N	2° 26' 8.195" E
208	52° 49' 59.456" N	1° 34' 27.330" E	476	52° 47' 44.124" N	2° 26' 7.739" E
209	52° 49' 59.714" N	1° 34' 29.738" E	477	52° 47' 42.819" N	2° 26' 7.446" E
210	52° 49' 59.947" N	1° 34' 32.153" E	478	52° 47' 42.518" N	2° 26' 7.422" E
211	52° 50' 0.154" N	1° 34' 34.574" E	479	52° 47' 40.198" N	2° 26' 6.759" E
212	52° 50' 0.336" N	1° 34' 37.001" E	480	52° 47' 32.505" N	2° 26' 6.180" E
213	52° 50' 0.492" N	1° 34' 39.433" E	481	52° 50' 2.151" N	2° 35' 9.316" E
214	52° 50' 0.623" N	1° 34' 41.869" E	482	52° 47' 39.858" N	2° 35' 10.667" E
215	52° 50' 0.727" N	1° 34' 44.308" E	483	52° 47' 38.680" N	2° 35' 10.728" E
216	52° 50' 0.806" N	1° 34' 46.750" E	484	52° 47' 37.466" N	2° 35' 10.917" E
217	52° 50' 0.859" N	1° 34' 49.193" E	485	52° 47' 36.261" N	2° 35' 11.231" E
218	52° 50' 0.887" N	1° 34' 51.638" E	486	52° 47' 35.071" N	2° 35' 11.670" E
219	52° 50' 0.888" N	1° 34' 54.083" E	487	52° 47' 33.900" N	2° 35' 12.231" E
220	52° 50' 0.864" N	1° 34' 56.528" E	488	52° 47' 32.753" N	2° 35' 12.912" E
221	52° 50' 0.814" N	1° 34' 58.972" E	489	52° 47' 31.634" N	2° 35' 13.711" E
222	52° 50' 0.739" N	1° 35' 1.414" E	490	52° 47' 30.547" N	2° 35' 14.623" E
223	52° 50' 0.637" N	1° 35' 3.854" E	491	52° 47' 29.498" N	2° 35' 15.647" E
224	52° 50' 0.510" N	1° 35' 6.290" E	492	52° 47' 28.489" N	2° 35' 16.777" E

225	52° 50' 0.357" N	1° 35' 8.722" E	493	52° 47' 27.525" N	2° 35' 18.010" E
226	52° 50' 0.178" N	1° 35' 11.150" E	494	52° 47' 26.611" N	2° 35' 19.340" E
227	52° 49' 59.974" N	1° 35' 13.572" E	495	52° 47' 25.748" N	2° 35' 20.762" E
228	52° 49' 59.745" N	1° 35' 15.987" E	496	52° 47' 24.942" N	2° 35' 22.271" E
229	52° 49' 59.490" N	1° 35' 18.396" E	497	52° 47' 24.194" N	2° 35' 23.860" E
230	52° 49' 59.209" N	1° 35' 20.797" E	498	52° 47' 23.509" N	2° 35' 25.523" E
231	52° 49' 58.903" N	1° 35' 23.190" E	499	52° 47' 22.888" N	2° 35' 27.254" E
232	52° 49' 58.573" N	1° 35' 25.573" E	500	52° 47' 22.334" N	2° 35' 29.046" E
233	52° 49' 58.217" N	1° 35' 27.947" E	501	52° 47' 21.849" N	2° 35' 30.892" E
234	52° 49' 57.836" N	1° 35' 30.310" E	502	52° 47' 21.436" N	2° 35' 32.784" E
235	52° 49' 57.430" N	1° 35' 32.661" E	503	52° 47' 21.096" N	2° 35' 34.716" E
236	52° 49' 56.999" N	1° 35' 35.001" E	504	52° 47' 20.829" N	2° 35' 36.678" E
237	52° 49' 56.544" N	1° 35' 37.328" E	505	52° 47' 20.638" N	2° 35' 38.665" E
238	52° 49' 56.064" N	1° 35' 39.641" E	506	52° 47' 20.523" N	2° 35' 40.667" E
239	52° 49' 55.560" N	1° 35' 41.940" E	507	52° 47' 20.485" N	2° 35' 42.678" E
240	52° 49' 55.032" N	1° 35' 44.225" E	508	52° 47' 20.523" N	2° 35' 44.688" E
241	52° 49' 54.480" N	1° 35' 46.494" E	509	52° 47' 20.637" N	2° 35' 46.691" E
242	52° 49' 53.904" N	1° 35' 48.746" E	510	52° 47' 20.743" N	2° 35' 47.801" E
243	52° 49' 53.304" N	1° 35' 50.982" E	511	52° 47' 20.744" N	2° 35' 47.806" E
244	52° 49' 52.681" N	1° 35' 53.200" E	512	52° 47' 21.786" N	2° 35' 56.101" E
245	52° 49' 52.034" N	1° 35' 55.400" E	513	52° 48' 20.763" N	2° 43' 47.964" E
246	52° 49' 51.868" N	1° 35' 55.943" E	514	52° 48' 21.026" N	2° 43' 49.928" E
247	52° 48' 40.863" N	1° 39' 22.453" E	515	52° 48' 21.364" N	2° 43' 51.862" E
248	52° 48' 40.702" N	1° 39' 22.924" E	516	52° 48' 21.774" N	2° 43' 53.756" E
249	52° 48' 40.367" N	1° 39' 23.994" E	517	52° 48' 22.256" N	2° 43' 55.605" E

250	52° 48' 40.234" N	1° 39' 24.393" E	518	52° 48' 22.808" N	2° 43' 57.400" E
251	52° 48' 40.107" N	1° 39' 24.797" E	519	52° 48' 23.426" N	2° 43' 59.134" E
252	52° 48' 39.560" N	1° 39' 26.596" E	520	52° 48' 24.109" N	2° 44' 0.800" E
253	52° 48' 39.405" N	1° 39' 27.124" E	521	52° 48' 24.854" N	2° 44' 2.393" E
254	52° 48' 39.261" N	1° 39' 27.661" E	522	52° 48' 25.659" N	2° 44' 3.905" E
255	52° 48' 38.783" N	1° 39' 29.512" E	523	52° 48' 26.519" N	2° 44' 5.331" E
256	52° 48' 38.649" N	1° 39' 30.055" E	524	52° 48' 27.432" N	2° 44' 6.665" E
257	52° 48' 38.525" N	1° 39' 30.606" E	525	52° 48' 28.394" N	2° 44' 7.902" E
258	52° 48' 38.044" N	1° 39' 32.861" E	526	52° 48' 29.401" N	2° 44' 9.037" E
259	52° 48' 37.927" N	1° 39' 33.484" E	527	52° 48' 30.449" N	2° 44' 10.065" E
260	52° 48' 37.569" N	1° 39' 35.557" E	528	52° 48' 31.534" N	2° 44' 10.983" E
261	52° 48' 37.477" N	1° 39' 36.124" E	529	52° 48' 32.652" N	2° 44' 11.786" E
262	52° 48' 37.396" N	1° 39' 36.696" E	530	52° 48' 33.799" N	2° 44' 12.472" E
263	52° 48' 37.137" N	1° 39' 38.662" E	531	52° 48' 34.969" N	2° 44' 13.037" E
264	52° 48' 37.067" N	1° 39' 39.237" E	532	52° 48' 36.158" N	2° 44' 13.481" E
265	52° 48' 37.008" N	1° 39' 39.816" E	533	52° 48' 37.362" N	2° 44' 13.800" E
266	52° 48' 36.824" N	1° 39' 41.805" E	534	52° 48' 38.576" N	2° 44' 13.994" E
267	52° 48' 36.776" N	1° 39' 42.387" E	535	52° 48' 39.226" N	2° 44' 14.030" E
268	52° 48' 36.739" N	1° 39' 42.971" E	536	52° 51' 27.631" N	2° 44' 14.043" E

PART 3

Details of Licensed Marine Activities

1. Subject to the licence conditions at Part 4, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) of the 2009 Act—

- (a) the deposit at sea of the substances and articles specified in paragraph 5 of Part 2 of this licence;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;

- (d) the disposal of up to 11,475,000 m³ of inert material of natural origin within the offshore Order limits produced during construction drilling or seabed preparation for foundation works and cable (including fibre optic cable) sandwave preparation works at disposal site references HU213, HU214, HU215 and HU216 within the extent of the Order limits seaward of MHWS, comprising—
 - (i) 9,000,000 m³ for cable (including fibre optic cable) installation;
 - (ii) 75,000 m³ for the offshore electrical platforms;
 - (iii) 1,900,000 m³ for the export cables (including fibre optic cables) within the Order limits excluding the Haisborough, Hammond and Winterton Special Area of Conservation;
 - (iv) 500,000 m³ for the export cables (including fibre optic cables) within the part of the Haisborough, Hammond and Winterton Special Area of Conservation that falls within the Order limits;
- (e) the removal of static fishing equipment; and
- (f) the disposal of drill arisings in connection with any foundation drilling up to 14,137 m³.

2. Such activities are authorised in relation to the construction, maintenance and operation of—

(1) *Work No. 2 (phase 2)* – up to two offshore electrical platforms fixed to the seabed within the area shown on the works plan by one of the following foundation types: jacket (piled or suction caisson) or gravity base.

(2) *Work No. 3 (phase 2)* – a network of subsea cables and fibre optic cables within the area shown on the works plan comprising Work No. 2 and for the transmission of electricity and electronic communications between the offshore electrical platforms including one or more cable crossings.

(3) *Work No. 4A (phase 2)* – up to four subsea export cables and fibre optic cables between Work No. 2 and Work No. 4B consisting of subsea cables and fibre optic cables along routes within the Order limits seaward of MHWS including one or more offshore cable crossings.

(4) *Work No. 4B (phase 2)* – up to four subsea export cables and fibre optic cables between Work No. 4A and Work No. 4C consisting of subsea cables and fibre optic cables along routes within the Order limits between MLWS and MHWS at Happisburgh South, North Norfolk.

(5) In connection with such Works No. 2, 3, 4A and 4B and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement and the provisions of this licence.

(6) In connection with such Works No. 2, 3, 4A and 4B, ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised scheme; and
- (b) beacons, fenders and other navigational warning or ship impact protection works.

PART 4

Conditions

Design parameters

1.—(1) The dimensions of any offshore electrical platform forming part of the authorised scheme (excluding towers, helipads, masts and cranes) must not exceed 100 metres in height when measured from HAT, 120 metres in length and 80 metres in width.

(2) In relation to an offshore electrical platform, each foundation using piles must not have—

- (a) more than 18 driven piles;
- (b) a pile diameter which is more than five metres.

(3) In relation to an offshore electrical platform, the foundations must not have a seabed footprint area (excluding scour protection) of greater than 15,000 m².

2. The total length of the cables and the area and volume of their cable protection must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection (m² and m³)</i>
Work No. 3 (Interconnector link)	150 kilometres	76,000m ² 38,000 m ³
Work No. 4A and 4B (export cable)	400 kilometres	102,086m ² 59,836 m ³

Phasing of the authorised scheme

3.—(1) Taken together with works authorised and proposed to be constructed pursuant to licence 1 (transmission)—

- (a) the total number of offshore electrical platforms forming part of the authorised scheme must not exceed two;
- (b) the total amount of scour protection for the offshore electrical platforms forming part of the authorised scheme must not exceed 20,000m² and 100,000 m³; and
- (c) the total amount of inert material of natural origin disposed within the offshore Order limits as part of the authorised scheme must not exceed 11,475,000 m³;
- (d) the total amount of disposal for drill arisings in connection with any foundation drilling must not exceed 14,137 m³;
- (e) the total length of cable and the amount of cable protection must not exceed the figures stated in condition 2 of this licence;
- (f) in the Haisborough, Hammond and Winterton Special Area of Conservation, the total area of cable protection must not exceed 32,000m² and the total volume of cable protection must not exceed 20,800m³;
- (g) disposal activities within the Haisborough, Hammond and Winterton Special Area of Conservation Site must not take place until the undertaker has confirmed to the MMO that the particle size composition of the disposal material is within 95% similarity to the particle size composition of the seabed at the disposal location.

(2) Prior to the commencement of the authorised scheme the undertaker must give notice to the MMO detailing—

- (a) whether the authorised scheme will be constructed—
 - (i) in a single offshore phase under this licence; or
 - (ii) in two offshore phases under this licence and licence 1 (transmission); and
- (b) where the authorised scheme will be constructed in two offshore phases, the total number of offshore electrical platforms to be constructed in each phase.

Notifications and inspections

4.—(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
 - (i) all agents and contractors notified to the MMO in accordance with condition 12; and

- (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 12;
 - (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) above must provide a completed confirmation form to the MMO confirming receipt of this licence.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 12 are permitted to carry out the licensed activities.
- (3) Copies of this licence must also be available for inspection at the following locations—
- (a) the undertaker's registered address;
 - (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
 - (c) on board each vessel or at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b) above.
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.
- (6) The undertaker must inform the MMO Coastal Office in writing at least five days prior to the commencement of the licensed activities or any part of them, and within five days of completion of the licensed activities.
- (7) The undertaker must inform the Kingfisher Information Service of Seafish by email to kingfisher@seafish.co.uk of details regarding the vessel routes, timings and locations relating to the construction of the authorised scheme or relevant part—
- (a) at least fourteen days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
 - (b) as soon as reasonably practicable and no later than 24 hours of completion of construction of all offshore activities.

Confirmation of notification must be provided to the MMO within five days.

(8) A notice to mariners must be issued at least ten days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 2 and the expected vessel routes from the construction ports to the relevant location. A second notice to mariners must be issued advising of the start date of Work Nos. 3, 4A and 4B and the route of the sub-sea cables and fibre optic cables. Copies of all notices must be provided to the MMO, MCA and UKHO within five days.

(9) The notices to mariners must be updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under condition 9(1)(b). Copies of all notices must be provided to the MMO and UKHO within five days.

(10) The undertaker must notify the UK Hydrographic Office both of the commencement (within ten days), progress and completion of construction (within ten days) of the licensed activities in order that all necessary amendments to nautical charts are made and the undertaker must send a copy of such notifications to the MMO within five days.

(11) In case of damage to, or destruction or decay of the authorised scheme seaward of MHWS or any part thereof, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UK Hydrographic Office.

(12) In case of exposure of cables on or above the seabed, the undertaker must within three business days or five days whichever is the sooner following the receipt by the undertaker of the final survey report from the periodic burial survey, notify mariners by issuing a notice to mariners and by informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO and MCA within five days.

Aids to navigation

5.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and to take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct.

(2) The undertaker must during the period from the start of construction of the authorised scheme to completion of decommissioning seaward of MHWS keep Trinity House and the MMO informed of progress of the authorised scheme seaward of MHWS including the following—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation as set out in the aids to navigation management plan agreed pursuant to condition 9(1)(k) using the reporting system provided by Trinity House.

(4) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning seaward of MHWS notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 4(11) and condition 4(12) are invoked, the undertaker must lay down such marker buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

Colouring of structures

6.—(1) Except as otherwise required by Trinity House the undertaker must colour all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height directed by Trinity House, or must colour the structure as directed by Trinity House from time to time.

(2) Subject to sub-paragraph (1) above, unless the MMO otherwise directs, the undertaker must paint the remainder of the structures submarine grey (colour code RAL 7035).

Chemicals, drilling and debris

7.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (as amended).

(2) The undertaker must ensure that any coatings/treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(3) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110% of the total volume of all reservoirs and containers.

(4) The undertaker must inform the MMO of the location and quantities of material disposed of each month under this licence. This information must be submitted to the MMO by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive..

(5) The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of or seabed preparation for foundations, and drilling mud is disposed of within disposal site references HU213, HU214, HU215 and HU216 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(6) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(7) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the District Marine Office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must endeavour to locate the material and recover it.

(8) The undertaker must undertake the survey agreed under condition 9(1)(h)(iii) following the swath-bathymetry survey referred to in condition 15(2)(b). Should any such obstructions resulting from burial of Work No. 4A or 4B (export cables and fibre optic cables) be identified which, in the reasonable opinion of the MMO, may be considered to interfere with fishing, the undertaker must take such steps to remove them as the MMO in its reasonable opinion may require.

(9) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained to prevent run off entering the water through the freeing ports.

(10) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 14(1)(d)(i).

(11) All dropped objects must be reported to the MMO using the Dropped Object Procedure Form as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident. On receipt of the Dropped Object Procedure Form, the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the seabed at the undertaker's expense if reasonable to do so.

