



The Planning Inspectorate Yr Arolygiaeth Gynllunio

The Planning Act 2008

Hornsea Three 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

David Prentis BA (Hons) BPI MRTPI (Lead Member of the Panel)

Roger Catchpole BSc (Hons) PhD MCIEEM

David Cliff BA (Hons) MSc MRTPI

Guy Rigby LLB ACGI CEng FICE FCIHT

2 July 2019

This page is intentionally blank

OVERVIEW

File Ref: EN010080

The application, dated 14 May 2018, was made under section 37 of the Planning Act 2008 and was received in full by The Planning Inspectorate on 14 May 2018.

The Applicant is Orsted Hornsea Project Three (UK) Ltd.

The application was accepted for Examination on 8 June 2018.

The examination of the application began on 2 October 2018 and was completed on 2 April 2019.

The Proposed Development comprises

- up to 300 wind turbines;
- up to three offshore accommodation platforms;
- up to twelve offshore transformer substations;
- up to four offshore High Voltage Direct Current (HVDC) converter substations;
- up to six subsea offshore High Voltage Alternating Current (HVAC) booster stations;
- up to four surface offshore HVAC booster stations;
- subsea inter-array electrical circuits;
- a marine connection to shore;
- a foreshore connection;
- an onshore connection to an onshore substation; and
- the connection from there to National Grid's existing Norwich Main substation.

The Proposed Development may use HVAC or HVDC transmission or could use a combination of both technologies in separate electrical systems. It could also include an onshore HVAC booster station.

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 at Appendix E.

REPORT TABLE OF CONTENTS

1.	INTRODUCTION.....	1
1.1.	INTRODUCTION TO THE EXAMINATION	1
1.2.	APPOINTMENT OF THE EXAMINING AUTHORITY	2
1.3.	THE PERSONS INVOLVED IN THE EXAMINATION	2
1.4.	THE EXAMINATION AND PROCEDURAL DECISIONS.....	2
1.5.	ENVIRONMENTAL IMPACT ASSESSMENT	7
1.6.	HABITATS REGULATIONS ASSESSMENT.....	8
1.7.	UNDERTAKINGS, OBLIGATIONS AND AGREEMENTS.....	8
1.8.	OTHER CONSENTS	8
1.9.	STRUCTURE OF THIS REPORT	9
2.	THE PROPOSAL AND THE SITE	11
2.1.	THE APPLICATION AS MADE	11
2.2.	THE APPLICATION AS EXAMINED.....	13
2.3.	RELEVANT PLANNING HISTORY	15
3.	LEGAL AND POLICY CONTEXT	16
3.1.	INTRODUCTION.....	16
3.2.	THE PLANNING ACT 2008.....	16
3.3.	NATIONAL POLICY STATEMENTS	17
3.4.	MARINE AND COASTAL ACCESS ACT 2009	17
3.5.	EUROPEAN LAW AND RELATED UK REGULATIONS	18
3.6.	OTHER LEGAL PROVISIONS	21
3.7.	MADE DEVELOPMENT CONSENT ORDERS	24
3.8.	TRANSBOUNDARY EFFECTS	25
3.9.	THE NATIONAL PLANNING POLICY FRAMEWORK	26
3.10.	LOCAL IMPACT REPORTS.....	26
3.11.	THE DEVELOPMENT PLAN	26
4.	THE PLANNING ISSUES	28
4.1.	MAIN ISSUES IN THE EXAMINATION	28
4.2.	ISSUES ARISING IN WRITTEN AND ORAL SUBMISSIONS.....	29
4.3.	ISSUES ARISING IN LOCAL IMPACT REPORTS.....	29
4.4.	CONFORMITY WITH NATIONAL POLICY STATEMENTS	30
4.5.	CONFORMITY WITH THE MARINE POLICY STATEMENT AND MARINE PLANS ..	32
4.6.	ENVIRONMENTAL IMPACT ASSESSMENT	33
4.7.	HABITATS REGULATIONS ASSESSMENT.....	36
5.	ALTERNATIVES AND DESIGN FLEXIBILITY	37
5.1.	INTRODUCTION.....	37
5.2.	POLICY CONSIDERATIONS	37
5.3.	THE APPLICANT'S APPROACH.....	39
5.4.	CONSIDERATION OF THE APPROACH TO ALTERNATIVES	42
5.5.	TRANSMISSION SYSTEMS - HVAC AND HVDC	43

5.6.	PHASING AND DUCTING	47
5.7.	THE LANDFALL WORKS	50
5.8.	THE HVDC CONVERTER/HVAC SUBSTATION	51
5.9.	OTHER ALTERNATIVES SUGGESTED DURING THE EXAMINATION	52
5.10.	CONCLUSIONS ON ALTERNATIVES AND DESIGN FLEXIBILITY.....	53
6.	OFFSHORE ECOLOGY	55
6.1.	INTRODUCTION.....	55
6.2.	POLICY CONSIDERATIONS	55
6.3.	APPLICANT'S APPROACH	57
6.4.	ISSUES ARISING DURING THE EXAMINATION.....	63
6.5.	CONCLUSIONS	79
7.	NAVIGATION AND OTHER OFFSHORE OPERATIONS.....	81
7.1.	INTRODUCTION.....	81
7.2.	POLICY CONSIDERATIONS	81
7.3.	THE APPLICANT'S APPROACH.....	83
7.4.	EFFECTS ON NAVIGATIONAL SAFETY	87
7.5.	OTHER USERS.....	90
7.6.	ALLISION RISKS TO SPIRIT ENERGY'S ASSETS	91
7.7.	HELICOPTER ACCESS TO SPIRIT ENERGY'S ASSETS	95
7.8.	EFFECT ON FUTURE SPIRIT ENERGY OPERATIONS.....	100
7.9.	ALARP AND SAFETY CONSIDERATIONS.....	101
7.10.	PROPOSED PROTECTIVE PROVISIONS	105
7.11.	CONCLUSIONS	108
8.	COMMERCIAL FISHING	109
8.1.	INTRODUCTION.....	109
8.2.	POLICY CONSIDERATIONS	109
8.3.	APPLICANT'S APPROACH	110
8.4.	ISSUES ARISING DURING THE EXAMINATION.....	111
8.5.	CONCLUSIONS	113
9.	LAND USE AND RECREATION.....	115
9.1.	INTRODUCTION.....	115
9.2.	POLICY CONSIDERATIONS	115
9.3.	APPLICANT'S APPROACH	116
9.4.	ISSUES ARISING DURING THE EXAMINATION.....	118
9.5.	CONCLUSIONS	124
10.	TRANSPORT AND HIGHWAY SAFETY	126
10.1.	INTRODUCTION.....	126
10.2.	POLICY CONSIDERATIONS	126
10.3.	APPLICANT'S APPROACH	127
10.4.	ISSUES ARISING DURING THE EXAMINATION.....	129
10.5.	CONCLUSIONS	138
11.	LIVING CONDITIONS FOR LOCAL RESIDENTS	139

11.1.	INTRODUCTION.....	139
11.2.	POLICY CONSIDERATIONS	139
11.3.	APPLICANT'S APPROACH	142
11.4.	ISSUES ARISING DURING THE EXAMINATION.....	144
11.5.	CONCLUSIONS	152
12.	LANDSCAPE AND VISUAL IMPACTS.....	154
12.1.	INTRODUCTION.....	154
12.2.	POLICY CONSIDERATIONS	154
12.3.	APPLICANT'S APPROACH	156
12.4.	ISSUES ARISING DURING THE EXAMINATION.....	159
12.5.	CONCLUSIONS	167
13.	HISTORIC ENVIRONMENT	169
13.1.	INTRODUCTION.....	169
13.2.	POLICY CONSIDERATIONS	169
13.3.	APPLICANT'S APPROACH	171
13.4.	ISSUES ARISING DURING THE EXAMINATION.....	173
13.5.	CONCLUSIONS	179
14.	ONSHORE ECOLOGY.....	181
14.1.	INTRODUCTION.....	181
14.2.	POLICY CONSIDERATIONS	181
14.3.	APPLICANT'S APPROACH	183
14.4.	ISSUES ARISING DURING THE EXAMINATION.....	187
14.5.	CONCLUSIONS	190
15.	SOCIO-ECONOMIC.....	192
15.1.	INTRODUCTION.....	192
15.2.	POLICY CONSIDERATIONS	192
15.3.	APPLICANT'S APPROACH	193
15.4.	ISSUES ARISING DURING THE EXAMINATION.....	195
15.5.	CONCLUSIONS	200
16.	OTHER MATTERS	201
16.1.	INTRODUCTION.....	201
16.2.	FUNCTIONAL ASPECTS OF DESIGN	201
16.3.	CLIMATE CHANGE ADAPTATION	202
16.4.	FLOOD RISK	203
16.5.	WASTE MANAGEMENT	204
16.6.	WATER ENVIRONMENT	205
16.7.	CONCLUSION	207
17.	HABITATS REGULATIONS ASSESSMENT	208
17.1.	INTRODUCTION.....	208
17.2.	POLICY CONSIDERATIONS	209
17.3.	PROJECT LOCATION	213
17.4.	ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS	214