Force majeure

8.—(1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to make a deposit which is not authorised under this licence, whether within or outside of the Order limits, because the safety of human life and/or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

Pre-construction plans and documentation

9.—(1) The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows, in accordance with the Development Principles—
 - (i) the proposed location and choice of foundation of all offshore electrical platforms;
 - (ii) the height, length and width of all offshore electrical platforms;
 - (iii) the length and arrangement of all cables (including fibre optic cables) comprising Work Nos. 3, 4A and 4B;
 - (iv) the dimensions of all foundations;

- (v) the proposed layout of all offshore electrical platforms including any exclusion zones identified under sub-paragraph (1)(h)(iv);
 - (vi) a plan showing the indicative layout of all offshore electrical platforms including all exclusion zones (insofar as not shown in (v) above) and showing the indicative programming of particular works as set out in the indicative programme to be provided under sub-paragraph (1)(b)(iv); and
 - (vii) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph (1)(i);
- to ensure conformity with the description of Works No. 2, 3, 4A and 4B and compliance with conditions 1 to 3 above.
- (b) A construction programme and monitoring plan (which accords with the offshore in principle monitoring plan) to include details of—
 - (i) the proposed construction start date;
 - (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction surveys and monitoring and related reporting in accordance with sub-paragraph (1)(h) and conditions 12, 13, 14 and 15; and
 - (iv) an indicative written construction programme for all offshore electrical platforms and cables including fibre optic cables comprised in the works at Part 3 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above);

with details pursuant to paragraph (iii) above to be submitted to the MMO in accordance with the following—

 - (aa) at least four months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed pre-construction monitoring;
 - (bb) at least four months prior to construction, detail on construction monitoring;
 - (cc) at least four months prior to commissioning, detail of post-construction (and operational) monitoring;

unless otherwise agreed in writing with the MMO.
 - (c) A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—
 - (i) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation works and having regard to any mitigation scheme pursuant to sub-paragraph (1)(i);
 - (ii) soft start procedures with specified duration periods;
 - (iii) offshore electrical platform location and installation, including scour protection;
 - (iv) cable (including fibre optic cable) installation;
 - (v) contractors;
 - (vi) vessels, vessels maintenance and vessels transit corridors; and
 - (vii) associated and ancillary works.
 - (d) A project environmental management plan (in accordance with the outline project environmental management plan) covering the period of construction and operation to include details of—
 - (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised scheme in relation to all activities carried out;
 - (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;

- (iv) the appointment and responsibilities of a fisheries liaison officer; and
 - (v) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 4 and to address the interaction of the licensed activities with fishing activities.
- (e) A scour protection and cable protection plan (in accordance with the outline scour protection and cable protection plan) providing details of the need, type, sources, quantity, distribution and installation methods for scour protection and cable (including fibre optic cable) protection. For the avoidance of doubt “distribution” in this sub-paragraph must include quantities in respect of each structure comprised in the offshore works and intended to be subject to scour protection.
- (f) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’ are proposed to be used, a marine mammal mitigation protocol, in accordance with the draft marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals and following current best practice as advised by the relevant statutory nature conservation bodies.
- (g) A cable specification, installation and monitoring plan, to include—
- (i) technical specification of offshore cables (including fibre optic cable) below MHWS, including a desk-based assessment of attenuation of electro-magnetic field strengths, shielding and cable burial depth in accordance with industry good practice;
 - (ii) a detailed cable (including fibre optic cable) laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques, including cable landfall and cable protection measures;
 - (iii) proposals for monitoring offshore cables including cable (including fibre optic cable) protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of unburied or shallow buried cables; and
 - (iv) appropriate methods such as a trawl or drift net to be deployed along Work No. 4A and 4B (export cables and fibre optic cables), following the survey referred to in condition 15(2)(b) to assess any seabed obstructions resulting from burial of the export cables and fibre optic cables.
- (h) An archaeological written scheme of investigation in relation to the offshore Order limits seaward of mean low water, which must accord with the outline written scheme of investigation (offshore) and industry good practice, in consultation with the statutory historic body (and, if relevant, North Norfolk District Council) to include—
- (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (ii) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (iii) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
 - (iv) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
 - (v) monitoring of archaeological exclusion zones during and post construction;
 - (vi) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting a Historic England OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO (and North Norfolk District Council where the report relates to the intertidal area) that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;

- (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (viii) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the offshore Order Limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities.
- (i) A mitigation scheme for any habitats of principal importance identified by the survey referred to in condition 13(2)(a) and in accordance with the offshore in principle monitoring plan.
- (j) An offshore operations and maintenance plan, in accordance with the outline offshore operations and maintenance plan, to be submitted to the MMO at least four months prior to commencement of operation of the licensed activities and to provide for review and resubmission every three years during the operational phase.
- (k) An aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House, to include details of how the undertaker will comply with the provisions of condition 5 for the lifetime of the authorised scheme.
- (l) In the event that piled foundations or any other construction method that may have an impact on marine mammals, such as vibro-piling or ‘blue hammer’, are proposed to be used, a site integrity plan which accords with the principles set out in the in principle Norfolk Vanguard Southern North Sea Special Area of Conservation Site Integrity Plan and which the MMO is satisfied would provide such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.
- (m) A site integrity plan which accords with the principles set out in the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation Site Integrity Plan and which the MMO (in consultation with the relevant statutory nature conservation body) is satisfied would provide such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that sandbanks and sabellaria spinulosa reefs are a protected feature of that site.
- (n) A lighting and marking plan.
- (o) An operation and maintenance programme.

(2) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation which is itself in accordance with the details set out in the outline offshore written scheme of investigation (offshore), and which has been submitted to and approved by the MMO.

(3) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed 5,000KJ.

10.—(1) Any archaeological reports produced in accordance with condition 9(1)(h)(iii) must be agreed with the MMO in consultation with the statutory historic body (and, if relevant, North Norfolk District Council).

(2) The design plan required by condition 9(1)(a) must be prepared by the undertaker and determined by the MMO in accordance with the Development Principles.

(3) Each programme, statement, plan, protocol or scheme required to be approved under condition 9 must be submitted for approval at least four months prior to the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(4) No licensed activity may commence until for that licensed activity the MMO has approved in writing any relevant programme, statement, plan, protocol or scheme required to be approved under condition 9 or approval has been given following an appeal in accordance with sub-paragraph (6).

(5) Unless otherwise agreed in writing with the undertaker, the MMO must use reasonable endeavours to determine an application for approval made under condition 9 as soon as practicable

and in any event within a period of four months commencing on the date the application is received by the MMO.

(6) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 9, unless otherwise agreed in writing by the MMO.

(7) No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes.

Post-construction plans and documents

11. The undertaker must conduct a swath bathymetric survey to IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out and provide the data and survey report(s) to the MCA and UKHO.

Reporting of engaged agents, contractors and vessels

12.—(1) The undertaker must provide the following information to the MMO—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) Any changes to the supplied details must be notified to the MMO in writing prior to the agent, contractor or vessel engaging in the licensed activities.

Pre-construction monitoring and surveys

13.—(1) The undertaker must, in discharging condition 9(1)(b), submit details (which accord with the offshore in principle monitoring plan) for written approval by the MMO in consultation with the relevant statutory bodies of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report; and—

- (a) the survey proposals must specify each survey’s objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 reef habitats of principal importance in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works; and
- (b) a full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a, and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation bodies.

Construction monitoring

14.—(1) The undertaker must, in discharging condition 9(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In the event that driven or part-driven pile foundations are proposed, such monitoring must include measurements of noise generated by the installation of the first four piled foundations of each piled foundation type to be installed unless the MMO otherwise agrees in writing.

(2) The undertaker must carry out the surveys approved under sub-paragraph (1), including any further noise monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(3) The results of the initial noise measurements monitored in accordance with sub-paragraph (1) must be provided to the MMO within six weeks of the installation of the first four piled foundations of each piled foundation type. The assessment of this report by the MMO will determine whether any further noise monitoring is required. If, in the opinion of the MMO in consultation with Natural England, the assessment shows significantly different impacts to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.

(4) In the event that piled foundations are proposed to be used, the details submitted in accordance with the offshore in principle monitoring plan must include proposals for monitoring marine mammals.

Post construction

15.—(1) The undertaker must, in discharging condition 9(1)(b), submit details (which accord with the offshore in principle monitoring plan) for approval by the MMO in consultation with relevant statutory bodies of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake —

- (a) A survey to determine any change in the location, extent and composition of any benthic habitats of conservation, ecological and/or economic importance constituting Annex 1 reef habitats identified in the pre-construction survey in the parts of the Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey.
- (b) within twelve months of completion of the licensed activities, one full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables including fibre optic cables have been buried or protected.

(3) The undertaker must carry out the surveys agreed under sub-paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.

(4) Following installation of cables, the cable (including fibre optic cables) monitoring plan required under condition 9(1)(g)(iii) must be updated with the results of the post installation surveys. The plan must be implemented during the operational lifetime of the authorised scheme and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.

Reporting of impact pile driving

16.—(1) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the UK Marine Noise Registry—

- (a) prior to the commencement of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
- (b) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements; and
- (c) within 12 weeks of completion of impact pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements.

(2) The undertaker must notify the MMO of the successful submission of Forward Look or Close Out data pursuant to paragraph (1) above within 7 days of the submission.

(3) For the purpose of this condition—

- (a) “Marine Noise Registry” means the database developed and maintained by JNCC on behalf of Defra to record the spatial and temporal distribution of impulsive noise generating activities in UK seas;
- (b) “Forward Look” and “Close Out” requirements are as set out in the UK Marine Noise Registry Information Document Version 1 (July 2015) or any updated information document.

Reporting of cable protection

17.—(1) Not more than 4 months following completion of the construction phase of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection used for the authorised scheme.

(2) The report must include the following information—

- (a) location of the cable protection;
- (b) volume of cable protection; and
- (c) any other information relating to the cable protection as agreed between the MMO and the undertaker.

Restriction on cable installation construction works

18. During the months of January to March inclusive, construction activities consisting of cable installation for Work No. 4A and Work No. 4B must only take place with one main cable laying vessel.

- (a)

SCHEDULE 13

Article 35

Hedgerows

PART 1

Removal of Potentially Important Hedgerows

(1) Area	(2) Reference of hedgerow
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District of Breckland	The potentially important hedgerow marked 270 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 271 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 272 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 273 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 274 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 275 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 276 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 277 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 284 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 288 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 289 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 290 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 291 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 292 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 293 on the important hedgerows plan
District of Breckland	The potentially important hedgerow marked 303 on the important hedgerows plan

PART 2

Removal of Important Hedgerows

(1) <i>Area</i>	(2) <i>Reference of hedgerow</i>
District of North Norfolk	The important hedgerow marked 2 on the important hedgerows plan
District of North Norfolk	The important hedgerow marked 4 on the important hedgerows plan
District of North Norfolk	The important hedgerow marked 6 on the important hedgerows plan
District of North Norfolk	The important hedgerow marked 8 on the important hedgerows plan
District of North Norfolk	The important hedgerow marked 23 on the important hedgerows plan
District of North Norfolk	The important hedgerow marked 24 on the important hedgerows plan
District of North Norfolk	The important hedgerow marked 26 on the important hedgerows plan

District of Breckland	The important hedgerow marked 297 on the important hedgerows plan
District of Breckland	The important hedgerow marked 299 on the important hedgerows plan
District of Breckland	The important hedgerow marked 302 on the important hedgerows plan
District of Breckland	The important hedgerow marked 304 on the important hedgerows plan
District of Breckland	The important hedgerow marked 308 on the important hedgerows plan
District of Breckland	The important hedgerow marked 312 on the important hedgerows plan
District of Breckland	The important hedgerow marked 313 on the important hedgerows plan
District of Breckland	The important hedgerow marked 314 on the important hedgerows plan
District of Breckland	The important hedgerow marked 315 on the important hedgerows plan
District of Breckland	The important hedgerow marked 316 on the important hedgerows plan

PART 3

Removal of Hedgerows

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Reference of hedgerow</i>
District of North Norfolk	The hedgerow marked 1 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 3 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 5 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 7 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 35 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 38 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 51 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 53 on the important hedgerows plan
District of North Norfolk	The hedgerow marked 79 on the important hedgerows plan
District of Broadland	The hedgerow marked 117 on the important hedgerows plan
District of Broadland	The hedgerow marked 137 on the important hedgerows plan
District of Broadland	The hedgerow marked 138 on the important hedgerows plan
District of Broadland	The hedgerow marked 139 on the important hedgerows plan

District of Broadland	The hedgerow marked 140 on the important hedgerows plan
District of Broadland	The hedgerow marked 141 on the important hedgerows plan
District of Broadland	The hedgerow marked 142 on the important hedgerows plan
District of Broadland	The hedgerow marked 143 on the important hedgerows plan
District of Broadland	The hedgerow marked 144 on the important hedgerows plan
District of Broadland	The hedgerow marked 145 on the important hedgerows plan
District of Broadland	The hedgerow marked 147 on the important hedgerows plan
District of Broadland	The hedgerow marked 171 on the important hedgerows plan
District of Broadland	The hedgerow marked 172 on the important hedgerows plan
District of Breckland	The hedgerow marked 183 on the important hedgerows plan
District of Breckland	The hedgerow marked 191 on the important hedgerows plan
District of Breckland	The hedgerow marked 194 on the important hedgerows plan
District of Breckland	The hedgerow marked 240 on the important hedgerows plan
District of Breckland	The hedgerow marked 246 on the important hedgerows plan
District of Breckland	The hedgerow marked 247 on the important hedgerows plan
District of Breckland	The hedgerow marked 248 on the important hedgerows plan
District of Breckland	The hedgerow marked 249 on the important hedgerows plan
District of Breckland	The hedgerow marked 262 on the important hedgerows plan
District of Breckland	The hedgerow marked 298 on the important hedgerows plan
District of Breckland	The hedgerow marked 300 on the important hedgerows plan
District of Breckland	The hedgerow marked 301 on the important hedgerows plan
District of Breckland	The hedgerow marked 305 on the important hedgerows plan
District of Breckland	The hedgerow marked 306 on the important hedgerows plan
District of Breckland	The hedgerow marked 307 on the important hedgerows plan
District of Breckland	The hedgerow marked 309 on the important hedgerows plan
District of Breckland	The hedgerow marked 310 on the important hedgerows plan
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SCHEDULE 14

ARBITRATION RULES

Article 38

Primary objective

1.—(1) The primary objective of these Arbitration Rules is to achieve a fair, impartial, final and binding award on the substantive difference between the parties (save as to costs) within 4 months from the date the Arbitrator is appointed pursuant to article 36 of the Order.

(2) The Arbitration is deemed to have commenced when a party (“the Claimant”) serves a written notice of arbitration on the other party (“the Respondent”).

Time periods

2.—(1) All time periods in these Arbitration Rules are measured in days and include weekends, but not bank or public holidays.

(2) Time periods are calculated from the day after the Arbitrator is appointed which is either:

- (a) the date the Arbitrator notifies the parties in writing of his/her acceptance of an appointment by agreement of the parties; or
- (b) the date the Arbitrator is appointed by the Secretary of State.

Timetable

3.—(1) The timetable for the Arbitration is set out in sub-paragraphs (2) to (4) below unless amended in accordance with sub-paragraph 5(3).

(2) Within 14 days of the Arbitrator being appointed, the Claimant must provide both the Respondent and the Arbitrator with:

- (a) a written Statement of Claim which describes the nature of the difference between the parties, the legal and factual issues, the Claimant’s contentions as to those issues, the amount of its claim and/or the remedy it is seeking;
- (b) all statements of evidence and copies of all documents on which it relies, including contractual documentation, correspondence (including electronic documents), legal precedents and expert witness reports.

(3) Within 14 days of receipt of the Claimant’s statements under sub-paragraph (2) by the Arbitrator and Respondent, the Respondent must provide the Claimant and the Arbitrator with:

- (a) a written Statement of Defence responding to the Claimant’s Statement of Claim, its statement in respect of the nature of the difference, the legal and factual issues in the Claimant’s claim, its acceptance of any element(s) of the Claimant’s claim, its contentions as to those elements of the Claimant’s claim it does not accept;
- (b) all statements of evidence and copies of all documents on which it relies, including contractual documentation, correspondence (including electronic documents), legal precedents and expert witness reports;
- (c) any objections it wishes to make to the Claimant’s statements, comments on the Claimant’s expert report(s) (if submitted by the Claimant) and explanations for the objections.

(4) Within 7 days of the Respondent serving its statements sub-paragraph (3), the Claimant may make a Statement of Reply by providing both the Respondent and the Arbitrator with:

- (a) a written statement responding to the Respondent’s submissions, including its reply in respect of the nature of the difference, the issues (both factual and legal) and its contentions in relation to the issues;
- (b) all statements of evidence and copies of documents in response to the Respondent’s submissions;
- (c) any expert report in response to the Respondent’s submissions;

- (d) any objections to the statements of evidence, expert reports or other documents submitted by the Respondent;
- (e) its written submissions in response to the legal and factual issues involved.

Procedure

4.—(1) The parties' pleadings, witness statements and expert reports (if any) must be concise. No single pleading is to exceed 30 single-sided A4 pages using 10pt Arial font.

(2) The Arbitrator must make an award on the substantive difference(s) based solely on the written material submitted by the parties unless the Arbitrator decides that a hearing is necessary to explain or resolve any matters.

(3) Either party may, within 2 days of delivery of the last submission, request a hearing giving specific reasons why it considers a hearing is required.

(4) Within 7 days of receiving the last submission, the Arbitrator must notify the parties whether a hearing is to be held and the length of that hearing.

(5) Within 10 days of the Arbitrator advising the parties that he is to hold a hearing, the date and venue for the hearing must be fixed by agreement with the parties, save that if there is no agreement the Arbitrator must direct a date and venue which he considers is fair and reasonable in all the circumstances. The date for the hearing must not be less than 35 days from the date of the Arbitrator's direction confirming the date and venue of the hearing.

(6) A decision must be made by the Arbitrator on whether there is any need for expert evidence to be submitted orally at the hearing. If oral expert evidence is required by the Arbitrator, then any expert(s) attending the hearing may be asked questions by the Arbitrator.