17.5.	ASSESSMENT OF ADVERSE EFFECTS ON INTEGRITY	219
17.6.	CONSIDERATION OF ALTERNATIVES	252
17.7.	IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST	256
17.8.	COMPENSATORY MEASURES	258
17.9.	HRA CONCLUSIONS	259
18.	CONCLUSION ON THE CASE FOR DEVELOPMENT CONSENT	260
18.1.	INTRODUCTION.....	260
18.2.	ASSESSING THE IMPACTS OF THE PROPOSED DEVELOPMENT	261
18.3.	MARINE CONSERVATION ZONES	267
18.4.	HABITATS REGULATIONS ASSESSMENT.....	268
18.5.	OVERALL CONCLUSIONS.....	269
19.	COMPULSORY ACQUISITION AND RELATED MATTERS.....	271
19.1.	INTRODUCTION.....	271
19.2.	LEGISLATIVE REQUIREMENTS.....	272
19.3.	THE APPLICANT’S REQUEST FOR CA AND TP POWERS.....	274
19.4.	THE PURPOSE AND EXTENT OF THE POWERS THAT ARE SOUGHT	277
19.5.	EXAMINATION OF THE CASE FOR CA AND TP POWERS	282
19.6.	CONCLUSIONS	297
19.7.	OVERALL CONCLUSION IN RESPECT OF CA AND TP	306
20.	DRAFT DEVELOPMENT CONSENT ORDER AND RELATED MATTERS ..	307
20.1.	INTRODUCTION.....	307
20.2.	THE EXAMINATION OF THE DCO.....	307
20.3.	THE DCO AS APPLIED FOR.....	308
20.4.	CHANGES DURING THE EXAMINATION	310
20.5.	DISCUSSION OF OUTSTANDING MATTERS	320
20.6.	OTHER CONSENTS	344
20.7.	NUISANCE	344
20.8.	CONCLUSIONS	344
21.	SUMMARY OF FINDINGS AND CONCLUSIONS	346
21.1.	CONSIDERATION OF FINDINGS AND CONCLUSIONS.....	346
21.2.	RECOMMENDATION.....	348

Appendix A – the Examination events

Appendix B – the Examination library

Appendix C – list of abbreviations

Appendix D – landowners represented by the Land Interest Group

Appendix E - the recommended DCO

Appendix F – the protective provisions plan



**ERRATA SHEET – HORNSEA THREE OFFSHORE WIND FARM - Ref.
EN010080**

**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 2 July 2019**

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

Page No.	Paragraph	Error	Correction
35	4.6.12	Refers to the 2017 EIA Regulations	This should be the 2009 EIA Regulations
68	6.4.33	Typo in second sentence "this is would only"	Delete "is"
106	7.10.4	Typo in third line "lime"	This should be "time"
123	9.4.26	Typo in third sentence "months in a any particular location"	Delete "a"
142	11.3.1	Unnecessary "a" at end of third line	Delete "a"
198	15.4.21	Typo in first sentence "that the either the low impact"	Delete "the" so reads "that either the low impact"
257	17.7.2	Word missing in the first line. "would not adversely any priority habitats"	Insert "affect" between "adversely" and "any"

1. INTRODUCTION

1.1. INTRODUCTION TO THE EXAMINATION

1.1.1. The Application for Hornsea Three Offshore Wind Farm (the Proposed Development) [APP-004] was submitted by Orsted Hornsea Project Three (UK) Ltd (the Applicant) to the Planning Inspectorate on 14 May 2018 under section 31 of the Planning Act 2008 (PA 2008) and accepted for Examination under section 55 of the PA 2008 on 8 June 2018.

1.1.2. The Proposed Development includes the principal development which comprises:

- an offshore wind turbine generating station with a gross electrical output of over 100 megawatts (MW) comprising up to 300 wind turbine generators;
- up to three offshore accommodation platforms; and
- a network of cables between the wind turbine generators

It also includes associated development which comprises:

- up to twelve offshore transformer substations;
- up to four offshore High Voltage Direct Current (HVDC) converter substations;
- up to six subsea offshore High Voltage Alternating Current (HVAC) booster stations;
- up to four surface offshore HVAC booster stations;
- offshore export cables;
- landfall connection works;
- onshore export cables;
- an onshore HVAC booster station;
- an onshore substation; and
- a connection to National Grid's existing Norwich Main substation.

The Proposed Development may use HVAC or HVDC transmission or could use a combination of both technologies in separate electrical systems.

1.1.3. The location of the Proposed Development is shown in the Environmental Statement (ES) [APP-058] and Location Plans, final updated versions of which were received at Deadline 9 [REP9-032]. The site for the onshore works lies within the administrative county of Norfolk and is wholly in England. The site for the offshore works is within the UK territorial sea and UK renewable energy zone.

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 in his decision to accept the Application for Examination in accordance with section 55 of PA2008 [PD-001].

- 1.1.5. On this basis, the Secretary of State agreed with the Applicant's view stated in the application form [APP-004] that the Proposed Development is an NSIP as it would consist of an offshore generating station with a capacity of greater than 100MW, is within section 15(3) of PA2008, and so requires development consent in accordance with section 31 of PA2008. The Proposed Development therefore meets the definition of an NSIP set out in section 14(1)(a) and section 15(3) of PA2008.

1.2. APPOINTMENT OF THE EXAMINING AUTHORITY

- 1.2.1. On 26 July 2018, David Prentis (Lead Member of the Panel), Roger Catchpole, David Cliff, and Guy Rigby were appointed as the Examining Authority (ExA) for the application under s61 and s65 of PA2008 [PD-004].

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 would be affected by compulsory acquisition (CA) and/ or temporary possession (TP) proposals 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 3 October 2018 and concluded on 2 April 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.
- 1.4.3. The Applicant submitted a request to amend the application. This is discussed further in Chapter 2.

The Preliminary Meeting

- 1.4.4. On 4 September 2018 the ExA wrote to all IPs, Statutory Parties and Other Persons [PD-006] under Rule 6 of the Infrastructure Planning (Examination Procedure) Rules 2010 inviting them to the Preliminary Meeting, outlining:
- the arrangements and agenda for the Preliminary Meeting;
 - the draft Examination Timetable;
 - availability of RRs and application documents; and
 - the ExA's procedural decisions.

- 1.4.5. The Preliminary Meeting took place on 2 October 2018 at Blackfriars Hall, The Halls, St Andrew's Plain, Norwich NR3 1AU. An audio recording [EV-001] and a note of the meeting [EV-002] were published on the Planning Inspectorate National Infrastructure website.
- 1.4.6. The ExA's procedural decisions and the Examination Timetable took full account of matters raised at the Preliminary Meeting. They were provided in the Rule 8 Letter [PD-007], dated 9 October 2018.

Key Procedural Decisions

- 1.4.7. 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 our consideration of the planning merits of the Proposed Development. 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.

Site Inspections

- 1.4.8. Site Inspections are held in PA2008 Examinations to ensure that the ExA has an adequate understanding of the physical and spatial effects of the Proposed Development within its site and surroundings.
- 1.4.9. An Unaccompanied Site Inspection (USI) is generally held where the land or features can be viewed from the public domain, unless there are issues such as personal safety. An Accompanied Site Inspection (ASI) is held where there is a need for permission to enter land, where there are safety or other technical considerations and/ or there are requests made to accompany an inspection.
- 1.4.10. We held USIs on 4, 5 and 13 March 2019 observing relevant locations and their surroundings in connection with the proposed onshore cable corridor including the landfall. A note providing a procedural record of each USI, including details of the locations visited, can be found in the Examination Library [EV-036].
- 1.4.11. We held ASIs on 28 January 2019 and 5 March 2019 observing relevant locations and their surroundings in connection with the proposed onshore cable corridor including the landfall. The itinerary for each ASI, including details of the locations visited, can be found in the Examination Library [EV-017 and EV-029a].
- 1.4.12. We have had regard to the information and impressions obtained during the 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:

- where persons affected by CA and/or TP proposals request to be heard at a Compulsory Acquisition Hearing (CAH); and/ or
 - where IPs request to be heard at an Open Floor Hearing (OFH).
 - 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. We held 15 hearings to enable the issues raised by the Application to be thoroughly examined. Issue Specific Hearings (ISH) under section 91 of PA2008 were held at the Mercure Norwich Hotel, 121-131 Boundary Road, Norwich NR3 2BA, a reasonably accessible location in relation to the onshore cable route.
- 1.4.15. The following ISHs were held on the draft Development Consent Order:
- ISH3, 6 December 2018 [EV-014];
 - ISH6, 30 January 2019 [EV-022]; and
 - ISH9, (Part 2), 8 March 2019 [EV-029].
- 1.4.16. The following ISHs were held on other matters:
- ISH1, 4 December 2018 [EV-012] on alternatives, design flexibility, onshore ecology, navigation and other offshore operations;
 - ISH2, 5 December 2018 [EV-013] on offshore ecology;
 - ISH4, 7 December 2018 [EV-015] on transport and highway safety, historic environment, noise and other impacts during construction, land use and recreation, socio-economic, landscape and visual impacts;
 - ISH5, 29 January 2019 [EV-021] on offshore ecology;
 - ISH7, 6 March 2019 [EV-027] on offshore ecology;
 - ISH8, 7 March 2019 [EV-028] on aviation, shipping and effects on oil and gas operations;
 - ISH9 (Part 1), 8 March 2019 [EV-029] on cumulative traffic impacts and related mitigation; and
 - Further ISH, 26 March 2019 [EV-034] for the benefit of additional APs following a change to the application.
- 1.4.17. The following CAH were held at the Mercure Norwich Hotel, 121-131 Boundary Road, Norwich NR3 2BA under s92 of PA2008:
- CAH, 31 January 2019 [EV-023]; and
 - Further CAH, 26 March 2019 [EV-035] relating to the CA of additional land following a change to the Application.
- 1.4.18. All persons affected by CA and/ or TP proposals were provided with an opportunity to be heard. We also used these hearings to examine the Applicant's case for CA and TP in the round.
- 1.4.19. The following Open Floor Hearings (OFH) were held under section 93 of PA2008 so that IPs were provided with an opportunity to be heard on any important and relevant matter that they wished to raise:

- OFH1 at the Mercure Norwich Hotel, 121-131 Boundary Road, Norwich NR3 2BA on the evening of 3 December 2018 [EV-011];
- OFH2 at North Norfolk District Council, Council Chambers, Council Offices, Holt Road, Cromer NR27 9EN on the evening of 28 January 2019 [EV-020a]; and
- OFH3 at the Mercure Norwich Hotel, 121-131 Boundary Road, Norwich NR3 2BA on the evening of 25 March 2019 [EV-033].

Written Processes

- 1.4.20. 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. Document references in this report are enclosed in square brackets [REPx-xxx] 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 we have had full regard to them in our conclusions. We have considered all important and relevant matters raised and key written sources are set out further below.

Relevant Representations

- 1.4.21. A total of 150 RRs were received by the Planning Inspectorate [RR-001 to RR-150]. All those who submitted a RR received the Rule 6 Letter and were able to become involved in the Examination as IPs. We have taken account of RRs and the issues that they raise are considered in the relevant chapters of this report.

Written Representations and Other Examination Documents

- 1.4.22. The Applicant, IPs and Other Persons were provided with opportunities to:
- make Written Representations (WR);
 - respond to written questions issued by the ExA;
 - comment on WRs made the Applicant and other IPs;
 - summarise their oral submissions at hearings;
 - make any written submissions requested or accepted by the ExA; and
 - comment on documents issued for consultation by the ExA including:
 - A Report on Implications for European Sites (RIES) [PD-024] published on 21 February 2019; and
 - The ExA's schedule of changes to the draft Development Consent Order [PD-017] published on 26 February 2019.

- 1.4.23. We have fully considered all WRs and other examination documents. The issues that they raise are discussed in the relevant chapters of this report.

Local Impact Reports

- 1.4.24. 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 that has been invited by and submitted to the ExA under section 60 of PA2008.

1.4.25. LIRs have been received from the following relevant local authorities:

- Norfolk County Council [REP1-061];
- North Norfolk District Council [REP1-062]
- Broadland District Council [REP1-053]; and
- South Norfolk Council [REP1-100].

1.4.26. We have taken account of the LIRs in all relevant chapters of this report.

Statements of Common Ground

1.4.27. 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.

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

- Norfolk County Council [REP9-027];
- North Norfolk District Council [REP9-021];
- South Norfolk Council [REP7-013];
- Broadland District Council [REP10-022];
- Norwich City Council [REP1-225];
- Great Yarmouth Borough Council [REP1-202];
- Natural England [REP8-005 and REP9-022];
- Marine Management Organisation [REP9-023];
- The Wildlife Trust and Norfolk Wildlife Trust [REP9-024];
- Whale and Dolphin Conservation [REP1-219];
- Environment Agency [REP1-203];
- Historic England [REP9-026];
- National Federation of Fishermen's Organisation and VisNed [REP10-046];
- Maritime and Coastguard Agency [REP10-021];
- Trinity House [REP9-025];
- Eastern Inshore Fisheries and Conservation Authority [REP7-016];
- Royal Society for the Protection of Birds [REP9-029];
- Highways England [REP7-015];
- Spirit Energy Netherlands B.V, Spirit Energy North Sea Limited and Spirit Energy Resources Limited [REP1-007]; and
- Norfolk Vanguard Limited and Norfolk Boreas Limited [REP9-028].

1.4.29. We have taken account of the SoCGs in all relevant chapters of this report. We note that the SoCG with the Royal Society for the Protection of Birds [REP9-029] is described as "*Draft*" on the front cover. We believe that to be an error because the revision history notes that this is the final version following discussions and it is signed. We have therefore taken it into account as a completed SoCG.

Written Questions

1.4.30. We asked two rounds of written questions:

- questions issued on 9 October 2018 [PD-008]; and
- questions issued on 19 December 2018 [PD-012].

1.4.31. The following requests for further information under Rule 17 of the Examination Procedure Rules were issued on:

- 26 February 2019 to the Maritime and Coastguard Agency regarding the array Layout Development Principles [PD-016];
- 6 March 2019 to Natural England regarding offshore ecology [PD-019];
- 19 March 2019 to the Applicant regarding offshore ecology, oil and gas operations and transport [PD-020];
- 19 March 2019 to Natural England regarding ornithology [PD-021];
- 19 March 2019 to Norfolk County Council regarding outstanding transport and highway safety issues [PD-022];
- 21 March 2019 to Natural England regarding the designation of the Southern North Sea Special Area of Conservation [PD-025]; and
- 29 March 2019 to the Applicant regarding technical queries on the draft DCO [PD-026].

1.4.32. We have taken account of all responses to our written questions in the relevant chapters of this report.

Requests to Join and Leave the Examination

1.4.33. There was a request made under section 102A of PA2008 by Laura Philpott to become an IP and this was accepted by the ExA [PD-005].

1.4.34. During the Examination, some parties wrote to the ExA to inform it that their issues were settled and their representations were withdrawn. Further details of these parties are given in Chapter 19.

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. On 26 October 2016 the Applicant submitted a Scoping Report to the Secretary of State (SoS) under Regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) in order to request 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 proposed to provide an ES.

1.5.3. On 6 December 2016 the Planning Inspectorate provided a Scoping Opinion. Therefore, in accordance with Regulation 4(2)(a) of the EIA Regulations, the Proposed Development was determined to be EIA development. The application received on 18 May 2018 was accompanied by an ES dated May 2018.

1.5.4. The Applicant has certified that sections 56 and 59 of PA2008 and Regulation 13 of the EIA Regulations have been complied with.

1.5.5. Consideration is given to the adequacy of the ES in Chapter 4.

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 17.

1.7. UNDERTAKINGS, OBLIGATIONS AND AGREEMENTS

1.7.1. No agreements or undertakings under section 106 of the Town and Country Planning Act were put before the Examination.

1.7.2. The Applicant's position in relation to a potential community benefit fund is that it has set up such funds in connection with other projects and may well do so here. However, in response to a written question (Q1.10.5) [PD-008] regarding community benefits, the Applicant states that any community benefit fund would be voluntary and not secured through the DCO. The Applicant does not suggest that the potential for such a fund should be within the scope of the Examination. In these circumstances we have not placed any weight on the possibility of such a fund being created in the future. This matter is discussed in Chapter 15.

1.7.3. Some parties have confirmed that, during the Examination, they have reached private agreements with the Applicant regarding protection of their assets and/ or interests. In respect of offshore operations this is covered further in Chapter 7.

1.8. OTHER CONSENTS

1.8.1. The application form [APP-004] and Consents Management Plan [APP-175] have identified the following consents that the Proposed Development will or may need to obtain in addition to Development Consent under PA2008:

- a decommissioning scheme under the Energy Act 2004;
- European Protected Species Licence(s) under the Conservation of Habitats and Species Regulations 2017;
- F10 - Notification of Construction Project under the Construction (Design and Management) Regulations 2015;
- a safety zone notice under section 95 of the Energy Act 2004;
- Flood Defence Consent under the Environmental Permitting (England and Wales) Regulations 2016;
- Land Drainage Consent under the Water Resources Act 1991;
- a licence under the Protection of Badgers Act 1992;
- Notice of Street Works under the Traffic Management Act 2004;
- Building Regulations approval;
- an Environmental Permit for water discharge or waste operations under the Environmental Permitting (England and Wales) Regulations 2016;

- a permit for the transport of abnormal loads under the Road Vehicles (Authorisation of Special Types)(General) Order 2003/ Road Traffic Regulation Act 1984;
- a temporary traffic regulation order under the Road Traffic Act 1984;
- a licence under section 24 of the Water Resources Act 1991;
- consent under section 23 of the Land Drainage Act 1991; and
- a licence under section 16 of the Wildlife and Countryside Act.