(7) There is no process of examination and cross-examination of experts, but the Arbitrator must invite the parties to ask questions of the experts by way of clarification of any answers given by the expert(s) in response to the Arbitrator's questions. Prior to the hearing the procedure for the expert(s) is:

- (a) At least 28 days before a hearing, the Arbitrator must provide a list of issues to be addressed by the expert(s);
- (b) If more than one expert is called, they are to jointly confer and produce a joint report or reports within 14 days of the issues being provided; and
- (c) The form and content of a joint report must be as directed by the Arbitrator and must be provided at least 7 days before the hearing.

(8) Within 14 days of a Hearing or a decision by the Arbitrator that no hearing is to be held the Parties may by way of exchange provide the Arbitrator with a final submission in connection with the matters in dispute and any submissions on costs. The Arbitrator must take these submissions into account in the Award.

(9) The Arbitrator may make other directions or rulings as considered appropriate in order to ensure that the parties comply with the timetable and procedures to achieve an award on the substantive difference within 4 months of the date on which he/she is appointed, unless both parties otherwise agree to an extension to the date for the award.

(10) If a party fails to comply with the timetable, procedure or any other direction then the Arbitrator may continue in the absence of a party or submission or document, and may make a decision on the information before him/her attaching the appropriate weight to any evidence submitted beyond any timetable or in breach of any procedure and/or direction.

(11) The Arbitrator's award must include reasons. The parties must accept that the extent to which reasons are given are proportionate to the issues in dispute and the time available to the Arbitrator to deliver the award.

Arbitrator's powers

5.—(1) The Arbitrator has all the powers of the Arbitration Act 1996, including the non-mandatory sections, save where modified by these Rules.

(2) There must be no discovery or disclosure, except that the Arbitrator has the power to order the parties to produce such documents as are reasonably requested by another party no later than the Statement of Reply, or by the Arbitrator, where the documents are manifestly relevant, specifically identified and the burden of production is not excessive. Any application and orders are to be made by way of a Redfern Schedule without any hearing.

(3) Any time limits fixed in accordance with this procedure or by the Arbitrator may be varied by agreement between the parties, subject to any such variation being acceptable to and approved by the Arbitrator. In the absence of agreement, the Arbitrator may vary the timescales and/or procedure:

- (a) if the Arbitrator is satisfied that a variation of any fixed time limit is reasonably necessary to avoid a breach of the rules of natural justice and then;
- (b) only for such a period that is necessary to achieve fairness between the parties.

(4) On the date the award is made, the Arbitrator must notify the parties that the award is completed, signed and dated, and that it is to be issued to the parties on receipt of cleared funds for the Arbitrator's fees and expenses.

Costs

6.—(1) The costs of the Arbitration must include the fees and expenses of the Arbitrator, the reasonable fees and expenses of any experts and the reasonable legal and other costs incurred by the parties for the Arbitration.

(2) Where the difference involves connected/interrelated issues, the Arbitrator must consider the relevant costs collectively.

(3) The final award must fix the costs of the arbitration and decide which of the parties must bear them or in what proportion they are to be borne by the parties.

(4) The Arbitrator must award recoverable costs on the general principle that costs follow the event, having regard to all material circumstances, including such matters as exaggerated claims and/or defences, the degree of success for different elements of the claims, claims that have incurred substantial costs, the conduct of the parties and the degree of success of a party.

Confidentiality

7.—(1) The parties agree that any hearings in this Arbitration must take place in private.

(2) The parties and Arbitrator agree that any matters, materials, documents, awards, expert reports and the like are confidential and must not be disclosed to any third party without prior written consent of the other party, save for any application to the Courts and/or save for compliance with legislative rules, functions or obligations on either party.

SCHEDULE 15

Article 39

Procedure for discharge of Requirements

Applications made under requirement

1.—(1) Where an application has been made to a discharging authority for any agreement or approval required pursuant to requirements 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33 and 34 in Part 3 of Schedule 1 (requirements) of this Order:

- (a) the undertaker must give the discharging authority sufficient information to identify the requirement(s) to which the application relates;
- (b) the undertaker must provide such particulars, and the request be accompanied by such plans and drawings, as are reasonably considered necessary to deal with the application.

(2) The discharging authority must give notice to the undertaker of its decision on the application before the end of the decision period.

- (3) For the purposes of sub-paragraph (2), the decision period is—
- (a) where no further information is requested under paragraph 2 (further information), 8 weeks from the day immediately following that on which the application is received by the discharging authority;
 - (b) where further information is requested under paragraph 2 (further information), 8 weeks from the day immediately following that on which further information has been supplied by the undertaker under paragraph 2; or
 - (c) such longer period as may be agreed by the undertaker and the discharging authority in writing before the end of the period in sub-paragraph (a) or (b).

Further information

2.—(1) In relation to any application to which this Schedule applies, the discharging authority has the right to request such further information from the undertaker as is necessary to enable it to consider the application.

(2) If the discharging authority considers such further information to be necessary and the requirement does not specify that consultation with a requirement consultee is required, it must, as soon as reasonably practicable and within 20 business days of receipt of the application, notify the undertaker in writing specifying the further information required.

(3) If the requirement specifies that consultation with a requirement consultee is required, the discharging authority must issue the consultation to the requirement consultee within 10 business days of receipt of the application, and must notify the undertaker in writing specifying any further information requested by the requirement consultee within 10 business days of receipt of such a request and in any event within 42 days of receipt of the application.

(4) If the discharging authority does not give such notification as specified in sub-paragraph (2) or (3) it is deemed to have sufficient information to consider the application and is not thereafter entitled to request further information without the prior agreement of the undertaker.

Appeals

3.—(1) The undertaker may appeal to the Secretary of State in the event that—

- (a) the discharging authority refuses an application for any agreement or approval required by a requirement included in this Order;
- (b) the discharging authority does not give notice of its decision to the undertaker within the decision period as determined in paragraph 1;
- (c) on receipt of a request for further information pursuant to paragraph 2 (further information) the undertaker considers that either the whole or part of the specified information requested by the discharging authority is not reasonably necessary for consideration of the application; or
- (d) on receipt of any further information requested, the discharging authority notifies the undertaker that the information provided is inadequate and requests additional information which the undertaker considers is not reasonably necessary for consideration of the application.

(2) The appeal process is as follows—

- (a) the undertaker must submit the appeal documentation to the Secretary of State, a copy of the application submitted to the discharging authority and any supporting documentation which the undertaker may wish to provide (“the appeal documentation”);
- (b) the undertaker must on the same day provide copies of the appeal documentation to the discharging authority and the requirement consultee (if applicable);
- (c) as soon as is practicable after receiving the appeal documentation, but in any event within 20 business days of receiving the appeal documentation, the Secretary of State must appoint a person and forthwith notify the appeal parties of the identity of the appointed person and the address to which all correspondence for that person’s attention should be sent;

- (d) the discharging authority and the requirement consultee (if applicable) must submit written representations to the appointed person in respect of the appeal within 20 business days of the date on which the appeal parties are notified of the appointment of a person under paragraph (c) and must ensure that copies of their written representations are sent to each other and to the undertaker on the day on which they are submitted to the appointed person; and
- (e) the appeal parties must make any counter-submissions to the appointed person within 20 business days of receipt of written representations pursuant to sub-paragraph (d) above.

(3) The appointed person must make his decision and notify it to the appeal parties, with reasons, as soon as reasonably practicable. If the appointed person considers that further information is necessary to enable him to consider the appeal he must, as soon as practicable, notify the appeal parties in writing specifying the further information required, the appeal party from whom the information is sought, and the date by which the information is to be submitted.

(4) Any further information required pursuant to sub-paragraph (3) must be provided by the party from whom the information is sought to the appointed person and to other appeal parties by the date specified by the appointed person. Any written representations concerning matters contained in the further information must be submitted to the appointed person, and made available to all appeal parties within 20 business days of that date.

(5) On an appeal under this paragraph, the appointed person may—

- (a) allow or dismiss the appeal; or
- (b) reverse or vary any part of the decision of the discharging authority (whether the appeal relates to that part of it or not),

and may deal with the application as if it had been made to the appointed person in the first instance.

(6) The appointed person may proceed to a decision on an appeal taking into account only such written representations as have been sent within the time limits prescribed, or set by the appointed person, under this paragraph.

(7) The appointed person may proceed to a decision even though no written representations have been made within those time limits, if it appears to the appointed person that there is sufficient material to enable a decision to be made on the merits of the case.

(8) The decision of the appointed person on an appeal is final and binding on the parties, and a court may entertain proceedings for questioning the decision only if the proceedings are brought by a claim for judicial review.

(9) If an approval is given by the appointed person pursuant to this Schedule, it is deemed to be an approval for the purpose of Part 3 of Schedule 1 (requirements) as if it had been given by the discharging authority. The discharging authority may confirm any determination given by the appointed person in identical form in writing but a failure to give such confirmation (or a failure to give it in identical form) may not be taken to affect or invalidate the effect of the appointed person's determination.

(10) Save where a direction is given pursuant to sub-paragraph (11) requiring the costs of the appointed person to be paid by the discharging authority, the reasonable costs of the appointed person must be met by the undertaker.

(11) On application by the discharging authority or the undertaker, the appointed person may give directions as to the costs of the appeal parties and as to the parties by whom the costs of the appeal are to be paid. In considering whether to make any such direction and the terms on which it is to be made, the appointed person must have regard to the Planning Practice Guidance on the award of costs or any guidance which may from time to time replace it.

Interpretation of this Schedule

4. In this Schedule—

“the appeal parties” means the discharging authority, the requirement consultee and the undertaker;

“business day” means a day other than Saturday or Sunday which is not Christmas Day, Good Friday or a bank holiday under section 1 of the Banking and Financial Dealings Act 1971;

“discharging authority” means that person or body responsible for approving details pursuant to requirements 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33 and 34 in Part 3 of Schedule 1 (requirements);

“requirement consultee” means any body named in a requirement which is the subject of an appeal as a body to be consulted by the discharging authority in discharging that requirement.

SCHEDULE 16

PROTECTIVE PROVISIONS

Article 43

PART 1

Protection for electricity, gas, water and sewerage undertakers

1. For the protection of the undertakers referred to in this part of this Schedule the following provisions must, unless otherwise agreed in writing between the undertaker and the affected undertaking concerned, have effect.

2. In this part of this Schedule—

“affected undertaker” means

- (a) any licence holder within the meaning of Part 1 of the Electricity Act 1989(a);
- (b) a gas transporter within the meaning of Part 1 of the Gas Act 1986(b);
- (c) a water undertaker within the meaning of the Water Industry Act 1991(c); and
- (d) a sewerage undertaker within the meaning of Part 1 of the Water Industry Act 1991,

for the area of the authorised development, and in relation to any apparatus, means the undertaker to whom it belongs or by whom it is maintained.

“alternative apparatus” means alternative apparatus adequate to enable the affected undertaker in question to fulfil its statutory functions in a manner not less efficient than previously;

“apparatus” means—

- (a) in the case of an electricity undertaker, electric lines or electrical plant (as defined in the Electricity Act 1989), belonging to or maintained by that affected undertaker;
- (b) in the case of a gas undertaker, any mains, pipes or other apparatus belonging to or maintained by a gas transporter for the purposes of gas supply;
- (c) in the case of a water undertaker, mains, pipes or other apparatus belonging to or maintained by that affected undertaker for the purposes of water supply; and any water mains or service pipes (or part of a water main or service pipe) that is the subject of an agreement to adopt made under section 51A of the Water Industry Act 1991 at the time of the works mentioned in this Part; and
- (d) in the case of a sewerage undertaker—
 - (i) any drain or works vested in the affected undertaker under the Water Industry Act 1991; and
 - (ii) any sewer which is so vested or is the subject of a notice of intention to adopt given under section 102(4) of that Act or an agreement to adopt made under section 104 of that Act,

(a) 1989 c. 29. Section 64 sub-paragraph (1) was amended by section 108 and paragraphs 24, 38(1), (3) of Part II of Schedule 6 of the Utilities Act 2010

(b) 1986 c. 44. A new section 7 was substituted by section 5 of the Gas Act 1995 (c.45), and was further amended by section 76 of the Utilities Act 2000 (c.27)

(c) 1991 c.56

and includes a sludge main, disposal main (within the meaning of section 219 of that Act) or sewer outfall and any manholes, ventilating shafts, pumps or other accessories forming part of any such sewer, drain or works, and includes any structure in which apparatus is or is to be lodged or which gives or will give access to apparatus;

“functions” includes powers and duties; and

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over or upon land.

3. This part of this Schedule does not apply to apparatus in respect of which the relations between the undertaker and the affected undertaker are regulated by the provisions of Part 3 of the 1991 Act.

4. Regardless of any provision in this Order or anything shown on the land plan, the undertaker must not acquire any apparatus otherwise than by agreement.

5.—(1) If, in the exercise of the powers conferred by this Order, the undertaker acquires any interest in any land in which any apparatus is placed, that apparatus must not be removed under this part of this Schedule and any right of an affected undertaker to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed and is in operation to the reasonable satisfaction of the affected undertaker in question.

(2) If, for the purpose of executing any works in, on or under any land purchased, held, or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it shall give to the affected undertaker in question written notice of that requirement, together with a plan and section of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order an affected undertaker reasonably needs to remove any of its apparatus) the undertaker shall, subject to sub-paragraph (3), afford to the affected undertaker the necessary facilities and rights for the construction of alternative apparatus in other land of the undertaker and subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, the affected undertaker in question shall, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible use all reasonable endeavours to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed.

(4) Any alternative apparatus to be constructed in land of the undertaker under this part of this Schedule shall be constructed in such manner and in such line or situation as may be agreed between the affected undertaker in question and the undertaker or in default of agreement settled by arbitration in accordance with article 38 (arbitration).

(5) The affected undertaker in question must, after the alternative apparatus to be provided or constructed has been agreed or settled by arbitration in accordance with article 38 (arbitration), and after the grant to the affected undertaker of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the undertaker to be removed under the provisions of this part of this Schedule.

(6) Regardless of anything in sub-paragraph (5), if the undertaker gives notice in writing to the affected undertaker in question that it desires itself to execute any work, or part of any work in connection with the construction or removal of apparatus in any land controlled by the undertaker, that work, instead of being executed by the affected undertaker, shall be executed by the undertaker without unnecessary delay under the superintendence, if given, and to the reasonable satisfaction of the affected undertaker.

(7) Nothing in sub-paragraph (6) shall authorise the undertaker to execute the placing, installation, bedding, packing, removal, connection or disconnection of any apparatus, or execute any filling around the apparatus (where the apparatus is laid in a trench) within 300 millimetres of the apparatus.

6.—(1) Where, in accordance with the provisions of this part of this Schedule, the undertaker affords to an affected undertaker facilities and rights for the construction and maintenance in land of the undertaker of alternative apparatus in substitution for apparatus to be removed, those facilities and rights shall be granted upon such terms and conditions as may be agreed between the undertaker and the affected undertaker in question or in default of agreement settled by arbitration in accordance with article 38 (arbitration).

(2) If the facilities and rights to be afforded by the undertaker in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are in the opinion of the arbitrator less favourable on the whole to the affected undertaker in question than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject, the arbitrator shall make such provision for the payment of compensation by the undertaker to that affected undertaker as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

7.—(1) Not less than 28 days before starting the execution of any works of the type referred to in paragraph 5(2) that are near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 5(2), the undertaker shall submit to the affected undertaker in question a plan, section and description of the works to be executed.

(2) Those works shall be executed only in accordance with the plan, section and description submitted under sub-paragraph (1) and in accordance with such reasonable requirements as may be made in accordance with sub-paragraph (3) by the affected undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the affected undertaker shall be entitled to watch and inspect the execution of those works.

(3) Any requirements made by an affected undertaker under sub-paragraph (2) shall be made within a period of 21 days beginning with the date on which a plan, section and description under sub-paragraph (1) are submitted to it.

(4) If an affected undertaker in accordance with sub-paragraph (3) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, paragraphs 1 to 6 shall apply as if the removal of the apparatus had been required by the undertaker under paragraph 5(2).

(5) Nothing in this paragraph shall preclude the undertaker from submitting at any time or from time to time, but in no case less than 28 days before commencing the execution of any works, a new plan, section and description instead of the plan, section and description previously submitted, and having done so the provisions of this paragraph shall apply to and in respect of the new plan, section and description.

(6) The undertaker shall not be required to comply with sub-paragraph (1) in a case of emergency but in that case it shall give to the affected undertaker in question notice as soon as is reasonably practicable and a plan, section and description of those works as soon as reasonably practicable subsequently and shall comply with sub-paragraph (2) in so far as is reasonably practicable in the circumstances.

8.—(1) Subject to the following provisions of this paragraph, the undertaker shall repay to an affected undertaker the reasonable expenses incurred by that affected undertaker in, or in connection with, the inspection, removal, alteration or protection of any apparatus or the construction of any new apparatus (including costs or compensation payable in connection with the acquisition of land for that purpose) which may be required in consequence of the execution of any such works as are referred to in paragraph 5(2).

(2) There must be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this part of this Schedule, that value being calculated after removal.