1.8.2. Natural England provided a letter of no impediment [REP10-043] in respect of a mitigation licence for great crested newt as reported in Chapter 14.

1.8.3. We have considered the available information bearing on the consents listed above. Without prejudice to the exercise of discretion by future decision-makers, we can see no apparent impediments to the implementation of the Proposed Development, should the SoS be minded to grant development consent.

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 and the processes used to carry out the Examination and make this report.
- Chapter 2 describes the site and its surrounds, the Proposed Development, and relevant planning history.
- 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 considers alternatives to the Proposed Development and the design flexibility sought by the Applicant.
- Chapter 6 considers offshore ecology.
- Chapter 7 considers navigation and other offshore operations.
- Chapter 8 considers commercial fishing.
- Chapter 9 considers land use and recreation.
- Chapter 10 considers transport and highway safety.
- Chapter 11 considers living conditions for local residents.
- Chapter 12 considers landscape and visual impacts
- Chapter 13 considers the historic environment.
- Chapter 14 considers onshore ecology.
- Chapter 15 considers socio-economic matters.
- Chapter 16 considers other matters, namely functional aspects of design, climate change adaptation, flood risk, waste management and water quality.
- Chapter 17 considers effects on European Sites and Habitats Regulations Assessment.
- Chapter 18 sets out the balance of planning considerations arising from Chapters 4 to 17, in the light of the factual, legal and policy information in Chapters 1 to 3.
- Chapter 19 sets out the ExA's examination of CA and TP proposals.
- Chapter 20 considers the implications of the matters arising from the preceding chapters for the Development Consent Order.

- Chapter 21 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** – landowners represented by the Land Interest Group
- **Appendix E** – the recommended DCO, should the SoS decide that development consent should be granted
- **Appendix F** – the protective provisions plan

2. THE PROPOSAL AND THE SITE

2.1. THE APPLICATION AS MADE

- 2.1.1. The application is described more fully in the Project Description chapter of the ES [APP-058]. In summary, the Proposed Development would create an offshore wind turbine generating station with up to 300 wind turbine generators (WTG). Each WTG could have a rotor diameter of up to 265m and an overall height (to blade tip) of 325m. The minimum clearance between the blade tip and sea level (at Lowest Astronomical Tide) would be 34.97m.
- 2.1.2. The transmission system could use High Voltage Alternating Current (HVAC), High Voltage Direct Current (HVDC) or a combination of both technologies. Whatever transmission system is selected there would be a need for a network of cables between the WTG, up to 12 offshore transformer substations, an offshore export cable leading to the landfall and up to three offshore accommodation platforms. For a HVAC system there would be up to six subsea booster stations and/ or up to four offshore surface booster stations. For a HVDC system there would be up to four surface offshore converter substations. A range of foundation designs for the offshore infrastructure have been assessed. Scour protection, most likely in the form of rock placement, would be required to avoid erosion of the seabed around the foundations.
- 2.1.3. In order to construct the offshore infrastructure, it would be necessary to carry out site preparation works. These would include pre-construction surveys, boulder clearance and sandwave clearance. The ES states that over 1.2 million cubic metres of material could be removed as a result of sandwave clearance. The array cables and the export cables would typically be buried between 1m to 2m below the sea bed. Rock protection would be needed to make the cables secure where ground conditions or obstacles prevent the target burial depth being achieved.
- 2.1.4. The onshore infrastructure would comprise an export cable corridor between the landfall and a connection to the National Grid at Norwich Main substation. If HVAC were selected, then there may be a need for an onshore booster station. Whatever transmission system is selected there would be an onshore substation towards the southern end of the cable corridor. To support the onshore construction works a main construction compound is proposed on a former airfield at Oulton.

The location for the offshore works

- 2.1.5. The array would occupy an area of the North Sea extending to around 696km², 121km north east of the coast of Norfolk and 160km east of the coast of Yorkshire. The export corridor would be 163km in length and 1.5km in width. Parts of the corridor would be within the following Marine Protected Areas:
- Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ);
 - The Wash and North Norfolk Coast Special Area of Conservation (SAC); and

- North Norfolk Sandbanks and Saturn Reef SAC.

2.1.6. Part of the array would be in the Markham's Triangle proposed MCZ. This area had not been designated at the close of the Examination¹.

The location for the onshore works

- 2.1.7. The export cables would be brought ashore on the beach to the west of Weybourne on the North Norfolk coast. The onshore cable corridor would be 55km in length and typically 80m in width. It would pass through the administrative areas of North Norfolk District Council, Broadland District Council and South Norfolk District Council. The cable route would follow a broadly north/ south alignment with numerous deviations to avoid settlements and ecologically sensitive locations. The route would pass to the west of the City of Norwich before turning eastwards to the location of the proposed substation at Swardeston. The grid connection would be made at Norwich Main substation, to the south of the City.
- 2.1.8. The northern section of the cable route would be within the Norfolk Coast Area of Outstanding Natural Beauty. It would cross some major transport routes, including the A149, A148, A1067, A47 and A11. However, much of the cable route would pass through a predominantly rural landscape.
- 2.1.9. The cable route would pass within the following designated statutory nature conservation sites:
- River Wensun SAC;
 - River Wensum Site of Special Scientific Interest (SSSI); and
 - Kelling Heath SSSI.
- 2.1.10. Aldeford Common SSSI is immediately adjacent to the cable route and the following designated sites would be within 0.5km of it:
- North Norfolk Coast SAC/Special Protection Area (SPA)/Ramsar/SSSI;
 - Norfolk Valley Fens SAC;
 - Booton Common SSSI;
 - Weybourne Cliffs SSSI;
 - Edgefield Little Wood SSSI;
 - Marton Marshes Local Nature Reserve (LNR); and
 - Dunston Common LNR.
- 2.1.11. The ES identifies 11 non-statutory designations falling partly within the temporary or permanent land take of the onshore works together with 49 such sites within 1km [APP-075].
- 2.1.12. The cable route would pass within the settings of several listed buildings and other designated heritage assets, as detailed in the ES.

¹ Markham's Triangle MCZ was designated on 31 May 2019 after the close of the Examination

2.2. THE APPLICATION AS EXAMINED

Request for amendments to the application (onshore)

- 2.2.1. The Applicant submitted a request to make amendments to the application at Deadline 4 [REP4-008]. The request included an assessment of any potential changes to the conclusions of the ES and a schedule identifying all those application documents that would be affected by the changes, including the land plans and the Book of Reference. Revisions to the relevant plans and documents were also submitted at Deadline 4. In addition, comparison plans showing the changes in relation to the Order limits were provided [REP4-098].
- 2.2.2. The first change related to a realignment of the cable route around land owned by the John Innes Centre. The Applicant sought to avoid taking the corner of a field being used by a research centre in order to maintain the integrity of scientific studies being undertaken. This change affected plots 27-009, 27-010 (which was removed), 27-010A (a new plot), 27-011 and 27-012.
- 2.2.3. Further changes related to the access point to the proposed onshore HVAC booster station from the B1149. The proposed Order limits were extended, following discussions with Norfolk County Council, to accommodate the movement of abnormal indivisible loads turning into the access and to provide improved visibility splays at the priority junction. There was also a widening of the private access road to facilitate the transport of transformers to the site. These changes affected plots 9-017, 9-025 and 10-004.
- 2.2.4. We noted that the changes at the John Innes Centre would have some different effects, for example in relation to the location of the crossing point at Bawburgh Road, effects on trees and vegetation and potential effects on undesignated archaeological assets. The realigned cable corridor would be around 40m closer to properties on Bawburgh Road. In respect of the access to the proposed HVAC booster station, we noted that the changes would have some different effects, for example in relation to trees and vegetation and potential effects on undesignated archaeological assets. However, we concluded that overall there would be no change in the significance of environmental effects reported in the ES [PD-012a]. The changes were accepted for consideration as part of the application.
- 2.2.5. The request for amendments included a request for the compulsory acquisition of additional land, which was accepted for consideration [PD-013]. We report on compulsory acquisition in Chapter 19.

Use of temporary working areas for microsites cables (offshore)

- 2.2.6. At Deadline 6 the Applicant proposed an amendment to extend a section of the offshore cable corridor into the adjacent temporary working areas to the north and south [REP6-038]. This was in response to concerns raised by Natural England (NE) relating to the feasibility of microsites cables around reef features. The proposal did not require any adjustment

to the Order limits, nor did it require any change to the footprint of cable installation or any other project parameters. It was supported by an assessment of the implications for the ES which concluded that there would be no new significant effects. A revised Offshore Works Plan was submitted at Deadline 9 [REP9-057].

Options left open at application stage

- 2.2.7. The application as submitted included alternative cable routes passing to either the west or the east of Moor Farm at The Moor, near Reepham. The Applicant's position was that either route would be feasible and that discussions with the landowner were continuing. The final Statement of Reasons [REP9-011] states that the western route had been confirmed in line with the preference of the landowner. This resulted in the deletion of plots 16-021A, 16-022A, 16-023A, 16-024A and 16-025A.
- 2.2.8. The application as submitted included alternative access routes from the B1172 Norwich Road to the cable route. The Applicant's position was that it had not been possible to gain access to survey the routes so it could not express a preference. The final Statement of Reasons [REP9-011] states that one route had been selected following discussions with the landowner resulting in the deletion of plots 30-001 and 30-002.

The application at the close of the Examination

- 2.2.9. The Applicant submitted a draft DCO [APP-027] with the application. As described more fully in Chapter 20, this was updated several times during the Examination. The Applicant's final draft was submitted at Deadline 10 [REP10-041].
- 2.2.10. At Deadline 9 the Applicant submitted final versions of:
- Explanatory Memorandum to the DCO [REP9-005];
 - Book of Reference [REP9-008]; and
 - Statement of Reasons [REP9-011].
- 2.2.11. Revised copies of all the plans were also submitted at Deadline 9. A number of other documents were updated by the Applicant throughout the Examination. To assist with navigation of the documents, and to show which documents had been superseded or supplemented, the Applicant submitted a Guide to the Application. The final version was submitted at Deadline 10 [REP10-040].

Effect of changes during the Examination

- 2.2.12. We have been mindful of the need to consider whether changes to the application documents have changed the Proposed Development to a point where it would become a different application. We have therefore considered whether the Secretary of State would have power under section 114 of PA2008 to make a DCO, having regard to the application for development consent.
- 2.2.13. 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 Acceptance². The view expressed by the Government during the passage of the Localism Act was that section 114(1) places the responsibility for making a DCO on the decision-maker and does not limit the terms in which it can be made³.

- 2.2.14. We consider that the changes described above, whether considered individually or collectively, have not resulted in a significant change to the development applied for. It follows that, in our view, the Secretary of State does have the power to make the DCO discussed in Chapter 20 and provided in Appendix E to this report.

2.3. RELEVANT PLANNING HISTORY

- 2.3.1. The Proposed Development would be the third offshore wind farm within the former Hornsea zone. Hornsea Project One and Hornsea Project Two have received development consent and are now under construction [REP1-164]. These projects are located to the west of the proposed array. The layout of the Proposed Development includes a navigation channel to accommodate north/ south shipping movements, enabling vessels to transit between the proposed array and the two schemes under construction. The ES has drawn on environmental data gathered during the consenting processes for Hornsea Project One and Hornsea Project Two and the cumulative assessments for this application have taken them into account.
- 2.3.2. An application for development consent for the Norfolk Vanguard Offshore Wind Farm (Reference EN010079) was the subject of an Examination under PA2008 at the same time as this Examination. The Norfolk Vanguard Examination closed on 10 June 2019. The onshore cable route for that project would cross the cables for the Proposed Development near Reepham. A related proposal, known as Norfolk Boreas, would make use of the same cable route as Norfolk Vanguard. The application for Norfolk Boreas was submitted on 18 June 2019. Numerous references were made to these projects during the Examination, in relation to differing approaches to defining a design envelope, cumulative impacts and mitigation. These matters are discussed further in Chapters 5, 10 and 11.
- 2.3.3. Several parties have referred to a previous planning appeal decision in which an Inspector dismissed a proposal for an anaerobic digestion renewable energy facility at Oulton airfield, the site of the proposed main construction compound⁴. This is discussed further in Chapters 10 and 11.

² Planning Act 2008: Guidance for the examination of applications for development consent, DCLG (2015)

³ Correspondence from Bob Neill MP, Parliamentary Under Secretary of State to Sir Michael Pitt, Chair, Infrastructure Planning Commission, DCLG (28 November 2011).

⁴ Appeal reference APP/K32610/A/14/2212257

3. LEGAL AND POLICY CONTEXT

3.1. INTRODUCTION

- 3.1.1. This chapter sets out the legal and policy context for the Examination which we considered in making our recommendations to the Secretary of State for Business, Energy and Industrial Strategy (SoS). The SoS is the relevant decision-maker under section 14 of Planning Act 2008 (as amended) (PA2008).

3.2. THE PLANNING ACT 2008

- 3.2.1. The application is for a Development Consent Order (DCO) under PA2008. The application is for a Nationally Significant Infrastructure Project (NSIP) because the Proposed Development would be an offshore generating station with a capacity of greater than 100MW. It would therefore be within section 15(3) of PA2008 and so requires development consent in accordance with section 31 of the Act. The Proposed Development therefore meets the definition of an NSIP set out in section 14(1)(a) and section 15(3) of PA2008.

- 3.2.2. This is an application where there are National Policy Statements (NPS) to be taken into account. It therefore falls to be considered under section 104 of PA2008 which sets out the matters the SoS must consider as follows:

- any national policy statement which has effect in relation to development of the description to which the application relates (section 104(2)(a));
- the appropriate marine policy documents, determined in accordance with section 59 of the Marine and Coastal Access Act 2009 (section 104(2)(aa));
- any local impact report submitted to the SoS before the specified deadline (section 104(2)(b));
- any matters prescribed in relation to development of the description to which the application relates (section 104(2)(c)); and
- any other matters which the SoS thinks are both important and relevant to the decision (section 104(2)(d)).

- 3.2.3. Section 104(3) requires the SoS to decide the application in accordance with any relevant NPS, except to the extent that one or more of the exceptions in subsections (4) to (8) applies. The exceptions are that the SoS is satisfied that:

- deciding the application in accordance with any relevant NPS would lead to the United Kingdom being in breach of any of its international obligations (subsection (4));
- deciding the application in accordance with any relevant NPS would lead to the SoS being in breach of any duty imposed on her/ him by or under any enactment (subsection (5));
- deciding the application in accordance with any relevant NPS would be unlawful by virtue of any enactment (subsection (6));

- the adverse impact of the proposed development would outweigh its benefits (subsection (7)); and/ or
- any condition prescribed for deciding an application otherwise than in accordance with a NPS is met (subsection (8)).

3.2.4. Our report sets out our findings and recommendations taking these matters into account and applying the approach set out in section 104.

3.2.5. Section 10(3)(a) requires the SoS to have regard to the desirability of mitigating, and adapting to, climate change in designating an NPS. Climate change is discussed in Chapter 16.

3.3. NATIONAL POLICY STATEMENTS

3.3.1. The National Policy Statements which are relevant in this case are:

- Overarching National Policy Statement for Energy (July 2011) (EN-1);
- National Policy Statement for Renewable Energy Infrastructure (July 2011) (EN-3); and
- National Policy Statement for Electricity Networks Infrastructure (July 2011) (EN-5).

3.3.2. EN-1 sets out the Government's policy for delivery of major energy infrastructure. It is part of a suite of NPSs for the energy sector which are to be read in conjunction with EN-1 where they are relevant. EN-3 sets out additional policy which is specific to renewable energy applications, including offshore wind generating stations exceeding 100MW. EN-5 sets out policy relevant to electricity transmission and distribution systems. It is therefore relevant to the provision of export cables and related infrastructure connecting the Proposed Development to the National Grid.

3.3.3. Together, these NPSs have formed the basis for our Examination. Individual policy requirements and tests arising from them are addressed throughout Chapters 4 to 16 of this Report.

3.4. MARINE AND COASTAL ACCESS ACT 2009

3.4.1. The Marine and Coastal Access Act 2009 (MCAA) introduced the production of marine plans and designation of Marine Conservation Zones (MCZ) in UK waters.

UK Marine Policy Statement

3.4.2. Under section 104 (2)(aa) of PA2008 the SoS must have regard to the appropriate marine policy documents. In this case the appropriate marine policy documents are the Marine Policy Statement (MPS) and the adopted East Inshore and East Offshore Marine Plans (EIEOMP).

3.4.3. The MPS provides the high-level policy context within which marine plans will be developed, implemented and monitored. It is intended to provide consistency in marine planning across the UK marine area, including the territorial seas and offshore area adjacent to the UK. It provides the overarching policy context for our consideration of the offshore works

and the Deemed Marine Licenses (DML) that would be created by the DCO.

East Inshore and East Offshore Marine Plans

- 3.4.4. The EIEOMP were adopted on 2 April 2014. The Proposed Development would be within both the East Inshore and the East Offshore areas. The East Inshore Marine Plan applies to the landfall and the offshore cable route out to 12nm. The East Offshore Marine Plan applies to the remainder of the offshore cable route and the offshore generating station. The plans contain a number of objectives and policies that must be taken into a consideration. These are addressed in Chapters 4, 6, 7 and 8.

Marine Conservation Zones

- 3.4.5. The Proposed Development would affect the Cromer Shoal Chalk Beds MCZ which has been designated under MCAA. Accordingly, the decision of the SoS must comply with the general duty under section 125 to exercise his functions in the manner which he considers best furthers the conservation objectives for the MCZ, or where this is not possible, to exercise his functions in the manner which he considers least hinders the achievement of those objectives. In addition, section 126 sets out the specific duties of public authorities. These matters are discussed in Chapter 6.
- 3.4.6. The Proposed Development would also affect the Markham's Triangle proposed MCZ. At the close of the Examination this had not been designated under MCAA. Consequently, section 125 and section 126 do not apply unless is designated before the application is determined. This eventuality is considered in more detail in Chapter 6.