(3) If in accordance with the provisions of this part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or

- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the undertaker or, in default of agreement, is not determined by arbitration in accordance with article 38 (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to the affected undertaker in question by virtue of sub-paragraph (1) shall be reduced by the amount of that excess.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus shall not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole shall be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to an affected undertaker in respect of works by virtue of sub-paragraph (1) shall, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on the affected undertaker any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

9.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works referred to in paragraph 5(2), any damage is caused to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of an affected undertaker, or there is any interruption in any service provided, or in the supply of any goods, by any affected undertaker, the undertaker must—

- (a) bear and pay the cost reasonably incurred by that affected undertaker in making good such damage or restoring the supply; and
- (b) make reasonable compensation to that affected undertaker for any other expenses, loss, damages, penalty or costs incurred by the affected undertaker,

by reason or in consequence of any such damage or interruption.

(2) Nothing in sub-paragraph (1) imposes any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of an affected undertaker, its officers, servants, contractors or agents.

(3) An affected undertaker must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise shall be made without the consent of the undertaker which, if it withholds such consent, shall have the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

10. Any difference or dispute arising between the undertaker and the affected undertaker under this Schedule must, unless otherwise agreed in writing between the undertaker and the affected undertaker, be determined by arbitration in accordance with article 39 (arbitration).

11. Nothing in this part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and an affected undertaker in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

PART 2

For the Protection of National Grid as Electricity and Gas Undertaker

Application

12. For the protection of National Grid referred to in this Part of this Schedule the following provisions will, unless otherwise agreed in writing between the promoter and National Grid, have effect.

Interpretation

13. In this Part of this Schedule—

“1991 Act” means the New Roads and Street Works Act 1991;

“alternative apparatus” means appropriate alternative apparatus to the satisfaction of National Grid to enable the National Grid to fulfil its statutory functions in a manner no less efficient than previously;

“apparatus” means—

- (a) in the case of an electricity undertaker, electric lines or electrical plant as defined in the Electricity Act 1989, belonging to or maintained by that undertaker;
- (b) in the case of a gas undertaker, any mains, pipes or other apparatus belonging to or maintained by a gas transporter for the purposes of gas supply;
- (c) together with any replacement apparatus and such other apparatus constructed pursuant to the Order that becomes operational apparatus of National Grid for the purposes of transmission, distribution and/or supply and includes any structure in which apparatus is or will be lodged or which gives or will give access to apparatus;
- (d) “authorised works” has the same meaning as is given to the term “authorised development” in article 2 of this Order and includes any associated development authorised by the Order and for the purposes of this Part of this Schedule includes the use and maintenance of the authorised works and construction of any works authorised by this Schedule;

“commence” has the same meaning as in article 2 of this Order and commencement must be construed to have the same meaning save that for the purpose of this part only the term commence includes operations consisting site clearance, demolition work, archaeological investigations, environmental surveys, investigations for the purposes of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure and temporary hard standing;

“deed of consent” means a deed of consent, crossing agreement, deed of variation or new deed of grant agreed between the parties acting reasonably in order to vary and/or replace existing easements, agreements, enactments and other such interests so as to secure land rights and interests as are necessary to carry out, maintain, operate and use the apparatus in a manner consistent with the terms of this Part of this Schedule;

“functions” includes powers and duties;

“ground mitigation scheme” means a scheme approved by National Grid (such approval not to be unreasonably withheld or delayed) setting out the necessary measures (if any) for a ground subsidence event;

“ground monitoring scheme” means a scheme for monitoring ground subsidence which sets out the apparatus which is to be subject to such monitoring, the extent of land to be monitored, the manner in which ground levels are to be monitored, the timescales of any monitoring activities and the extent of ground subsidence which, if exceeded, must require the promoter to submit for National Grid’s approval a ground mitigation scheme;

“ground subsidence event” means any ground subsidence identified by the monitoring activities set out in the ground monitoring scheme that has exceeded the level described in the ground monitoring scheme as requiring a ground mitigation scheme;

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, across, along or upon such land;

“maintain” and “maintenance” include the ability and right to do any of the following in relation to any apparatus or alternative apparatus of National Grid including construct use, repair, alter, inspect, renew or remove the apparatus;

“National Grid” means, as appropriate—

(a) National Grid Electricity Transmission PLC (Company No. 2366977) whose registered office is at 1-3 Strand, London, WC2N 5EH and any successor to their licence under Part 1 of the Electricity Act 1989; and

(b) National Grid Gas PLC (Company No. 200600) whose registered office is at 1-3 Strand, London, WC2N 5EH and any successor to their licence under Part 1 of the Gas Act 1986.

“plan” or “plans” include all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are reasonably necessary properly and sufficiently to describe and assess the works to be executed;

“promoter” means the undertaker as defined in article 2 of this Order;

“specified works” means any of the authorised works or activities undertaken in association with the authorised works which:

(a) will or may be situated over, or within 15 metres measured in any direction of any apparatus the removal of which has not been required by the promoter under paragraph 17(2) or otherwise;

(b) may in any way adversely affect any apparatus the removal of which has not been required by the promoter under paragraph 17(2) or otherwise;

14.—(1) Except for paragraphs 15 (apparatus in stopped up streets), 20 (retained apparatus: protection), 21 (expenses) and 22 (compensation) of this Schedule which will apply in respect of the exercise of all or any powers under the Order affecting the rights and apparatus of National Grid, the other provisions of this Schedule do not apply to apparatus in respect of which the relations between the promoter and National Grid are regulated by the provisions of Part 3 of the 1991 Act.

(2) Notwithstanding Art 25(5) or any other powers in the Order generally, s85 of the 1991 Act in relation to costs sharing and the powers in respect of cost sharing generally including the regulations made thereunder does not apply in relation to any diversion of apparatus of National Grid under the 1991 Act.

Apparatus of Undertakers in stopped up streets

15. Notwithstanding the temporary stopping up or diversion of any highway under the powers of article 10 (temporary stopping up of streets), National Grid will be at liberty at all times to take all necessary access across any such stopped up highway and/or to execute and do all such works and things in, upon or under any such highway as may be reasonably necessary or desirable to enable it to maintain any apparatus which at the time of the stopping up or diversion was in that highway.

Acquisition of land

16.—(1) Regardless of any provision in this Order or anything shown on the land plans or contained in the book of reference to the Order, the promoter may not acquire any land interest or apparatus or override any easement and/or other interest of National Grid otherwise than by agreement.

(2) As a condition of agreement between the parties in paragraph 16(1), prior to the carrying out of any part of the authorised works (or in such other timeframe as may be agreed between the undertaker and the promoter) that are subject to the requirements of this Part of this Schedule that will cause any conflict with or breach the terms of any easement and/or other legal or land interest of the undertaker and/or affects the provisions of any enactment or agreement regulating the

relations between the undertaker and the promoter in respect of any apparatus laid or erected in land belonging to or secured by the promoter, the promoter must as the undertaker reasonably and necessarily requires enter into such deeds of consent upon such terms and conditions as may be agreed between the undertaker and the promoter acting reasonably and which must be no less favourable on the whole to the undertaker unless otherwise agreed by the undertaker, and it will be the responsibility of the promoter to procure and/or secure the consent and entering into of such deeds and variations by all other third parties with an interest in the land at that time who are affected by such authorised works.

(3) The promoter and the undertaker agree that where there is any inconsistency or duplication between the provisions set out in this Part of this Schedule relating to the relocation and/or removal of apparatus/including but not limited to the payment of costs and expenses relating to such relocation and/or removal of apparatus) and the provisions of any existing easement, rights, agreements and licences granted, used, enjoyed or exercised by the undertaker and/or other enactments relied upon by the undertaker as of right or other use in relation to the apparatus, then the provisions in this Schedule prevail.

(4) Any agreement or consent granted by the undertaker under paragraph 19 or 20 or any other paragraph of this Part of this Schedule, must not be taken to constitute agreement under sub-paragraph 16(1).

Removal of apparatus

17.—(1) If, in the exercise of the agreement reached in accordance with paragraph 16 or in any other authorised manner, the promoter acquires any interest in any land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of an undertaker to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed, and is in operation to the reasonable satisfaction of National Grid in question in accordance with sub-paragraph (2) to (5) inclusive.

(2) If, for the purpose of executing any works in, on, under or over any land purchased, held, appropriated or used under this Order, the promoter requires the removal of any apparatus placed in that land, it must give to National Grid 56 days' advance written notice of that requirement, together with a plan of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order National Grid reasonably needs to remove any of its apparatus) the promoter must, subject to sub-paragraph (3), afford to National Grid to its reasonable satisfaction (taking into account paragraph 18(1) below) the necessary facilities and rights:

- (a) for the construction of alternative apparatus in other land of or land secured by the promoter; and
- (b) subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of or land secured by the promoter, or the promoter is unable to afford such facilities and rights as are mentioned in sub-paragraph (2) in the land in which the alternative apparatus or part of such apparatus is to be constructed, National Grid must, on receipt of a written notice to that effect from the promoter, as soon as possible take such steps as are reasonable in the circumstances in an endeavour to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed, with the promoter's assistance if required by National Grid, save that this obligation does not extend to the requirement for National Grid to use its compulsory purchase powers to this end unless it elects to so do.

(4) Any alternative apparatus to be constructed in land of or land secured by the promoter under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between National Grid and the promoter.

(5) National Grid must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the grant to National Grid of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the promoter to be removed under the provisions of this Part of this Schedule.

Facilities and rights for alternative apparatus

18.—(1) Where, in accordance with the provisions of this Part of this Schedule, the promoter affords to or secures for National Grid facilities and rights in land for the construction, use, maintenance and protection of alternative apparatus in substitution for apparatus to be removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the promoter and National Grid and must be no less favourable on the whole to National Grid than the facilities and rights enjoyed by it in respect of the apparatus to be removed unless otherwise agreed by National Grid, acting reasonably

(2) If the facilities and rights to be afforded by the promoter and agreed with National Grid under paragraph 18(1) above in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are less favourable on the whole to National Grid than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject in the matter may be referred to arbitration in accordance with paragraph 26 (Arbitration) of this Part of this Schedule and the arbitrator may make such provision for the payment of compensation by the promoter to National Grid as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case

Retained apparatus: protection Gas Undertakers

19.—(1) The promoter must provide technical information relevant to any specified works to National Grid as soon as reasonably practicable after it becomes available, and will seek to liaise with National Grid as early as reasonably practicable regarding the specified works.

(2) Not less than 56 days before the commencement of any specified works the promoter must submit to National Grid a plan and, if reasonably required by National Grid, a ground monitoring scheme in respect of those works.

(3) The plan to be submitted to National Grid under sub-paragraph (2) must include a method statement and describe—

- (a) the exact position of the works;
- (b) the level at which these are proposed to be constructed or renewed;
- (c) the manner of their construction or renewal including details of excavation, positioning of plant etc;
- (d) the position of all apparatus;
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus; and
- (f) any intended maintenance regimes.

(4) The promoter must not commence any works to which sub-paragraphs 2 and 3 apply until National Grid has given written approval of the plan so submitted.

(5) Any approval of National Grid required under sub-paragraph (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (6) or (8); and,
- (b) must not be unreasonably withheld.

(6) In relation to any work to which sub-paragraphs (2) and/or (3) apply, National Grid may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus provided that such modifications are requested by National Grid within a period of 56 days, unless otherwise agreed between the parties, beginning with the date on which the plan under sub-paragraph (2) is submitted to it. For the avoidance of doubt, provided that any further iterations of the plan submitted to National Grid for approval as a result of modifications required under this paragraph are not materially different to the modifications previously made by National Grid, any further required modifications will be

made by the promoter as soon as reasonably practicable thereafter and in any event within 56 days of receipt of any further plans.

(7) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (2) or as relevant sub paragraph (6), as approved or as amended from time to time by agreement between the promoter and National Grid and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (6) or (8) by National Grid for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and National Grid will be entitled to watch and inspect the execution of those works

(8) Where National Grid requires any protective works to be carried out by itself or by the promoter (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph, must be carried out to National Grids' reasonable satisfaction prior to the commencement of any authorised works (or any relevant part thereof) for which protective works are required and National Grid must give 56 days' notice of such works from the date of submission of a plan pursuant to sub-paragraph (2) or (3) (except in an emergency).

(9) If National Grid in accordance with sub-paragraphs (6) or (8) and in consequence of the works proposed by the promoter, reasonably requires the removal of any apparatus and gives written notice to the promoter of that requirement, paragraphs 12 to 14 and 17 to 19 apply as if the removal of the apparatus had been required by the promoter under paragraph 17(2).

(10) Nothing in this paragraph precludes the promoter from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph will apply to and in respect of the new plan.

(11) The promoter will not be required to comply with sub-paragraph (2) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to National Grid notice as soon as is reasonably practicable and a plan of those works and must—

- (a) comply with sub-paragraphs (6), (7) and (8) insofar as is reasonably practicable in the circumstances; and
- (b) comply with sub-paragraph (12) at all times.

(12) At all times when carrying out any works authorised under the Order the promoter must comply with National Grid's policies for safe working in proximity to gas apparatus "Specification for safe working in the vicinity of National Grid, High pressure Gas pipelines and associated installation requirements for third parties T/SP/SSW22" and HSE's "HS(-G)47 Avoiding Danger from underground services".

(13) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the promoter must implement an appropriate ground mitigation scheme save that National Grid retains the right to carry out any further necessary protective works for the safeguarding of its apparatus and can recover any such costs in line with paragraph 21.

Retained apparatus: protection Electricity Undertakers

20.—(1) The promoter must provide technical information relevant to any specified works to National Grid as soon as reasonably practicable after it becomes available, and will seek to liaise with National Grid as early as reasonably practicable regarding the specified works.

(2) Not less than 56 days before the commencement of any specified works, the promoter must submit to National Grid a plan of the works to be executed and seek from National Grid details of the underground extent of their electricity tower foundations.

(3) In relation to works which will or may be situated on, over, under or within (i) 15 metres measured in any direction of any apparatus, or (ii) involve embankment works within 15 metres of any apparatus, the plan to be submitted to National Grid under sub-paragraph (1) must include a method statement and describe—

- (a) the exact position of the works;
- (b) the level at which these are proposed to be constructed or renewed;

- (c) the manner of their construction or renewal including details of excavation, positioning of plant;
- (d) the position of all apparatus;
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus;
- (f) any intended maintenance regimes; and
- (g) an assessment of risks of rise of earth issues.

(4) In relation to any works which will or may be situated on, over, under or within 10 metres of any part of the foundations of an electricity tower or between any two or more electricity towers, the plan to be submitted under sub-paragraph (1) must, in addition to the matters set out in sub-paragraph (2), include a method statement describing—

- (a) details of any cable trench design including route, dimensions, clearance to pylon foundations;
- (b) demonstration that pylon foundations will not be affected prior to, during and post construction;
- (c) details of load bearing capacities of trenches;
- (d) details of cable installation methodology including access arrangements, jointing bays and backfill methodology;
- (e) a written management plan for high voltage hazard during construction and ongoing maintenance of the cable route;
- (f) written details of the operations and maintenance regime for the cable, including frequency and method of access;
- (g) assessment of earth rise potential if reasonably required by National Grid's engineers;
- (h) evidence that trench bearing capacity is to be designed to 26 tonnes to take the weight of overhead line construction traffic.

(5) The promoter must not commence any works to which sub-paragraphs (3) or (4) apply until National Grid has given written approval of the plan so submitted.

(6) Any approval of National Grid required under sub-paragraphs (3) or (4)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (7) or (9); and
- (b) must not be unreasonably withheld.

(7) In relation to any work to which sub-paragraphs (3) or (4) apply, National Grid may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus

(8) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (2) or as relevant sub-paragraph (3), (4) or (7), as approved or as amended from time to time by agreement between the promoter and National Grid and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (7) or (9) by National Grid for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and National Grid will be entitled to watch and inspect the execution of those works.

(9) Where National Grid requires any protective works to be carried out by itself or by the promoter (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph, must be carried out to National Grid's satisfaction prior to the commencement of any authorised works (or any relevant part thereof) for which protective works are required and National Grid must give 56 days' notice of such works from the date of submission of a plan pursuant to this paragraph (except in an emergency).

(10) If National Grid in accordance with sub-paragraphs (7) or (9) and in consequence of the works proposed by the promoter, reasonably requires the removal of any apparatus and gives written

notice to the promoter of that requirement, paragraphs 12 to 14 and 17 to 19 apply as if the removal of the apparatus had been required by the promoter under paragraph 17(2).

(11) Nothing in this paragraph precludes the promoter from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph apply to and in respect of the new plan.

(12) The promoter will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to National Grid notice as soon as is reasonably practicable and a plan of those works and must—

- (a) comply with sub-paragraphs (7), (8) and (9) insofar as is reasonably practicable in the circumstances; and
- (b) comply with sub-paragraph (13) at all times.

(13) At all times when carrying out any works authorised under the Order, the promoter must comply with National Grid's policies for development near overhead lines EN43-8 and HSE's guidance note 6 "Avoidance of Danger from Overhead Lines".

Expenses

21.—(1) Subject to the following provisions of this paragraph, the promoter must pay to National Grid on demand all charges, costs and expenses reasonably and properly anticipated or incurred by National Grid in or in connection with the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new or alternative apparatus which may be required in consequence of the execution of any authorised works as are referred to in this Part of this Schedule including without limitation—

- (a) any costs reasonably incurred by or compensation properly paid by National Grid in connection with the acquisition of rights or the exercise of statutory powers for such apparatus including without limitation all costs incurred by National Grid as a consequence of National Grid—
 - (i) using its own compulsory purchase powers to acquire any necessary rights under paragraph 17(3); and/or
 - (ii) exercising any compulsory purchase powers in the Order transferred to or benefitting National Grid;
- (b) in connection with the cost of the carrying out of any necessary diversion work or the provision of any alternative apparatus;
- (c) the cutting off of any apparatus from any other apparatus or the making safe of redundant apparatus;
- (d) the approval of plans;
- (e) the carrying out of protective works, plus a capitalised sum to cover the cost of maintaining and renewing permanent protective works;
- (f) the survey of any land, apparatus or works, the inspection and monitoring of works or the installation or removal of any temporary works reasonably necessary in consequence of the execution of any such works referred to in this Part of this Schedule.

(2) There will be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule and which is not re-used as part of the alternative apparatus, that value being calculated after removal.

(3) If in accordance with the provisions of this Part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or
- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was situated,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the promoter or, in default of agreement, is not determined by arbitration in accordance with article 36 (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to National Grid by virtue of sub-paragraph (1) will be reduced by the amount of that excess save where it is not possible in the circumstances to obtain the existing type of apparatus at the same capacity and dimensions or place at the existing depth in which case full costs will be borne by the promoter.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus will not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole will be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to an undertaker in respect of works by virtue of sub-paragraph (1) will, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on National Grid any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

Compensation

22.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works authorised by this Part of this Schedule or in consequence of the construction, use, maintenance or failure of any of the authorised works by or on behalf of the promoter or in consequence of any act or default of the promoter (or any person employed or authorised by him) in the course of carrying out such works, including without limitation works carried out by the promoter under this Part of this Schedule or any subsidence resulting from any of these works, any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of the authorised works) or property of National Grid, or there is any interruption in any service provided, or in the supply of any goods, by National Grid, or National Grid becomes liable to pay any amount to any third party or National Grid incurs any liability as a result of the transfer of undertaking under article 5, the promoter will—

- (a) bear and pay on demand the cost reasonably incurred by National Grid in making good such damage or restoring the supply; and
- (b) compensate National Grid for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from National Grid, by reason or in consequence of any such damage or interruption or National Grid becoming liable to any third party as aforesaid other than arising from any default of National Grid.

(2) The fact that any act or thing may have been done by National Grid on behalf of the promoter or in accordance with a plan approved by National Grid or in accordance with any requirement of National Grid or under its supervision will not (unless sub-paragraph (3) applies), excuse the promoter from liability under the provisions of this sub-paragraph (1) unless National Grid fails to carry out and execute the works properly with due care and attention and in a skilful and workman like manner or in a manner that does not accord with the approved plan.

(3) Nothing in sub-paragraph (1) imposes any liability on the promoter in respect of—

- (a) any damage or interruption to the extent that it is attributable to the neglect or default of National Grid, its officers, servants, contractors or agents; and
- (b) any authorised works and/or any other works authorised by this Part of this Schedule carried out by National Grid as an assignee, transferee or lessee of the promoter with the

benefit of the Order pursuant to section 156 of the Planning Act 2008 or article 5 (consent to transfer benefit of order)] subject to the proviso that once such works become apparatus (“new apparatus”), any authorised works yet to be executed and not falling within this subsection 3(b) will be subject to the full terms of this Part of this Schedule including this paragraph 22.

- (c) National Grid must give the promoter reasonable notice of any such third party claim or demand and no settlement or compromise must, unless payment is required in connection with a statutory compensation scheme, be made without first consulting the promoter and considering their representations.

Enactments and agreements

23. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between National Grid and the promoter, nothing in this Part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the promoter and National Grid in respect of any apparatus laid or erected in land belonging to the promoter on the date on which this Order is made.

Co-operation

24.—(1) Where in consequence of the proposed construction of any of the authorised works, the promoter or an undertaker requires the removal of apparatus under paragraph 17(2) or an undertaker makes requirements for the protection or alteration of apparatus under paragraph (19), the promoter must use its best endeavours to co-ordinate the execution of the works in the interests of safety and the efficient and economic execution of the authorised development and taking into account the need to ensure the safe and efficient operation of National Grid’s undertaking and National Grid must use its best endeavours to co-operate with the promoter for that purpose.

(2) For the avoidance of doubt whenever the undertaker’s consent, agreement or approval is required in relation to plans, documents or other information submitted by National Grid or the taking of action by National Grid, it must not be unreasonably withheld or delayed.

Access

25. If in consequence of the agreement reached in accordance with paragraph 16(1) or the powers granted under this Order the access to any apparatus is materially obstructed, the promoter must provide such alternative means of access to such apparatus as will enable National Grid to maintain or use the apparatus no less effectively than was possible before such obstruction.

Arbitration

26. Save for differences or disputes arising under paragraph 17(2), 17(4), 18(1), 19 and 20 any difference or dispute arising between the promoter and National Grid under this Part of this Schedule must, unless otherwise agreed in writing between the promoter and National Grid, be determined by arbitration in accordance with article 37 (arbitration).

Notices

27. The plans submitted to National Grid by the promoter pursuant to paragraph 19 and 20 must be sent to National Grid Plant Protection at plantprotection@nationalgrid.com or such other address as National Grid may from time to time appoint instead for that purpose and notify to the promoter in writing.

PART 3

For the Protection of Cadent Gas Limited as Gas Undertaker

Application

28. For the protection of Cadent referred to in this Part of this Schedule the following provisions will, unless otherwise agreed in writing between the promoter and Cadent, have effect.

Interpretation

29. In this Part of this Schedule—

“1991 Act” means the New Roads and Street Works Act 1991;

“alternative apparatus” means appropriate alternative apparatus to the satisfaction of Cadent to enable the Cadent to fulfil its statutory functions in a manner no less efficient than previously;

“apparatus” means any mains, pipes pressure governors, ventilators, cathodic protections cables or other apparatus belonging to or maintained by Cadent for the purposes of gas distribution and supply together with any replacement apparatus and such other apparatus constructed pursuant to the Order that becomes operational apparatus of Cadent for the purposes of distribution and/or supply and includes any structure in which apparatus is or will be lodged or which gives or will give access to apparatus;

“authorised works” has the same meaning as is given to the term “authorised development” in article 2 of this Order and includes any associated development authorised by the Order and for the purposes of this Part of this Schedule includes the use and maintenance of the authorised works and construction of any works authorised by this Schedule;

“Cadent” means Cadent Gas Limited and/or its successors in title and/or any successor as a gas transporter within the meaning of Part 1 of the Gas Act 1986

“commence” has the same meaning as in article 2 of this Order and commencement must be construed to have the same meaning save that for the purpose of this part only the term commence includes operations consisting site clearance, demolition work, archaeological investigations, environmental surveys, investigations for the purposes of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure and temporary hard standing;

“deed of consent” means a deed of consent, crossing agreement, deed of variation or new deed of grant agreed between the parties acting reasonably in order to vary and/or replace existing easements, agreements, enactments and other such interests so as to secure land rights and interests as are necessary to carry out, maintain, operate and use the apparatus in a manner consistent with the terms of this Part of this Schedule;

“functions” includes powers and duties;

“ground mitigation scheme” means a scheme approved by Cadent (such approval not to be unreasonably withheld or delayed) setting out the necessary measures (if any) for a ground subsidence event;

“ground monitoring scheme” means a scheme for monitoring ground subsidence which sets out the apparatus which is to be subject to such monitoring, the extent of land to be monitored, the manner in which ground levels are to be monitored, the timescales of any monitoring activities and the extent of ground subsidence which, if exceeded, must require the promoter to submit for Cadent’s approval a ground mitigation scheme;

“ground subsidence event” means any ground subsidence identified by the monitoring activities set out in the ground monitoring scheme that has exceeded the level described in the ground monitoring scheme as requiring a ground mitigation scheme;

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, across, along or upon such land;

“maintain” and “maintenance” include the ability and right to do any of the following in relation to any apparatus or alternative apparatus of Cadent including retain, lay, construct, maintain, protect, access, enlarge, replace, use, repair, alter, inspect, renew, decommission or render unusable or remove the apparatus;

“plan” or “plans” include all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are reasonably necessary properly and sufficiently to describe and assess the works to be executed;

“promoter” means the undertaker as defined in article 2 of this Order;

“specified works” means any of the authorised works or activities undertaken in association with the authorised works which:

- (a) will or may be situated over, or within 15 metres measured in any direction of any apparatus the removal of which has not been required by the promoter under paragraph 33(2) or otherwise;
- (b) may in any way adversely affect any apparatus the removal of which has not been required by the promoter under paragraph 33(2) or otherwise;

On Street Apparatus

30.—(1) Except for paragraphs 31 (apparatus in stopped up streets), 33 (Removal of Apparatus) in so far as sub-paragraph 3(2) applies, 34 (Facilities and Rights for Alternative Apparatus) in so far as sub-paragraph 3(2) applies, 35 (retained apparatus: protection), 36 (expenses) and 37 (compensation) of this Schedule which will apply in respect of the exercise of all or any powers under the Order affecting the rights and apparatus of Cadent, the other provisions of this Schedule do not apply to apparatus in respect of which the relations between the promoter and Cadent are regulated by the provisions of Part 3 of the 1991 Act.

(2) Paragraph 34 and 35 of this Agreement apply to diversions when where carried out under the 1991 Act, in circumstance where any apparatus is diverted from an alignment within the existing adopted public highway but not wholly replaced within existing adopted public highway

(3) Notwithstanding Art 25(5) or any other powers in the Order generally, s85 of the 1991 Act in relation to costs sharing and the powers in respect of cost sharing generally including the regulations made thereunder does not apply in relation to any diversion of apparatus of Cadent under the 1991 Act.

Apparatus of Undertakers in stopped up streets

31. Notwithstanding the temporary stopping up or diversion of any highway under the powers of article 11 (temporary stopping up of streets), Cadent will be at liberty at all times to take all necessary access across any such stopped up highway and/or to execute and do all such works and things in, upon or under any such highway as may be reasonably necessary or desirable to enable it to maintain any apparatus which at the time of the stopping up or diversion was in that highway

Acquisition of land

32.—(1) Regardless of any provision in this Order or anything shown on the land plans or contained in the book of reference to the Order, the promoter may not acquire or appropriate any land interest or apparatus or appropriate, acquire, extinguish, interfere with or override any easement and/or other interest of Cadent otherwise than by agreement

(2) As a condition of agreement between the parties in paragraph 32(1), prior to the carrying out of any part of the authorised works (or in such other timeframe as may be agreed between Cadent and the promoter) that are subject to the requirements of this Part of this Schedule that will cause any conflict with or breach the terms of any easement and/or other legal or land interest of the undertaker and/or affects the provisions of any enactment or agreement regulating the relations between Cadent and the promoter in respect of any apparatus laid or erected in land belonging to or secured by the promoter, the promoter must as Cadent reasonably and necessarily requires enter into such deeds of consent upon such terms and conditions as may be agreed between Cadent and the

promoter acting reasonably and which must be no less favourable on the whole to Cadent unless otherwise agreed by the undertaker, and it will be the responsibility of the promoter to procure and/or secure the consent and entering into of such deeds and variations by all other third parties with an interest in the land at that time who are affected by such authorised works.

(3) The promoter and Cadent agree that where there is any inconsistency or duplication between the provisions set out in this Part of this Schedule relating to the relocation and/or removal of apparatus/including but not limited to the payment of costs and expenses relating to such relocation and/or removal of apparatus) and the provisions of any existing easement, rights, agreements and licences granted, used, enjoyed or exercised by the undertaker and/or other enactments relied upon by the undertaker as of right or other use in relation to the apparatus, then the provisions in this Schedule prevail.

(4) Any agreement or consent granted by the undertaker under paragraph 35 or any other paragraph of this Part of this Schedule, must not be taken to constitute agreement under sub-paragraph 32(1).

Removal of apparatus

33.—(1) If, in the exercise of the agreement reached in accordance with paragraph 32 or in any other authorised manner, the promoter acquires any interest in any land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of an undertaker to maintain that apparatus in that land must not be extinguished until alternative apparatus has been constructed, and is in operation to the reasonable satisfaction of Cadent in accordance with sub-paragraph (2) to (5) inclusive.

(2) If, for the purpose of executing any works in, on, under or over any land purchased, held, appropriated or used under this Order, the promoter requires the removal of any apparatus placed in that land, it must give to Cadent advance written notice of that requirement, together with a plan of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order Cadent reasonably needs to remove any of its apparatus) the promoter must, subject to sub-paragraph (3), afford to Cadent to its satisfaction (taking into account paragraph 34(1) below) the necessary facilities and rights

- (a) for the construction of alternative apparatus in other land of or land secured by the promoter; and
- (b) subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of or land secured by the promoter, or the promoter is unable to afford such facilities and rights as are mentioned in sub-paragraph (2) in the land in which the alternative apparatus or part of such apparatus is to be constructed, Cadent must, on receipt of a written notice to that effect from the promoter, as soon as possible take such steps as are reasonable in the circumstances in an endeavour to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed, with the promoter's assistance if required by Cadent, save that this obligation does not extend to the requirement for Cadent to use its compulsory purchase powers to this end unless it elects to so do.

(4) Any alternative apparatus to be constructed in land of or land secured by the promoter under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between Cadent and the promoter.

(5) Cadent must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the prior grant to Cadent of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the promoter to be removed under the provisions of this Part of this Schedule.

Facilities and rights for alternative apparatus

34.—(1) Where, in accordance with the provisions of this Part of this Schedule, the promoter affords to or secures for Cadent facilities and rights in land for the construction, use, maintenance and protection of alternative apparatus in substitution for apparatus to be decommissioned or removed, those facilities and rights must be granted upon such terms and conditions as may be agreed between the promoter and Cadent and must be no less favourable on the whole to Cadent than the facilities and rights enjoyed by it in respect of the apparatus to be removed unless otherwise agreed by Cadent

(2) If the facilities and rights to be afforded by the promoter and agreed with Cadent under paragraph 34(1) above in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are less favourable on the whole to National Grid than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject in the matter may be referred to arbitration in accordance with paragraph 41 (Arbitration) of this Part of this Schedule and the arbitrator may make such provision for the payment of compensation by the promoter to National Grid as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case

Retained apparatus: protection Gas Undertakers

35.—(1) The promoter must provide technical information relevant to any specified works to Cadent as soon as reasonably practicable after it becomes available, and will seek to liaise with Cadent as early as reasonably practicable regarding the specified works.

(2) Not less than 56 days before the commencement of any specified works the promoter must submit to Cadent a plan and, if reasonably required by Cadent, a ground monitoring scheme in respect of those works.

(3) The plan to be submitted to Cadent under sub-paragraph (2) must include a method statement and describe—

- (a) the exact position of the works;
- (b) the level at which these are proposed to be constructed or renewed;
- (c) the manner of their construction or renewal including details of excavation, positioning of plant etc;
- (d) the position of all apparatus;
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus; and
- (f) any intended maintenance regimes.

(4) The promoter must not commence any works to which sub-paragraphs 2 and (3) apply until Cadent has given written approval of the plan so submitted.

(5) Any approval of Cadent required under sub-paragraph (4)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (6) or (8); and,
- (b) must not be unreasonably withheld.

(6) In relation to any work to which sub-paragraphs (1) and/or (2) apply, Cadent may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its apparatus against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus provided that such modifications are requested by Cadent within a period of 56 days, unless otherwise agreed between the parties, beginning with the date on which the plan under sub-paragraph (1) is submitted to it. For the avoidance of doubt, provided that any further iterations of the plan submitted to Cadent for approval as a result of modifications required under this paragraph are not materially different to the modifications previously made by Cadent, any further required modifications will be made by the promoter as soon as reasonably practicable thereafter and in any event within 56 days of receipt of any further plans.

(7) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (2) or as relevant sub paragraph (6), as approved or as amended from time to time by agreement between the promoter and Cadent and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (6) or (8) by Cadent for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and Cadent will be entitled to watch and inspect the execution of those works.

(8) Where Cadent requires any protective works to be carried out by itself or by the promoter (whether of a temporary or permanent nature) such protective works, inclusive of any measures or schemes required and approved as part of the plan approved pursuant to this paragraph, must be carried out to Cadent's satisfaction prior to the commencement of any authorised works (or any relevant part thereof) for which protective works are required and Cadent must give 56 days' notice of such works from the date of submission of a plan pursuant to sub-paragraph (2) or (3) (except in an emergency).

(9) If Cadent in accordance with sub-paragraphs (6) or (8) and in consequence of the works proposed by the promoter, reasonably requires the removal of any apparatus and gives written notice to the promoter of that requirement, paragraphs 28 to 30 and 33 to 35 apply as if the removal of the apparatus had been required by the promoter under paragraph 33(2).

(10) Nothing in this paragraph precludes the promoter from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of the authorised works, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph will apply to and in respect of the new plan.

(11) The promoter will not be required to comply with sub-paragraph (1) where it needs to carry out emergency works as defined in the 1991 Act but in that case it must give to Cadent notice as soon as is reasonably practicable and a plan of those works and must—

- (a) comply with sub-paragraphs (6), (7) and (8) insofar as is reasonably practicable in the circumstances; and
- (b) comply with sub-paragraph (12) at all times.

(12) At all times when carrying out any works authorised under the Order the promoter must comply with Cadent's policies for safe working in proximity to gas apparatus "Specification for safe working in the vicinity of Cadent's, High pressure Gas pipelines and associated installation requirements for third parties SPGD//SP/SSW22" and HSE's "HS(~G)47 Avoiding Danger from underground services".