3.5. EUROPEAN LAW AND RELATED UK REGULATIONS

Leaving the European Union

- 3.5.1. The UK is in the process of negotiating departure from the European Union. The European Union (Withdrawal) Act (2018) provides that, subject to defined exceptions, European law which was extant up to exit day would remain in force and be incorporated into UK law. If these provisions were commenced, the main effect would be that the body of European law that is typically applicable to NSIP casework would remain applicable unless it is specifically amended or repealed by UK legislation. This would include:

- strategic environmental assessment of policies and programmes;
- project environmental impact assessment;
- the protection of defined habitats and species including the Natura 2000 network of sites – Habitats Regulations Assessment; and
- other European environmental protection regimes setting objectives, targets and levels in relation to emissions to the receiving environment, including the Water Framework Directive and the Ambient Air Quality Directive.

- 3.5.2. This report has been drafted on the basis that relevant European Union law will be incorporated into UK law at the point when the SoS decides this application.

The EIA Directive

- 3.5.3. Council Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive) defines the procedure by which information about the environmental effects of a project is collated and taken into account by the relevant decision-making body before consent is granted for a development. It applies to a wide range of defined public and private projects. The Proposed Development falls to be considered under the UK legislation related to 2011/92/EU.

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

- 3.5.4. For reasons explained in Chapter 4, the transitional provisions set out in the 2017 Regulations apply and consequently the 2009 Regulations remain the operative regulations for this application. The Proposed Development falls within Schedule 2, paragraph 3(i) of the Regulations. The location, scale and nature of the Proposed Development may have the potential to give rise to significant effects on the environment and is considered to be EIA development. The DCO application is therefore required to be accompanied by an Environmental Statement (ES) prepared in accordance with the EIA Regulations. The Applicant has provided an ES [APP-055 to APP-171] as part of the submitted application.

The Habitats Directive

- 3.5.5. The Habitats Directive (92/43/EEC) is a European nature conservation policy measure. It provides for a network of protected sites and a system of species protection.
- 3.5.6. The European Union and the UK have obligations to conserve a range of natural habitats and associated flora and fauna under the Bern Convention and the Convention on Biological Diversity. These obligations are met through Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (the Habitats Directive). This requires the identification and designation of Special Areas of Conservation (SAC) for habitats that are listed in Annex I and species that are listed in Annex II. Relevant matters are discussed in Chapter 17.

The Birds Directive

- 3.5.7. The European Union and the UK have obligations for the protection of wild birds and their habitats as agreed under the Ramsar Convention, Bern Convention and Bonn Convention. These obligations, together with more general duties, are met through Directive 2009/147/EC on the conservation of wild birds (the Birds Directive). This requires the

identification and classification of Special Protection Areas (SPA). Relevant matters are considered in Chapter 17.

The Habitats Regulations

- 3.5.8. In England and Wales the Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) consolidated earlier legislation and transposed the obligations of Birds Directive and Habitats Directive into domestic legislation (the Habitats Regulations). Together these sites form a pan-European network of protected areas known as the Natura 2000 (N2K) network. Relevant matters are considered in Chapter 17.

The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2017

- 3.5.9. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2017 transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Council Directive 2009/147/EC on the conservation of wild birds (Birds Directive) into national law. These regulations apply to the UK's offshore marine area which covers waters beyond 12nm, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area.

Ramsar Convention 1971

- 3.5.10. Ramsar sites comprise wetlands of international importance which are listed under the Ramsar Convention which resulted from the Convention on Wetlands of International Importance held in Ramsar, Iran in 1971. The main aim of the convention is the conservation and wise use of all wetlands as a contribution towards achieving global sustainable development goals. Relevant matters are considered in Chapter 17.

The Water Framework Directive

- 3.5.11. Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the Water Framework Directive or WFD) sets objectives to prevent and reduce pollution, improve aquatic ecosystems and mitigate the effects of floods. It provides for the production of River Basin Management Plans for the sustainable management of rivers. The Directive is transposed into law in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. Relevant matters are considered in Chapter 16.

The Air Quality Directive

- 3.5.12. Council Directive 2008/50/EC on ambient air quality and cleaner air for Europe (the Air Quality Directive) requires Member States to assess ambient air quality with respect to sulphur dioxide (SO₂), nitrogen dioxide (NO₂), oxides of nitrogen (NO_x), particulate matter (PM₁₀ and PM_{2.5}), lead, benzene, carbon monoxide and ozone. The Directive aims to protect human health and the environment by avoiding, reducing or preventing harmful concentrations of air pollutants. It sets legally binding concentration-based limit values as well as target values to be achieved for the main air pollutants and establishes control actions where these

are exceeded. It is transposed into UK statute through the Air Quality Standards Regulations 2010 made under the Environment Act 1995.

The UK Air Quality Strategy

- 3.5.13. The UK Air Quality Strategy establishes the UK framework for air quality improvements. The UK Air Quality Strategy establishes a long-term vision for improving air quality in the UK and offers options to reduce the risks 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 where Air Quality Management Plans are prepared by local authorities.
- 3.5.14. The environmental non-governmental organisation ClientEarth has brought various proceedings against the UK Government for breaching the Air Quality Directive. Judgments by the Supreme Court have ordered the Secretary of State for Environment, Food and Rural Affairs to prepare new air quality plans to achieve NO₂ limit value compliance as soon as possible. However, no party to this Examination argued that the outcomes of these proceedings were important in terms of the air quality issues discussed in Chapter 11.

Environmental Permitting Regulations

- 3.5.15. The Environmental Permitting (England and Wales) Regulations 2016 (as amended) implement the EU Directive 2008/1/EC concerning Integrated Pollution Prevention and Control. They define activities that require the operator to obtain an Environmental Permit from the Environment Agency and transpose the requirements of the Directive into UK legislation.

3.6. OTHER LEGAL PROVISIONS

United Nations Environment Programme (UNEP) Convention on Biological Diversity 1992

- 3.6.1. Responsibility for the UK contribution to the Convention on Biological Diversity lies with the Department for Environment, Food and Rural Affairs who promote the integration of biodiversity into policies, projects and programmes within Government and beyond. As required by Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010, the UNEP Convention on Biological Diversity must be taken into account in consideration of the likely impacts of the Proposed Development and of appropriate objectives and mechanisms for mitigation and compensation.

National Parks and Access to the Countryside Act 1949

- 3.6.2. The National Parks and Access to the Countryside Act 1949 provides the framework for the establishment of National Parks and Areas of Outstanding Natural Beauty. It also establishes powers to declare National Nature Reserves and for local authorities to establish Local

Nature Reserves. The Act is relevant to the application because the onshore cable route would pass through an Area of Outstanding Natural Beauty and because of nature conservation sites identified in the ES [APP-075]. Relevant matters are considered in Chapters 12 and 14.

The Wildlife and Countryside Act 1981

- 3.6.3. The Wildlife and Countryside Act 1981 (as amended) protects certain habitats and species in the UK. It provides for nature conservation, countryside protection, National Parks, Public Rights of Way and the notification, confirmation, protection and management of Sites of Special Scientific Interest (SSSI). If a species protected under the Act is likely to be affected by the development, a protected species licence will be required from Natural England. The effects of development on the rights of way network are also relevant. The Act is relevant to the application due to the sites and species identified in the ES [APP-075]. Relevant matters are considered in Chapters 9 and 14.

Natural Environment and Rural Communities Act 2006

- 3.6.4. The Natural Environment and Rural Communities Act 2006 (as amended) makes provision for bodies concerned with the natural environment and rural communities, including 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 purpose of biodiversity. In complying with the biodiversity duty, regard must be had to the UNEP Convention on Biological Diversity. Relevant matters are discussed in Chapter 14.

The Countryside and Rights of Way Act 2000

- 3.6.5. The Countryside and Rights of Way Act 2000 (as amended) includes provisions in respect of Public Rights of Way and access to land. Effects on Public Rights of Way are discussed in Chapter 9.

The Planning (Listed Buildings and Conservation Areas) Act 1990

- 3.6.6. The Planning (Listed Buildings and Conservation Areas) Act empowers the SoS to maintain a list of built structures of historic or architectural importance and sets out the principal statutory provisions that must be considered in the determination of any application affecting listed buildings and conservation areas. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the desirability of preserving any listed buildings or their settings or any features of special architectural or historic interest which they possess. The historic environment is discussed in Chapter 13.

Ancient Monuments and Archaeological Areas Act 1979

- 3.6.7. The Ancient Monuments and Archaeological Areas Act provides for Scheduled Monuments to be protected and for the maintenance of a list of Scheduled Monuments. It also imposes a requirement for Scheduled Monument Consent for any works of demolition, repair, and alteration

that might affect a designated Scheduled Monument. The Act is relevant due to the scheduled monuments identified in the ES [APP-077].

Environmental Protection Act 1990

- 3.6.8. Section 79(1) of the Environmental Protection Act 1990 identifies a number of matters which are considered to be statutory nuisance.