(13) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the promoter must implement an appropriate ground mitigation scheme save that Cadent retains the right to carry out any further necessary protective works for the safeguarding of its apparatus and can recover any such costs in line with paragraph 37.

Expenses

36.—(1) Subject to the following provisions of this paragraph, the promoter must pay to Cadent on demand all charges, costs and expenses reasonably and properly anticipated or incurred by Cadent in or in connection with the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new or alternative apparatus which may be required in consequence of the execution of any authorised works as are referred to in this Part of this Schedule including without limitation—

- (a) any costs reasonably incurred by or compensation properly paid by Cadent in connection with the acquisition of rights or the exercise of statutory powers for such apparatus including without limitation all costs incurred by Cadent as a consequence of Cadent;
 - (i) using its own compulsory purchase powers to acquire any necessary rights under paragraph 33(3); and/or
 - (ii) exercising any compulsory purchase powers in the Order transferred to or benefitting Cadent;

- (b) in connection with the cost of the carrying out of any necessary diversion work or the provision of any alternative apparatus;
- (c) the cutting off of any apparatus from any other apparatus or the making safe of redundant apparatus;
- (d) the approval of plans;
- (e) the carrying out of protective works, plus a capitalised sum to cover the cost of maintaining and renewing permanent protective works;
- (f) the survey of any land, apparatus or works, the inspection and monitoring of works or the installation or removal of any temporary works reasonably necessary in consequence of the execution of any such works referred to in this Part of this Schedule.

(2) There will be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions of this Part of this Schedule and which is not re-used as part of the alternative apparatus, that value being calculated after removal.

(3) If in accordance with the provisions of this Part of this Schedule—

- (a) apparatus of better type, of greater capacity or of greater dimensions is placed in substitution for existing apparatus of worse type, of smaller capacity or of smaller dimensions; or
- (b) apparatus (whether existing apparatus or apparatus substituted for existing apparatus) is placed at a depth greater than the depth at which the existing apparatus was situated,

and the placing of apparatus of that type or capacity or of those dimensions or the placing of apparatus at that depth, as the case may be, is not agreed by the promoter or, in default of agreement, is not determined by arbitration in accordance with article 38 (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this Part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to Cadent by virtue of sub-paragraph (1) will be reduced by the amount of that excess save where it is not possible in the circumstances to obtain the existing type of apparatus at the same capacity and dimensions or place at the existing depth in which case full costs will be borne by the promoter.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus will not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole will be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to an undertaker in respect of works by virtue of sub-paragraph (1) will, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on Cadent any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

Compensation

37.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works authorised by this Part of this Schedule or in consequence of the construction, use, maintenance or failure of any of the authorised works by or on behalf of the promoter or in consequence of any act or default of the promoter (or any person employed or authorised by him) in the course of carrying out such works, including without limitation works carried out by the promoter under this Part of this Schedule or any subsidence resulting from any of these works, any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of the authorised works) or property of Cadent, or there is any interruption in any service provided, or in the supply of any goods,

by Cadent, or Cadent becomes liable to pay any amount to any third party or Cadent incurs any liability as a result of the transfer of undertaking under article 6, the promoter will—

- (a) bear and pay on demand the cost reasonably incurred by Cadent in making good such damage or restoring the supply; and
- (b) compensate Cadent for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Cadent, by reason or in consequence of any such damage or interruption or Cadent becoming liable to any third party as aforesaid other than arising from any default of Cadent.

(2) The fact that any act or thing may have been done by Cadent on behalf of the promoter or in accordance with a plan approved by Cadent or in accordance with any requirement of Cadent or under its supervision will not (unless sub-paragraph (3) applies), excuse the promoter from liability under the provisions of this sub-paragraph (1) unless Cadent fails to carry out and execute the works properly with due care and attention and in a skilful and workman like manner or in a manner that does not accord with the approved plan.

(3) Nothing in sub-paragraph (1) imposes any liability on the promoter in respect of—

- (a) any damage or interruption to the extent that it is attributable to the neglect or default of Cadent, its officers, servants, contractors or agents; and
- (b) any authorised works and/or any other works authorised by this Part of this Schedule carried out by Cadent as an assignee, transferee or lessee of the promoter with the benefit of the Order pursuant to section 156 of the Planning Act 2008 or article 6 (consent to transfer benefit of order) subject to the proviso that once such works become apparatus (“new apparatus”), any authorised works yet to be executed and not falling within this sub-section 3(b) will be subject to the full terms of this Part of this Schedule including this paragraph 37.

(4) Cadent must give the promoter reasonable notice of any such third party claim or demand and no settlement or compromise must, unless payment is required in connection with a statutory compensation scheme, be made without first consulting the promoter and considering their representations.

Enactments and agreements

38. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between Cadent and the promoter, nothing in this Part of this Schedule affects the provisions of any enactment or agreement regulating the relations between the promoter and Cadent in respect of any apparatus laid or erected in land belonging to the promoter on the date on which this Order is made.

Co-operation

39.—(1) Where in consequence of the proposed construction of any of the authorised works, the promoter or an undertaker requires the removal of apparatus under paragraph 33(2) or an undertaker makes requirements for the protection or alteration of apparatus under paragraph 35, the promoter must use its best endeavours to co-ordinate the execution of the works in the interests of safety and the efficient and economic execution of the authorised development and taking into account the need to ensure the safe and efficient operation of Cadent’s undertaking and Cadent must use its best endeavours to co-operate with the promoter for that purpose.

(2) For the avoidance of doubt whenever the undertaker’s consent, agreement or approval to is required in relation to plans, documents or other information submitted by Cadent or the taking of action by Cadent, it must not be unreasonably withheld or delayed.

Access

40. If in consequence of the agreement reached in accordance with paragraph 32(1) or the powers granted under this Order the access to any apparatus is materially obstructed, the promoter must

provide such alternative means of access to such apparatus as will enable Cadent to maintain or use the apparatus no less effectively than was possible before such obstruction.

Arbitration

41. Save for differences or disputes arising under paragraph 33(2), 33(4), 34(1), 35 and 36 any difference or dispute arising between the promoter and Cadent under this Part of this Schedule must, unless otherwise agreed in writing between the promoter and Cadent, be determined by arbitration in accordance with article 38 (arbitration).

Notices

42. The plans submitted to Cadent by the promoter pursuant to paragraph 35 must be sent to National Grid Plant Protection at plantprotection@cadent.com or such other address as Cadent may from time to time appoint instead for that purpose and notify to the promoter in writing.

PART 4

Protection for Operators of Electronic Communications Code Networks

43.—(1) For the protection of any operator, the following provisions shall, unless otherwise agreed in writing between the undertaker and the operator, have effect.

(2) In this part of this Schedule—

“the 2003 Act” means the Communications Act 2003;

“conduit system” has the same meaning as in the electronic communications code and references to providing a conduit system is construed in accordance with paragraph 1(3A) of that code;

“electronic communications apparatus” has the same meaning as in the electronic communications code;

“the electronic communications code” has the same meaning as in Chapter 1 of Part 2 of the 2003 Act^(a);

“electronic communications code network” means—

- (a) so much of an electronic communications network or conduit system provided by an electronic communications code operator as is not excluded from the application of the electronic communications code by a direction under section 106 of the 2003 Act; and
- (b) an electronic communications network which the Secretary of State is providing or proposing to provide;

“electronic communications code operator” means a person in whose case the electronic communications code is applied by a direction under section 106 of the 2003 Act; and

“operator” means the operator of an electronic communications code network.

44. The exercise of the powers of article 29 (statutory undertakers) are subject to Part 10 of Schedule 3A of the 2003 Act.

45.—(1) Subject to sub-paragraphs (2) to (4), if as the result of the authorised development or their construction, or of any subsidence resulting from any of those works—

- (a) any damage is caused to any electronic communications apparatus belonging to an operator (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works, or other property of an operator); or
- (b) there is any interruption in the supply of the service provided by an operator, the undertaker shall bear and pay the cost reasonably incurred by the operator in making good such damage or restoring the supply and shall—

^(a) See section 106.

- (i) make reasonable compensation to an operator for loss sustained by it; and
- (ii) indemnify an operator against claims, demands, proceedings, costs, damages and expenses which may be made or taken against, or recovered from, or incurred by, an operator by reason, or in consequence of, any such damage or interruption.

(2) Nothing in sub-paragraph (1) shall impose any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of an operator, its officers, servants, contractors or agents.

(3) The operator shall give the undertaker reasonable notice of any such claim or demand and no settlement or compromise of the claim or demand shall be made without the consent of the undertaker which, if it withholds such consent, shall have the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

(4) Any difference arising between the undertaker and the operator under this paragraph shall be referred to and settled by arbitration under article 38 (arbitration).

46. This part of this Schedule does not apply to—

- (a) any apparatus in respect of which the relations between the undertaker and an operator are regulated by the provisions of Part 3 of the 1991 Act; or
- (b) any damage, or any interruption, caused by electro-magnetic interference arising from the construction or use of the authorised development.

47. Nothing in this part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and an operator in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

PART 5

Protection of Network Rail Infrastructure Limited

48. The following provisions of this Schedule have effect, unless otherwise agreed in writing between the undertaker and Network Rail and, in the case of paragraph 62 any other person on whom rights or obligations are conferred by that paragraph.

49. In this part of this Schedule—

“construction” includes execution, placing, alteration and reconstruction and “construct” and “constructed” have corresponding meanings;

“the engineer” means an engineer appointed by Network Rail for the purposes of this Order;

“network licence” means the network licence, as is amended from time to time, granted to Network Rail Infrastructure Limited by the Secretary of State in exercise of powers under section 8 of the Railways Act 1993;

“Network Rail” means Network Rail Infrastructure Limited and any associated company of Network Rail Infrastructure Limited which holds property for railway purposes, and for the purpose of this definition “associated company” means any company which is (within the meaning of section 1159 of the Companies Act 2006 the holding company of Network Rail Infrastructure Limited, a subsidiary of Network Rail Infrastructure Limited or another subsidiary of the holding company of Network Rail Infrastructure Limited;

“plans” includes sections, designs, design data, software, drawings, specifications, soil reports, calculations, descriptions (including descriptions of methods of construction), staging proposals, programmes and details of the extent, timing and duration of any proposed occupation of railway property;

“railway operational procedures” means procedures specified under any access agreement (as defined in the Railways Act 1993) or station lease;

“railway property” means any railway belonging to Network Rail and-

- (a) any station, land, works, apparatus and equipment belonging to Network Rail or connected with any such railway; and
- (b) any easement or other property interest held or used by Network for the purposes of such railway or works, apparatus or equipment; and

“specified work” means so much of any of the authorised development as is situated upon, across, under, over or within 15 metres of, or may in any way adversely affect, railway property.

50.—(1) Where under this part of this Schedule Network Rail is required to give its consent or approval in respect of any matter, that consent or approval is subject to the condition that Network Rail complies with any relevant railway operational procedures and any obligations under its network licence or under statute.

(2) In so far as any specified work or the acquisition or use of railway property is or may be subject to railway operational procedures, Network Rail must—

- (a) co-operate with the undertaker with a view to avoiding undue delay and securing conformity as between any plans approved by the engineer and requirements emanating from those procedures; and
- (b) use their reasonable endeavours to avoid any conflict arising between the application of those procedures and the proper implementation of the authorised development under this Order.

51.—(1) The undertaker must not exercise the powers conferred by—

- (a) article 15 (discharge of water);
- (b) article 16 (authority to survey and investigate the land);
- (c) article 18 (compulsory acquisition of land);
- (d) article 20 (compulsory acquisition of rights);
- (e) article 21 (private rights);
- (f) article 24 (acquisition of subsoil only);
- (g) article 26 (temporary use of land for carrying out the authorised development);
- (h) article 27 (temporary use of land for maintaining the authorised development);
- (i) article 28 (extinguishment of private rights);
- (j) article 29(b) (statutory undertakers) (where relevant);
- (k) article 35 (felling or lopping of trees and removal of hedgerows);
- (l) article 36 (trees subject to tree preservation orders);
- (m) or the powers conferred by section 11(3) of the 1965 Act (powers of entry),

in respect of any railway property unless the exercise of such powers is with the consent of Network Rail.

(2) The undertaker must not in the exercise of the powers conferred by this Order prevent pedestrian or vehicular access to any railway property, unless preventing such access is with the consent of Network Rail.

(3) The undertaker must not exercise the powers conferred by sections 271 or 272 of the 1990 Act, or article 29 (statutory undertakers), in relation to any right of access of Network Rail to railway property, but such right of access may be diverted with the consent of Network Rail.

(4) The undertaker must not under the powers conferred by this Order acquire or use or acquire new rights over, or seek to impose any restrictive covenants over, any railway property, or extinguish any existing rights of Network Rail in respect of any third party property except with the consent of Network Rail.

(5) Where Network Rail is asked to give its consent pursuant to this paragraph, such consent must not be unreasonably withheld but may be given subject to reasonable conditions.

52.—(1) The undertaker must before commencing construction of any specified work supply to Network Rail proper and sufficient plans of that work for the reasonable approval of the engineer and

the specified work must not be commenced except in accordance with such plans as have been approved in writing by the engineer (or deemed approved under sub-paragraph (2)) or settled by arbitration under article 38 (Arbitration) (as varied by paragraph 69 of this Part of this Schedule).

(2) The approval of the engineer under sub-paragraph (1) must not be unreasonably withheld or delayed, and if by the end of the period of 28 days beginning with the date on which such plans have been supplied to Network Rail the engineer has not intimated disapproval of those plans and the grounds of disapproval the undertaker may serve upon the engineer written notice requiring the engineer to intimate approval or disapproval within a further period of 28 days beginning with the date upon which the engineer receives written notice from the undertaker. If by the expiry of the further 28 days the engineer has not intimated approval or disapproval, the engineer is deemed to have approved the plans as submitted.

(3) If by the end of the period of 28 days beginning with the date on which written notice was served upon the engineer under sub-paragraph (2), Network Rail gives notice to the undertaker that Network Rail desires itself to construct any part of a specified work which in the opinion of the engineer will or may affect the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the undertaker desires such part of the specified work to be constructed, Network Rail must construct it without unnecessary delay on behalf of and to the reasonable satisfaction of the undertaker in accordance with the plans approved or deemed to be approved or settled under this paragraph, and under the supervision (where appropriate and if given) of the undertaker.

(4) When signifying approval of the plans the engineer may specify any protective works (whether temporary or permanent) which in the engineer's opinion should be carried out before the commencement of the construction of a specified work to ensure the safety or stability of railway property or the continuation of safe and efficient operation of the railways of Network Rail or the services of operators using the same (including any relocation de-commissioning and removal of works, apparatus and equipment necessitated by a specified work and the comfort and safety of passengers who may be affected by the specified works), and such protective works as may be reasonably necessary for those purposes may be constructed by Network Rail or by the undertaker, if Network Rail so desires, and such protective works must be carried out at the expense of the undertaker in either case without unnecessary delay and the undertaker must not commence the construction of the specified works until the engineer has notified the undertaker that the protective works have been completed to the engineer's reasonable satisfaction.

53.—(1) Any specified work and any protective works to be constructed by virtue of paragraph 52(4) must, when commenced, be constructed—

- (a) without unnecessary delay in accordance with the plans approved or deemed to have been approved or settled under paragraph 52;
- (b) under the supervision (where appropriate and if given) and to the reasonable satisfaction of the engineer;
- (c) in such manner as to cause as little damage as is possible to railway property; and
- (d) so far as is reasonably practicable, so as not to interfere with or obstruct the free, uninterrupted and safe use of any railway of Network Rail or the traffic thereon and the use by passengers of railway property.

(2) If any damage to railway property or any such interference or obstruction is caused by the carrying out of or in consequence of the construction of a specified work, the undertaker must, regardless of any approval, make good such damage and shall pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for loss which it may sustain by reason of any such damage, interference or obstruction.

(3) Nothing in this Part of this Schedule imposes any liability on the undertaker with respect to any damage, costs, expenses or loss attributable to the negligence of Network Rail or its servants, contractors or agents or any liability on Network Rail with respect of any damage, costs, expenses or loss attributable to the negligence of the undertaker or its servants, contractors or agents.

54. The undertaker must-

- (a) at all times afford reasonable facilities to the engineer for access to a specified work during its construction; and
- (b) supply the engineer with all such information as the engineer may reasonably require with regard to a specified work or the method of constructing it.

55. Network Rail must at all times afford reasonable facilities to the undertaker and its agents for access to any works carried out by Network Rail under this Part of this Schedule during their construction and must supply the undertaker with such information as it may reasonably require with regard to such works or the method of constructing them.

56.—(1) If any permanent or temporary alterations or additions to railway property are reasonably necessary in consequence of the construction of a specified work, or during a period of 24 months after the completion of that work in order to ensure the safety of railway property or the continued safe operation of the railway of Network Rail or the services of operators using the same, such alterations and additions may be carried out by Network Rail and if Network Rail gives to the undertaker reasonable notice of its intention to carry out such alterations or additions (which must be specified in the notice), the undertaker must pay to Network Rail the reasonable cost of those alterations or additions including, in respect of any such alterations and additions as are to be permanent, a capitalised sum representing the increase of the costs which may be expected to be reasonably incurred by Network Rail in maintaining, working and, when necessary, renewing any such alterations or additions.