Control of Pollution Act 1974

- 3.6.9. The Control of Pollution Act 1974 provides the main legislation regarding demolition and construction site noise and vibration. If noise complaints are received, a section 60 notice may be issued by the local planning authority with instructions to cease work until specific conditions to reduce noise have been adopted. Section 61 provides a means for applying for prior consent to carry out noise generating activities during construction. Impacts during construction are considered in Chapter 11.

Water Resources Act 1991, Flood and Water Management Act 2010, Water Act 2003 and 2014, Land Drainage Act 1991

- 3.6.10. The above Acts set out the relevant regulatory controls that provide protection to waterbodies and water resources from abstraction pressures, discharge and pollution, and for drainage management related to non-main rivers. The application would have implications for land drainage, flood risk and water quality and further consents may be needed under the above Acts. Relevant matters are considered in Chapter 16.

The UK Biodiversity Action Plan

- 3.6.11. Priority habitats and species are listed in the UK Biodiversity Action Plan. This is of relevance to the application due to the sites and species identified in the ES [APP-062, APP-063, APP-064, APP-065 and APP-075]. Relevant matters are considered in Chapters 6 and 14.

The Public Sector Equality Duty

- 3.6.12. The Equalities Act 2010 established a duty (the 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 SoS in making a decision on the application. It is considered in Chapter 19.

The Climate Change Act 2008 (2050 Target Amendment) Order 2019

- 3.6.13. On 26 June 2019, the Climate Change Act 2008 (2050 Target Amendment) Order 2019 was made (SI 2019 No.1056), coming into force the following day. Article 2 amends the Climate Change Act 2008 by replacing the 80% target with 100%. This occurred after the close of the Examination. Consequently, it has not formed part of our Examination of the application, nor has it had any bearing on our final conclusions. It will be a matter for the Secretary of State to consider in their decision.

Other relevant provisions

3.6.14. Section 1.8 of this Report identified additional consents, beyond PA2008, that would or may be required to implement the Proposed Development. In most cases the relevant statutory provisions have already been covered above. In addition, the following are relevant:

- The Energy Act 2004 in respect of a decommissioning scheme and safety zone notices;
- The Construction (Design and Management) Regulations 2015 in respect of the notification of a construction project;
- The Protection of Badgers Act 1992 in respect of possible need for a licence;
- The Traffic Management Act 2004 in respect of any Notice of Street Works;
- The Building Regulations;
- The Road Vehicles (Authorisation of Special Types) (General) Order 2003/ Road Traffic Regulation Act 1984 in respect of permits for the transport of abnormal loads; and
- The Road Traffic Act 1984 in respect of temporary traffic regulation orders.

3.6.15. The following are also relevant:

- Weeds Act 1959; and
- Wild Mammals (Protection) Act 1996.

3.7. MADE DEVELOPMENT CONSENT ORDERS

3.7.1. We referred to a number of made development consent orders in written questions (Q1.13.5, Q1.13.6 and Q1.13.90) [PD-008]:

- East Anglia Three Offshore Wind Farm Order 2017;
- Dogger Bank Teesside A/ Sofia Offshore Windfarm (formerly Dogger Bank Teesside B⁵);
- Port of Immingham Improvement Development Consent Order 2015; and
- Hornsea Two Offshore Wind Farm Order 2016.

3.7.2. In responding to the first written questions (Q1.13.9, Q1.13.14, Q1.13.16, Q1.13.18, Q1.13.34, Q1.13.40 and Q1.13.53) [PD-008] the Applicant referred to some of the above together with the following made orders:

- Triton Knoll Offshore Wind Farm Order 2013;
- Burbo Bank Extension Offshore Wind Farm Order 2014;
- Walney Extension Offshore Wind Farm Order 2014 (as amended);
- Silvertown Tunnel Order 2018;
- Eggborough Gas Fired Generating Station Order 2018;
- A19/A184 Testo's Junction Alteration Development Consent Order 2018;

⁵ Referred to in our questions as Dogger Bank Teesside A and B

- Wrexham Gas Fired Generating Station Order 2017;
- Dogger Bank Creyke Beck Order 2015;
- National Grid (Richborough Connection Project) Order 2017; and
- North Wales Wind Farms Connection Order 2016.

3.7.3. In responding to our further written questions (Q2.2.7 and Q2.2.44 [PD-012]) the Applicant referred to The Able Marine Energy Park Development Consent Order 2014

3.7.4. The Applicant referred to the National Grid (Hinkley Point C Connection Project) Order 2016 at the Compulsory Acquisition Hearing.

3.7.5. The Marine Management Organisation referred to The Port of Tilbury (Expansion) Order 2019.

3.8. TRANSBOUNDARY EFFECTS

3.8.1. Under Regulation 24 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, the Inspectorate (on behalf of the SoS) has undertaken two screenings. The first screening was undertaken on 12 June 2017 [OD-005]. It was concluded that significant effects on the environment of European Economic Area states were likely. A notice was placed in the London Gazette on 30 June 2017 and the following states were notified:

- Belgium;
- Denmark;
- France;
- The Netherlands;
- Germany;
- Iceland;
- Sweden; and
- Norway.

3.8.2. France, Belgium, Denmark, Norway and the Netherlands responded, requesting to be involved in further consultation in relation to the Proposed Development. None of the other states responded.

3.8.3. Following the acceptance of the application for Examination, the second screening was undertaken on 19 June 2018. Consultation letters were sent to the states which had previously requested further involvement, offering the opportunity for them to register as Interested Parties. No additional states were identified as being likely to have significant effects on their environment. On a precautionary basis, notification letters were re-sent to the states which did not respond to the previous Regulation 24 notification (Germany, Iceland and Sweden).

3.8.4. France responded by noting the receipt of the consultation letter but did not respond further. Sweden confirmed that it did not wish to participate further. No other comments were received during the Examination. None of the states consulted or notified requested to be registered as Interested Parties.

- 3.8.5. Potential transboundary impacts were considered in the ES Transboundary Impacts Screening [APP-099] with relevant matters carried forward to the individual topic chapters of the ES.

3.9. THE NATIONAL PLANNING POLICY FRAMEWORK

- 3.9.1. The National Planning Policy Framework (July 2018) and its accompanying Planning Practice Guidance set out the Government's planning policies for England and how these are expected to be applied, for the purposes of making Development Plans and deciding applications for planning permission under the Town and Country Planning Act 1990 (as amended).
- 3.9.2. Paragraph 5 of the Framework makes clear that it does not contain specific policies for nationally significant infrastructure projects. These are to be determined in accordance with the decision-making framework in PA2008 and relevant national policy statements for major infrastructure, as well as any other matters that are relevant. The National Planning Policy Framework may be one such matter.
- 3.9.3. Whilst the National Planning Policy Framework is a relevant matter, in the main the parties framed their submissions in relation to EN-1 and EN-3.

3.10. LOCAL IMPACT REPORTS

- 3.10.1. Section 104(2) of PA2008 states that in deciding an application for development consent where an NPS has effect the SoS must have regard to any Local Impact Report (LIR) within the meaning of section 60(3) submitted to the SoS before the deadline specified in a notice under section 60(2). Under section 60(2) of PA2008 there is a requirement to give notice in writing to each local authority falling under section 56A inviting them to submit LIRs. This notice was given in the Rule 8 Letter [PD-007] which required LIRs to be submitted by Deadline 1.
- 3.10.2. LIRs were submitted by:
- Norfolk County Council [REP1-061];
 - North Norfolk District Council [REP1-062]
 - Broadland District Council [REP1-053]; and
 - South Norfolk Council [REP1-100].
- 3.10.3. The matters raised in the LIRs are discussed in the relevant chapters of this report.

3.11. THE DEVELOPMENT PLAN

- 3.11.1. EN-1 (para 4.1.5) states that policies contained within Development Plan documents and other Local Development Framework documents may be considered important and relevant in decision making.
- 3.11.2. The onshore cable route and associated onshore development falls within the boundaries of three local authorities: North Norfolk District Council, Broadland District Council and South Norfolk Council.

- 3.11.3. The current main Development Plan documents for each authority are set out below:

North Norfolk District Council (NNDC)

- Core Strategy and Development Control Policies 2008;
- The Proposals Map 2008; and
- Site Allocations plan DPD 2011.

Broadland District Council (BDC)

- Joint Core Strategy DPD 2011 (with 2014 amendments) (covering Broadland District, Norwich City and South Norfolk District);
- Broadland District Development Management DPD 2015;
- Site allocations DPD 2016; and
- Relevant Area Action Plans 2016.

South Norfolk Council (SNC)

- Joint Core Strategy DPD 2011 (with 2014 amendments) (covering Broadland District, Norwich City and South Norfolk District);
- South Norfolk Development Management Policies Document 2015;
- Site Specific Allocations and Policies Document 2015; and
- Relevant Area Action Plans 2015 and 2016.