(2) If during the construction of a specified work by the undertaker, Network Rail gives notice to the undertaker that Network Rail desires itself to construct that part of the specified work which in the opinion of the engineer is endangering the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the undertaker decides that part of the specified work is to be constructed, Network Rail must assume construction of that part of the specified work and the undertaker must, notwithstanding any such approval of a specified work under paragraph 52(3), pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for loss which it may suffer by reason of the execution by Network Rail of that specified work.

(3) The engineer must, in respect of the capitalised sums referred to in this paragraph and paragraph 57(a) provide such details of the formula by which those sums have been calculated as the undertaker may reasonably require.

(4) If the cost of maintaining, working or renewing railway property is reduced in consequence of any such alterations or additions a capitalised sum representing such saving must be set off against any sum payable by the undertaker to Network Rail under this paragraph.

57. The undertaker must repay to Network Rail all reasonable fees, costs, charges and expenses reasonably incurred by Network Rail—

- (a) in constructing any part of a specified work on behalf of the undertaker as provided by paragraph 52(3) or in constructing any protective works under the provisions of paragraph 52(4) including, in respect of any permanent protective works, a capitalised sum representing the cost of maintaining and renewing those works;
- (b) in respect of the approval by the engineer of plans submitted by the undertaker and the supervision by the engineer of the construction of a specified work;
- (c) in respect of the employment or procurement of the services of any inspectors, signallers, watch-persons and other persons whom it shall be reasonably necessary to appoint for inspecting, signalling, watching and lighting railway property and for preventing, so far as may be reasonably practicable, interference, obstruction, danger or accident arising from the construction or failure of a specified work;
- (d) in respect of any special traffic working resulting from any speed restrictions which may in the opinion of the engineer, require to be imposed by reason or in consequence of the construction or failure of a specified work or from the substitution or diversion of services which may be reasonably necessary for the same reason; and

- (e) in respect of any additional temporary lighting of railway property in the vicinity of the specified works, being lighting made reasonably necessary by reason or in consequence of the construction or failure of a specified work.

58.—(1) In this paragraph-

“EMI” means, subject to sub-paragraph (2), electromagnetic interference with Network Rail apparatus generated by the operation of the authorised development where such interference is of a level which adversely affects the safe operation of Network Rail’s apparatus; and

“Network Rail’s apparatus” means any lines, circuits, wires, apparatus or equipment (whether or not modified or installed as part of the authorised development) which are owned or used by Network Rail for the purpose of transmitting or receiving electrical energy or of radio, telegraphic, telephonic, electric, electronic or other like means of signalling or other communications.

(2) This paragraph applies to EMI only to the extent that such EMI is not attributable to any change to Network Rail’s apparatus carried out after approval of plans under paragraph 52(1) for the relevant part of the authorised development giving rise to EMI (unless the undertaker has been given notice in writing before the approval of those plans of the intention to make such change).

(3) Subject to sub-paragraph (5), the undertaker must in the design and construction of the authorised development take measures reasonably necessary to prevent EMI and must establish with Network Rail (both parties acting reasonably) appropriate arrangements to verify their effectiveness.

(4) In order to facilitate the undertaker’s compliance with sub-paragraph (3)-

- (a) the undertaker must consult with Network Rail as early as reasonably practicable to identify all Network Rail’s apparatus which may be at risk of EMI, and thereafter must continue to consult with Network Rail (both before and after formal submission of plans under paragraph 52(1)) in order to identify all potential causes of EMI and the measures required to eliminate them;
- (b) Network Rail must make available to the undertaker all information in the possession of Network Rail reasonably requested by the undertaker in respect of Network Rail’s apparatus identified pursuant to sub-paragraph (a); and
- (c) Network Rail must allow the undertaker reasonable facilities for the inspection of Network Rail’s apparatus identified pursuant to sub-paragraph (a).

(5) In any case where it is established that EMI can only reasonably be prevented by modifications to Network Rail’s apparatus, Network Rail must not withhold its consent unreasonably to modifications of Network Rail’s apparatus, but the means of prevention and the method of their execution must be selected in the reasonable discretion of Network Rail, and in relation to such modifications paragraph 52(1) has effect subject to this sub-paragraph.

(6) If at any time prior to the commencement of regular revenue-earning operations comprised in the authorised development and regardless of any measures adopted under sub-paragraph (3), the testing or commissioning of the authorised development causes EMI then the undertaker shall immediately upon receipt of notification by Network Rail of such EMI either in writing or communicated orally (such oral communication to be confirmed in writing as soon as reasonably practicable after it has been issued) forthwith cease to use (or procure the cessation of use of) the undertaker’s apparatus causing such EMI until necessary measures have been taken to remedy such EMI by way of modification to the source of such EMI or (in the circumstances, and subject to the consent, specified in sub-paragraph (5)) to Network Rail’s apparatus.

(7) In the event of EMI having occurred –

- (a) the undertaker must afford reasonable facilities to Network Rail for access to the undertaker’s apparatus in the investigation of such EMI;
- (b) Network Rail must afford reasonable facilities to the undertaker for access to Network Rail’s apparatus in the investigation of such EMI; and
- (c) Network Rail must make available to the undertaker any additional material information in its possession reasonably requested by the undertaker in respect of Network Rail’s apparatus or such EMI.

(8) Where Network Rail approves modifications to Network Rail's apparatus pursuant to sub-paragraphs (5) or (6) –

- (a) Network Rail must allow the undertaker reasonable facilities for the inspection of the relevant part of Network Rail's apparatus;
- (b) any modifications to Network Rail's apparatus approved pursuant to those sub-paragraphs must be carried out and completed by the undertaker in accordance with paragraph 53.

(9) To the extent that it would not otherwise do so, the indemnity in paragraph 62(1) applies, subject to paragraphs 62(2) to 62(6), to the costs and expenses reasonably incurred or losses suffered by Network Rail through the implementation of the provisions of this paragraph (including costs incurred in connection with the consideration of proposals, approval of plans, supervision and inspection of works and facilitating access to Network Rail's apparatus) or in consequence of any EMI to which sub-paragraph (6) applies.

(10) For the purpose of paragraph 57(a) any modifications to Network Rail's apparatus under this paragraph shall be deemed to be protective works referred to in that paragraph.

59. If at any time after the completion of a specified work, not being a work vested in Network Rail, Network Rail gives notice to the undertaker informing it that the state of maintenance of any part of the specified work appears to be such as adversely affects the operation of railway property, the undertaker must, on receipt of such notice, take such steps as may be reasonably necessary to put that specified work in such state of maintenance as not adversely to affect railway property.

60. The undertaker must not provide any illumination or illuminated sign or signal on or in connection with a specified work in the vicinity of any railway belonging to Network Rail unless it has first consulted Network Rail and it must comply with Network Rail's reasonable requirements for preventing confusion between such illumination or illuminated sign or signal and any railway signal or other light used for controlling, directing or securing the safety of traffic on the railway.

61. Any additional expenses which Network Rail may reasonably incur in altering, reconstructing or maintaining railway property under any powers existing at the making of this Order by reason of the existence of a specified work must, provided that 56 days' previous notice of the commencement of such alteration, reconstruction or maintenance has been given to the undertaker, be repaid by the undertaker to Network Rail.

62.—(1) The undertaker must pay to Network Rail all reasonable costs, charges, damages and expenses not otherwise provided for in this Schedule which may be occasioned to or reasonably incurred by Network Rail—

- (a) by reason of the construction or maintenance of a specified work or the failure thereof or
- (b) by reason of any act or omission of the undertaker or of any person in its employ or of its contractors or others whilst engaged upon a specified work;

and the undertaker must indemnify and keep indemnified Network Rail from and against all claims and demands arising out of or in connection with a specified work or any such failure, act or omission; and the fact that any act or thing may have been done by Network Rail on behalf of the undertaker or in accordance with plans approved by the engineer or in accordance with any requirement of the engineer or under the engineer's supervision shall not (if it was done without negligence on the part of Network Rail or of any person in its employ or of its contractors or agents) excuse the undertaker from any liability under the provisions of this sub-paragraph.

(2) Network Rail must give the undertaker reasonable written notice of any such claim or demand and no settlement or compromise of such a claim or demand shall be made without the prior consent of the undertaker.

(3) The sums payable by the undertaker under sub-paragraph (1) shall if relevant include a sum equivalent to the relevant costs.

(4) Subject to the terms of any agreement between Network Rail and a train operator regarding the timing or method of payment of the relevant costs in respect of that train operator, Network Rail must promptly pay to each train operator the amount of any sums which Network Rail receives under sub-paragraph (3) which relates to the relevant costs of that train operator.

(5) The obligation under sub-paragraph (3) to pay Network Rail the relevant costs is, in the event of default, to be enforceable directly by any train operator concerned to the extent that such sums would be payable to that operator pursuant to sub-paragraph (4).

(6) In this paragraph—

“the relevant costs” means the costs, direct losses and expenses (including loss of revenue) reasonably incurred by each train operator as a consequence of any restriction of the use of Network Rail’s railway network as a result of the construction, maintenance or failure of a specified work or any such act or omission as mentioned in sub-paragraph (1); and

“train operator” means any person who is authorised to act as the operator of a train by a licence under section 8 of the Railways Act 1993.

63. Network Rail must, on receipt of a request from the undertaker, from time to time provide the undertaker free of charge with written estimates of the costs, charges, expenses and other liabilities for which the undertaker is or will become liable under this Schedule (including the amount of the relevant costs mentioned in paragraph 62) and with such information as may reasonably enable the undertaker to assess the reasonableness of any such estimate or claim made or to be made pursuant to this Part (including any claim relating to those relevant costs).

64. In the assessment of any sums payable to Network Rail under this Schedule there must not be taken into account any increase in the sums claimed that is attributable to any action taken by or any agreement entered into by Network Rail if that action or agreement was not reasonably necessary and was taken or entered into with a view to obtaining the payment of those sums by the undertaker under this Schedule or increasing the sums so payable.

65. The undertaker and Network Rail may, subject in the case of Network Rail to compliance with the terms of its network licence, enter into, and carry into effect, agreements for the transfer to the undertaker of—

- (a) any railway property shown on the works and land plans and described in the book of reference;
- (b) any lands, works or other property held in connection with any such railway property; and
- (c) any rights and obligations (whether or not statutory) of Network Rail relating to any railway property or any lands, works or other property referred to in this paragraph.

66. Nothing in this Order, or in any enactment incorporated with or applied by this Order, prejudices or affects the operation of Part I of the Railways Act 1993.

67. The undertaker must give written notice to Network Rail if any application is proposed to be made by the undertaker for the Secretary of State’s consent, under article 6 (transfer of benefit of Order) of this Order in relation to railway property or any specified works and any such notice must be given no later than 28 days before any such application is made and must describe or give (as appropriate)—

- (a) the nature of the application to be made;
- (b) the extent of the geographical area to which the application relates; and
- (c) the name and address of the person acting for the Secretary of State to whom the application is to be made.

68. The undertaker must no later than 28 days from the date that the plans submitted to and certified by the Secretary of State in accordance with article 37 (certification of plans etc.) are certified by the Secretary of State, provide a set of those plans to Network Rail in electronic form specified by Network Rail.

69. In relation to any dispute arising under this Part that is referred to arbitration in accordance with article 38 (arbitration) of the Order, the parties agree that the timetable referred to within Paragraph 3 of Schedule 14 (Arbitration Rules) will be amended where Network Rail can demonstrate that it is unable (acting reasonably) to comply with the time limit due to timing constraints that may arise for Network Rail in obtaining clearance conditions and/or any engineering regulatory or stakeholder

(internal or external) consents and/or assessing any matters of concern with regards to the safe operation of the railway.

PART 6

For the Protection of Anglian Water Services Limited

70.—(1) For the protection of Anglian Water, the following provisions shall, unless otherwise agreed in writing between the undertaker and Anglian Water, have effect.

(2) In this part of this schedule –

“Anglian Water” means Anglian Water Services Limited;

“apparatus” means any works, mains, pipes or other apparatus belonging to or maintained by Anglian Water for the purposes of water supply and sewerage and

(a) any drain or works vested in Anglian Water under The Water Industry Act 1991,

(b) any sewer which is so vested or is the subject of a notice of intention to adopt given under section 102 (4) of The Water Industry Act 1991 or an agreement to adopt made under section 104 of that Act,

and includes a sludge main, disposal main or sewer outfall and any manholes, ventilating shafts, pumps or other accessories forming part of any sewer, drain, or works (within the meaning of section 219 of that Act) and any structure in which apparatus is or is to be lodged or which gives or will give access to apparatus.

“alternative apparatus” means alternative apparatus adequate to enable Anglian Water to fulfil its statutory functions in not less efficient a manner than previously;

“undertaker” means the undertaker under article 2 of this Order

“functions” includes powers and duties

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over or upon land; and

“plan” includes sections, drawings, specifications and method statements.

(3) The undertaker must not interfere with, build over or near to any Apparatus within the Order Land or execute the placing, installation, bedding, packing, removal, connection or disconnection of any apparatus, or execute any filling around the apparatus (where the apparatus is laid in a trench) within the standard protection strips which are the strips of land falling the following distances to either side of the medial line of any relevant pipe or apparatus:

(a) 2.25 metres where the diameter of the pipe is less than 150 millimetres, 3 metres where the diameter of the pipe is between 150 and 450 millimetres,

(b) 4.5 metres where the diameter of the pipe is between 450 and 750 millimetres and

(c) 6 metres where the diameter of the pipe exceeds 750 millimetres

unless otherwise agreed in writing with Anglian Water, such agreement not to be unreasonably withheld or delayed, and such provision being brought to the attention of any agent or contractor responsible for carrying out any work on behalf of the undertaker.

(4) The alteration, extension, removal or re-location of any apparatus shall not be implemented until

(a) any requirement for any permits under the Environmental Permitting Regulations 2010 or other legislations and any other associated consents are obtained, and any approval or agreement required from Anglian Water on alternative outfall locations as a result of such re-location are approved, such approvals from Anglian Water not to be unreasonably withheld or delayed; and

(b) the undertaker has made the appropriate application required under the Water Industry Act 1991 together with a plan and section of the works proposed and Anglian Water has agreed all of the contractual documentation required under the Water Industry Act 1991, such

agreement not to be unreasonably withheld or delayed; and such works to be executed only in accordance with the plan, section and description submitted and in accordance with such reasonable requirements as may be made by Anglian Water for the alteration or otherwise for the protection of the apparatus, or for securing access to it.

(5) In the situation, where in exercise of the powers conferred by the Order, the undertaker acquires any interest in any land in which Apparatus is placed and such apparatus is to be relocated, extended, removed or altered in any way, no alteration or extension shall take place until Anglian Water has established to its reasonable satisfaction, contingency arrangements in order to conduct its functions for the duration of the works to relocate, extend, remove or alter the apparatus. Anglian Water must use all reasonable endeavours to establish contingency arrangements in a timely manner.

(6) Regardless of any provision in this Order or anything shown on any plan, the undertaker must not acquire any apparatus otherwise than by agreement, and before extinguishing any existing rights for Anglian Water to use, keep, inspect, renew and maintain its apparatus in the Order land, the undertaker shall, with the agreement of Anglian Water, create a new right to use, keep, inspect, renew and maintain the apparatus that is reasonably convenient for Anglian Water, such agreement not to be unreasonably withheld or delayed, and to be subject to arbitration under article [38] (Arbitration).

(7) If the undertaker is unable to create the new rights referred to in sub-paragraph (6), Anglian Water must, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible, use its reasonable endeavours to obtain the necessary rights.

(8) If in consequence of the exercise of the powers conferred by the Order the access to any apparatus is materially obstructed the undertaker shall provide such alternative means of access to such apparatus as will enable Anglian Water to maintain or use the apparatus no less effectively than was possible before such obstruction, or alternatively such means of access as may be agreed with Anglian Water, acting reasonably.

(9) If in consequence of the exercise of the powers conferred by the Order, previously unmapped sewers, lateral drains or other apparatus are identified by the company, notification of the location of such assets will immediately be given to Anglian Water and afforded the same protection of other Anglian Water assets.

(10) If for any reason or in consequence of the construction of any of the works referred to in paragraphs (4) to (6) and (8) above any damage is caused to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of Anglian Water, or there is any interruption in any service provided, or in the supply of any goods, by Anglian Water, the undertaker shall:

- (a) bear and pay the cost reasonably incurred by Anglian Water in making good any damage or restoring the supply; and
- (b) make reasonable compensation to Anglian Water for any other reasonably necessary expenses, loss, damages, penalty or costs incurred by Anglian Water

by reason or in consequence of any such damage or interruption.

(11) Anglian Water must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise may be made without first consulting the undertaker and considering their representations acting reasonably.

(12) Nothing in sub-paragraph (10) above imposes any liability on the undertaker with respect to—

- (a) any damage or interruption to the extent that it is attributable to the act, neglect or default of Anglian Water, its officer, servants, contractors or agents; and
- (b) any authorised works and/or any other works authorised by this Part of this Schedule carried out by Anglian Water as an assignee, transferee or lessee of the undertaker with the benefit of the Order pursuant to section 156 of the Planning Act 2008 or article 6 (Benefit of order).

(13) Anglian Water must use its reasonable endeavours to mitigate and minimise any claim, costs, expenses, loss, demands and penalties pursuant to sub-paragraph (11). If requested to do so by the undertaker, Anglian Water shall provide an explanation of how the claim has been minimised.

(14) Any difference or dispute arising between the undertaker and Anglian Water under this Schedule must, unless otherwise agreed in writing between the undertaker and Anglian Water, be determined by arbitration in accordance with article 38 (arbitration).

PART 7

For the protection of the Environment Agency and drainage authorities

71. The provisions of this Part have effect for the protection of a drainage authority unless otherwise agreed in writing between the undertaker and the drainage authority.

72. In this Part—

“construction” includes execution, placing, altering, replacing, relaying and removal; and

“construct” and “constructed” must be construed accordingly;

“drainage authority” means—

(a) in relation to an ordinary watercourse, the drainage board concerned within the meaning of section 23 of the Land Drainage Act 1991; and

(b) in relation to a main river or any sea defence work, the Environment Agency;

“drainage work” means any watercourse and includes any land that provides or is expected to provide flood storage capacity for any watercourse and any bank, wall, embankment or other structure, or any appliance, constructed or used for land drainage, flood defence, sea defence or tidal monitoring;

“ordinary watercourse” has the meaning given in the Land Drainage Act 1991;

“plans” includes sections, drawings, specifications and method statements;

“specified work” means so much of any work or operation authorised by this Order as is in, on, under, over or within 16 metres of a drainage work or is otherwise likely to—

(c) affect any drainage work or the volumetric rate of flow of water in or flowing to or from any drainage work;

(d) affect the flow, purity, or quality of water in any watercourse; or

(e) affect the conservation, distribution or use of water resources.

73.—(1) Before beginning to construct any specified work, the undertaker must submit to the drainage authority plans of the specified work and such further particulars available to it as the drainage authority may within 28 days of the submission of the plans reasonably require.

(2) Any such specified work must not be constructed except in accordance with such plans as may be approved in writing by the drainage authority or determined under paragraph 71.

(3) Any approval of the drainage authority required under this paragraph—

(a) must not be unreasonably withheld or delayed;

(b) is deemed to have been given if it is neither given nor refused within 2 months of the submission of the plans for approval (or submission of further particulars if required by the drainage authority under sub-paragraph (1)) or, in the case of a refusal, if it is not accompanied by a statement of the grounds of refusal; and

(c) may be given subject to such reasonable requirements as the drainage authority may make for the protection of any drainage work or, where the drainage authority is the Environment Agency, for the protection of water resources for the prevention of pollution or in the discharge of its environmental duties.

(4) the drainage authority must use its reasonable endeavours to respond to the submission of any plans before the expiration of the period mentioned in sub-paragraph (3)(b).

74. Without limiting paragraph 71, the requirements which the drainage authority may make under that paragraph include conditions requiring the undertaker at its own expense to construct such protective works, whether temporary or permanent, during the construction of the specified work

(including the provision of flood banks, walls or embankments or other new works and the strengthening, repair or renewal of existing banks, walls or embankments) as are reasonably necessary—

- (a) to safeguard any drainage work against damage; or
- (b) to secure that its efficiency for flood defence purposes is not impaired and that the risk of flooding is not otherwise increased, by reason of any specified work.

75.—(1) Subject to sub-paragraph (2), any specified work, and all protective works required by the drainage authority under paragraph 72, must be constructed—

- (a) without unreasonable delay in accordance with the plans approved or deemed to have been approved or settled under this Part; and
- (b) to the reasonable satisfaction of the drainage authority, and an officer of the drainage authority is entitled to watch and inspect the construction of such works.

(2) The undertaker must give to the drainage authority—

- (a) not less than 14 days' notice in writing of its intention to commence construction of any specified work; and
- (b) notice in writing of its completion not later than 7 days after the date on which it is brought into use.

(3) If the drainage authority reasonably requires, the undertaker must construct all or part of the protective works so that they are in place before the construction of the specified work.

(4) If any part of a specified work or any protective work required by the drainage authority is constructed otherwise than in accordance with the requirements of this Part, the drainage authority may by notice in writing require the undertaker at the undertaker's expense to comply with the requirements of this Part or (if the undertaker so elects and the drainage authority in writing consents, such consent not to be unreasonably withheld or delayed) to remove, alter or pull down the work and, where removal is required, to restore the site to its former condition to such extent and within such limits as the drainage authority reasonably requires.

(5) Subject to sub-paragraph (6), if within a reasonable period, being not less than 28 days from the date when a notice under sub-paragraph (4) is served on the undertaker, the undertaker has failed to begin taking steps to comply with the requirements of the notice and subsequently to make reasonably expeditious progress towards their implementation, the drainage authority may execute the works specified in the notice, and any expenditure incurred by it in so doing is recoverable from the undertaker.

(6) In the event of any dispute as to whether sub-paragraph (4) is properly applicable to any work in respect of which notice has been served under that sub-paragraph, or as to the reasonableness of any requirement of such a notice, the drainage authority must not except in emergency exercise the powers conferred by sub-paragraph (4) until the dispute has been finally determined.

76.—(1) Subject to sub-paragraph (5) the undertaker must from the commencement of the construction of any specified work maintain in good repair and condition and free from obstruction any drainage work that is situated within the limits of deviation on land held by the undertaker for the purposes of or in connection with the specified work, whether or not the drainage work is constructed under the powers conferred by this Order or is already in existence.

(2) If any drainage work that the undertaker is liable to maintain is not maintained to the reasonable satisfaction of the drainage authority, the drainage authority may by notice in writing require the undertaker to repair and restore the work, or any part of such work, or (if the undertaker so elects and the drainage authority in writing consents, such consent not to be unreasonably withheld or delayed), to remove the work and restore the site to its former condition, to such extent and within such limits as the drainage authority reasonably requires.

(3) If, within a reasonable period being not less than 28 days beginning with the date on which a notice in respect of any drainage work is served under sub-paragraph (2) on the undertaker, the undertaker has failed to begin taking steps to comply with the reasonable requirements of the notice and has not subsequently made reasonably expeditious progress towards their implementation, the

drainage authority may do what is necessary for such compliance and may recover any expenditure reasonably incurred by it in so doing from the undertaker.

(4) In the event of any dispute as to the reasonableness of any requirement of a notice served under sub-paragraph (2), the drainage authority must not except in a case of emergency exercise the powers conferred by sub-paragraph (3) until the dispute has been finally determined.

(5) This paragraph does not apply to—

- (a) drainage works that are vested in the drainage authority or that the drainage authority or another person is liable to maintain and is not prevented by this Order from so doing; and
- (b) any obstruction of a drainage work for the purpose of a work or operation authorised by this Order and carried out in accordance with the provisions of this Part.

77. If by reason of the construction of any specified work or of the failure of any such work the efficiency of any drainage work for flood defence purposes is impaired, or the drainage work is otherwise damaged, the impairment or damage must be made good by the undertaker to the reasonable satisfaction of the drainage authority and, if the undertaker fails to do so, the drainage authority may make good the impairment or damage and recover from the undertaker the expense reasonably incurred by it in doing so.

78. The undertaker must compensate the drainage authority in respect of all costs, charges and expenses that the drainage authority may reasonably incur, have to pay or may sustain—

- (a) in the examination or approval of plans under this Part;
- (b) in inspecting the construction of any specified work or any protective works required by the drainage authority under this Part; and
- (c) in carrying out of any surveys or tests by the drainage authority that are reasonably required in connection with the construction of the specified work.

79.—(1) Without limiting the other provisions of this Part, the undertaker must compensate the drainage authority in respect of all claims, demands, proceedings, costs, damages, expenses or loss that may be made or taken against, recovered from or incurred by, the drainage authority by reason of—

- (a) any damage to any drainage work so as to impair its efficiency for the purposes of flood defence;
- (b) any raising or lowering of the water table in land adjoining the authorised development or any sewers, drains and watercourses; or
- (c) any flooding or increased flooding of any such land; and
- (d) where the drainage authority is the Environment Agency, inadequate water quality in any watercourse or other surface waters or in any groundwater, that is caused by the construction of any specified work by the undertaker or any act or omission of the undertaker, its contractors, agents or employees whilst engaged on the work.

(2) The drainage authority must give to the undertaker reasonable notice of any such claim or demand, and no settlement or compromise may be made without the agreement of the undertaker which agreement must not be unreasonably withheld or delayed.

80. The fact that any work or thing has been executed or done by the undertaker in accordance with a plan approved or deemed to be approved by the drainage authority, or to its satisfaction, or in accordance with any directions or award of an arbitrator, does not relieve the undertaker from any liability under this Part.

81. Any dispute between the undertaker and the drainage authority under this Part, if the parties agree, must be determined by arbitration under article 38 (arbitration), but otherwise must be determined by the Secretary of State for Environment, Food and Rural Affairs and the Secretary of State for Business, Energy and Industrial Strategy acting jointly on a reference to them by the undertaker or the drainage authority, after notice in writing by one to the other.

PART 8

For the protection of Ørsted Hornsea Project Three (UK) Ltd

82. The provisions of this Part apply for the protection of Orsted unless otherwise agreed in writing between the undertaker and Orsted.

83. In this Part—

“apparatus” means the cables, structures or other infrastructure owned, occupied or maintained by Orsted or its successor in title within the Hornsea 3 Order Land;

“construction” includes execution, placing, altering, replacing, reconstruction, relaying, maintenance, extensions, enlargement and removal; and “construct” and “constructed” must be construed accordingly;

“Crossing Area” means the land within land parcel 21/08 shown on the land plans and described in the book of reference;

“Orsted” means an undertaker with the benefit of all or part of the Hornsea 3 Order for the time being;

“Hornsea 3 Order” means the Hornsea Three Offshore Wind Farm Order 20[];

“Hornsea 3 Order land” means Order land as defined in the Hornsea 3 Order;

“plans” includes sections, drawings, specifications, designs, design data, software, soil reports, calculations, descriptions (including descriptions of methods of construction), staging proposals, programmes and details of the extent, timing and duration of any proposed occupation of the Hornsea Three Order land;

“proposed Hornsea 3 Cable Corridor” means the proposed location for any electrical circuit(s) and construction compound(s) permitted by the Hornsea 3 Order within the Hornsea 3 Order land;

“specified works” means so much of any works or operations authorised by this Order (or authorised by any planning permission intended to operate in conjunction with this Order) as is—

- (a) within the Crossing Area;
- (b) in, on, under, over or within 25 metres of the proposed Hornsea 3 Cable Corridor or any apparatus; or
- (c) may in any way adversely affect any apparatus.

84. The consent of Orsted under this Part is not required where the Hornsea 3 Order has expired without the authorised development having been commenced pursuant to requirement 1 of Schedule 2 to the Hornsea 3 Order.

85. Where conditions are included in any consent granted by Orsted pursuant to this Part, the undertaker must comply with the conditions if it chooses to implement or rely on the consent, unless the conditions are waived or varied in writing by Orsted.

86. The undertaker must not under the powers of this Order—

- (a) acquire, extinguish, suspend, override or interfere with any rights that Orsted has in respect of any apparatus or the proposed Hornsea 3 Cable Corridor;
- (b) acquire the Hornsea 3 Order land or acquire any new rights or impose restrictive covenants or exercise any powers of temporary use over or in relation to the Hornsea 3 Order land without the consent of Orsted, which must not be unreasonably withheld or delayed but which may be made subject to reasonable conditions.

87.—(1) The undertaker must not under the powers of this Order carry out any specified works without the consent of Orsted, which must not be unreasonably withheld or delayed but which may be made subject to reasonable conditions and if Orsted does not respond within 30 days then consent is deemed to be given.

(2) Subject to obtaining consent pursuant to sub-paragraph (1) and before beginning to construct any specified works, the undertaker must submit plans of the specified works to Orsted and must submit such further particulars available to it that Orsted may reasonably require.

(3) Any specified works must be constructed without unreasonable delay in accordance with the plans approved in writing by Orsted.

(4) Any approval of Orsted required under this paragraph may be made subject to such reasonable conditions as may be required for the protection or alteration of any apparatus or the proposed Hornsea 3 Cable Corridor or for securing access to any apparatus or the proposed Hornsea 3 Cable Corridor;

(5) Without limiting sub-paragraph (1), it is not reasonable for Orsted to withhold or delay any consent or approval under this Part in relation to specified works in, on, under, or over the Crossing Area solely on the basis of thermal interaction where the plans of the specified works submitted under sub-paragraph (2) demonstrate that all reasonable steps have been taken to minimise thermal interaction between the specified works and any apparatus or the proposed Hornsea 3 Cable Corridor.

(6) Where Orsted requires any protective works to be carried out either by themselves or by the undertaker (whether of a temporary or permanent nature) such protective works must be carried out to Orsted's reasonable satisfaction.

(7) Nothing in this paragraph precludes the undertaker from submitting at any time or from time to time, but in no case less than 28 days before commencing the execution of any specified works, new plans instead of the plans previously submitted, and the provisions of this paragraph shall apply to and in respect of the new plans.

88.—(1) The undertaker must give to Orsted not less than 28 days' written notice of its intention to commence the construction of the specified works and, not more than 14 days after completion of their construction, must give Orsted written notice of the completion.

(2) The undertaker is not required to comply with paragraph 87 or sub-paragraph (1) in a case of emergency, but in that case it must give to the utility undertaker in question notice as soon as is reasonably practicable and a plan, section and description of those works as soon as reasonable practicable subsequently and must comply with paragraph 87 in so far as is reasonably practicable in the circumstances.

89. The undertaker must at all reasonable times during construction of the specified works allow Orsted and its servants and agents access to the specified works and all reasonable facilities for inspection of the specified works.

90.—(1) After the purpose of any temporary works has been accomplished, the undertaker must with all reasonable dispatch, or after a reasonable period of notice in writing from Orsted requiring the undertaker to do so, remove the temporary works in, on, under, over, or within the Crossing Area.

(2) If the undertaker fails to remove the temporary works within a reasonable period of receipt of a notice pursuant to sub-paragraph (1), Orsted may remove the temporary works and may recover the reasonable costs of doing so from the undertaker.

91. If in consequence of the exercise of the powers conferred by this Order the access to any apparatus is materially obstructed, the undertaker must provide such alternative means of access to such apparatus as will enable Orsted to maintain or use the apparatus no less effectively than was possible before the obstruction.

92. The undertaker must not exercise the powers conferred by this Order to prevent or interfere with the access by Orsted to the proposed Hornsea 3 Cable Corridor.

93. To ensure its compliance with this Part, the undertaker must before carrying out any works or operations pursuant to this Order within the Crossing Area request up-to-date written confirmation from Orsted of the location of any apparatus or the proposed Hornsea 3 Cable Corridor.

94. The undertaker and Orsted must each act in good faith and use reasonable endeavours to co-operate with, and provide assistance to, each other as may be required to give effect to the provisions of this Part.

95. The undertaker must pay to Orsted the reasonable expenses incurred by Orsted in connection with the approval of plans, inspection of any specified works or the alteration or protection of any apparatus or the proposed Hornsea 3 Cable Corridor.

96.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any specified works, any damage is caused to any apparatus or there is any interruption in any service provided, or in the supply of any goods, by Orsted, or Orsted becomes liable to pay any amount to any third party, the undertaker must—

- (a) bear and pay the cost reasonably incurred by Orsted in making good such damage or restoring the service or supply; and
- (b) compensate Orsted for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Orsted, by reason or in consequence of any such damage or interruption or Orsted becoming liable to any third party as aforesaid.

(2) Nothing in sub-paragraph (1) imposes any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of Orsted, its officers, servants, contractors or agents.

(3) Orsted must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise shall be made, unless payment is required in connection with a statutory compensation scheme without first consulting the undertaker and considering its representations.

(4) Orsted must use its reasonable endeavours to mitigate in whole or in part and to minimise any costs, expenses, loss, demands, and penalties to which the indemnity under this paragraph 96 applies. If requested to do so by the undertaker, Orsted shall provide an explanation of how the claim has been minimised. The undertaker shall only be liable under this paragraph 96 for claims reasonably incurred by Orsted.

(5) The fact that any work or thing has been executed or done with the consent of Orsted and in accordance with any conditions or restrictions prescribed by Orsted or in accordance with any plans approved by Orsted or to its satisfaction or in accordance with any directions or award of any arbitrator does not relieve the undertaker from any liability under this Part.

97. Any dispute arising between the undertaker and Orsted under this Part must be determined by arbitration under article 38 (arbitration).

EXPLANATORY NOTE

(This note is not part of the Order)

This Order grants development consent for, and authorises Norfolk Vanguard Limited to construct, operate and maintain a generating station located in the North Sea approximately 47km from the Norfolk coast, together with all necessary and associated development. For the purposes of the development that it authorises Norfolk Vanguard Limited is authorised by the Order compulsorily or by agreement to purchase land and rights in land to use land, as well as to override easements and other rights. The Order also provides a defence in proceedings in respect of statutory nuisance and to discharge water. The Order imposes requirements in connection with the development for which it grants development consent.

The Order also grants deemed marine licences for the marine licensable activities, being the deposit of substances and articles and the carrying out of works, involved in the construction of the generating station and associated development. The deemed marine licences impose conditions in connection with the deposits and works for which they grant consent.

A copy of the plans and book of reference referred to in this Order and certified in accordance with article 37 (certification of plans, etc) of this Order may be inspected free of charge at the offices of North Norfolk District Council, Council Offices, Holt Road, Cromer, NR27 9EN.