- 3.11.4. NNDC is currently preparing a new Local Plan which was subject to consultation in May/June 2019. SNC, BDC and Norwich City Council are preparing a new Greater Norwich Local Plan which is understood to be scheduled for adoption in September 2021 [REP1-053].
- 3.11.5. Overall, the LIRs made few references to Development Plan policies. Where an LIR has identified potential conflict with a Development Plan policy this is discussed in the relevant chapter of this report.

4. THE PLANNING ISSUES

4.1. MAIN ISSUES IN THE EXAMINATION

4.1.1. The ExA made an Initial Assessment of the Principal Issues based on the application documents and the Relevant Representations. In accordance with section 88 of the Planning Act 2008 (PA2008) and Rule 5 of the Infrastructure Planning (Examination Procedure) Rules 2010, this was done within 21 days of the day after receipt of the section 58 certificate of compliance with section 56 of PA2008 provided by the Applicant. The assessment was published with the Rule 6 letter on 4 September 2018 [PD-006]. The issues were not in any implied order of importance. They were as follows:

- Alternatives and design flexibility;
- Ecology – offshore;
- Marine processes;
- Ecology – onshore;
- Navigation and other offshore operations;
- Commercial fishing;
- Landscape, seascape and visual impacts;
- Historic environment;
- Land use and recreation;
- Socio-economic;
- Transport and highway safety;
- Living conditions for local residents;
- Content of the DCO; and
- Compulsory acquisition.

4.1.2. The Initial Assessment of Principal Issues was discussed at the Preliminary Meeting [EV-001 and EV-002]. Some participants requested additions to the list of principal issues:

- Surface water and drainage (Norfolk County Council);
- Use of Oulton airfield as the main construction compound (Oulton Parish Council);
- Decommissioning (Oulton Parish Council); and
- The cable landfall works (North Norfolk District Council)

4.1.3. We decided that no changes were needed to the initial assessment, on the basis that all of the specific concerns raised at the Preliminary Meeting could be addressed within the structure set out above. For example, Norfolk County Council's concerns regarding surface water drainage were explored in the context of the content of the DCO.

4.1.4. The Initial Assessment of Principal Issues provided the structure for our written questions and informed our selection of topics for oral hearings. The structure of this Report broadly follows the assessment although we have found it convenient to deal with marine processes as part of offshore ecology rather than in a separate chapter. The order of topics has been amended to reflect relationships between topics.

4.2. ISSUES ARISING IN WRITTEN AND ORAL SUBMISSIONS

- 4.2.1. The key events in the Examination are summarised in Chapter 1 and set out more fully in Appendix A. There were 150 Relevant Representations, 4 Local Impact Reports, 19 Statements of Common Ground and a large number of other written submissions submitted at the 10 deadlines included in the Examination timetable.
- 4.2.2. Broadly speaking, all of the issues raised fell within the Initial Assessment of Principal Issues set out above. However, there were some notable changes of emphasis.
- 4.2.3. In the offshore environment, matters relating to benthic ecology and ornithology were the subject of extensive examination both at hearings and in the high volume of written submissions received. These matters are discussed in Chapters 6 and 17. Potential effects on current and future oil and gas operations were also discussed extensively at hearings and in written submissions. These matters are considered in Chapter 7.
- 4.2.4. In the onshore environment, one of the key issues emerging in the written and oral submissions was the design envelope. Frequently expressed concerns included the potential for a phased implementation of the onshore works and the decision to seek consent for either High Voltage Alternating Current (HVAC) or High Voltage Direct Current (HVDC) transmission technology. These matters are discussed in Chapter 5.
- 4.2.5. Cumulative impacts, particularly in relation to the Norfolk Vanguard NSIP application, were of particular concern to many parties. These matters are discussed in Chapters 10 and 11. The key issues raised included:
- construction traffic movements in the vicinity of the main compound at Oulton;
 - construction traffic movements through the village of Cawston; and
 - implications of construction traffic for noise, vibration, air quality and highway safety.

4.3. ISSUES ARISING IN LOCAL IMPACT REPORTS

- 4.3.1. The principal matters raised in the LIR submitted by Norfolk County Council [REP1-061] relate to:
- in-principle support for the Proposed Development;
 - preference for a HVDC transmission system;
 - grid connection;
 - securing socio-economic benefits;
 - commercial fishing;
 - highways objections to specific accesses;
 - ecology;
 - landscape;
 - public rights of way including the Norfolk Coastal Path;
 - archaeology; and

- surface water drainage.

4.3.2. The principal matters raised in the LIR submitted by North Norfolk District Council [REP1-062] relate to:

- contribution to renewable energy (a significant benefit);
- HVAC would have greater impacts;
- preference for horizontal direct drilling at the landfall;
- ecology;
- landscape and visual impacts;
- land use and recreation;
- traffic including impact on tourism routes;
- noise and vibration; and
- socio-economic impacts, particularly in relation to tourism.

4.3.3. The principal matters raised in the LIR submitted by Broadland District Council [REP1-053] relate to:

- impact of construction traffic at the Oulton compound;
- impact of construction traffic at Cawston;
- Code of Construction Practice; and
- cumulative impacts with Norfolk Vanguard.

4.3.4. The principal matters raised in the LIR submitted by South Norfolk Council [REP1-100] relate to:

- effect on potential development sites;
- heritage assets, including Keswick Hall and parkland;
- landscape and visual impacts;
- preference for HVAC to reduce landscape and heritage impacts;
- lack of information on hedgerows;
- Code of Construction Practice; and
- support for contribution to national/ local economy and diversifying energy supply.

4.3.5. We have had regard to the issues raised in the LIRs throughout the Examination and in the relevant chapters of this Report.

4.4. CONFORMITY WITH NATIONAL POLICY STATEMENTS

4.4.1. The Overarching National Policy Statement for Energy (EN-1) includes the following statements regarding the need for energy projects generally:

- The Government is committed to cut greenhouse gas emissions by at least 80% by 2050, compared to 1990 levels (paragraph 2.2.1).
- This NPS sets out how the energy sector can help deliver the Government's climate change objectives by clearly setting out the need for new low carbon energy infrastructure to contribute to climate change mitigation (paragraph 2.2.11).
- The UK needs all the types of energy infrastructure covered by this NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions (paragraph 3.1.1).

- Applications for development consent should be assessed on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described for each of them in the NPS (paragraph 3.1.3).
- Substantial weight should be given to the contribution which projects would make towards satisfying this need when considering applications for development consent under the Planning Act 2008 (paragraph 3.1.4).

4.4.2. EN-1 goes on to comment on the role of renewable energy generation as part of this broader picture:

- The UK has committed to sourcing 15% of its total energy (across the sectors of transport, electricity and heat) from renewable sources by 2020 and new projects need to continue to come forward urgently to ensure that we meet this target (paragraph 3.4.1).
- Large scale deployment of renewables will help the UK to tackle climate change (paragraph 3.4.2).
- Offshore wind is expected to provide the largest single contribution towards the 2020 renewable energy generation targets (paragraph 3.4.3).
- To hit the 2020 target for renewable energy, and to largely decarbonise the power sector by 2030, it is necessary to bring forward new renewable electricity generating projects as soon as possible - the need for new renewable electricity generation projects is therefore urgent (paragraph 3.4.5).

4.4.3. The National Policy Statement for Renewable Energy Infrastructure (EN-3) does not seek to repeat the material set out in EN-1. The two documents are intended to be read together. EN-3 notes that EN-1 includes assessments of the need for new major renewable energy infrastructure. In the light of this, the decision-maker should act on the basis that the need for infrastructure covered by EN-3 has been demonstrated by EN-1.

4.4.4. It is clear from the above that national policy does not require us to examine in detail the need for the Proposed Development. The scale and the urgency of the need for new energy infrastructure, and the important role of offshore wind in contributing to addressing that need, is demonstrated by EN-1. The Proposed Development would have an estimated generating capacity of 2.4GW. It is therefore of a scale which would make a very significant contribution to the UK supply of renewable energy. It could not be constructed in time to contribute to the 2020 target but could contribute in the following decade. This policy context was reflected in the course of the Examination. No party questioned the significant benefits the Proposed Development would deliver and those benefits were recognised in the LIRs [REP1-061, REP1-062, REP1-100].

4.4.5. Both EN-1 and EN-3 contain policies which seek to guide the assessment of specific topics relevant to the application. Similarly, the National Policy Statement for Electricity Networks Infrastructure (EN-5) contains relevant policy. These matters are discussed in the relevant chapters of this report.

- 4.4.6. EN-1, EN-3 and EN-5 were published in 2011. Nevertheless, the statements they make about the need for energy projects and the role of renewable energy in decarbonising the power sector remain relevant to proposals for offshore wind farms. No party to the Examination suggested that there have been any material changes to national policy in respect of offshore wind projects.
- 4.4.7. We conclude that the Proposed Development would make a substantial contribution to the delivery of renewable energy. To this extent it would support the objectives of EN-1 and EN-3. Accordingly, we attach substantial weight to the contribution it would make towards meeting the national need demonstrated by EN-1.

4.5. CONFORMITY WITH THE MARINE POLICY STATEMENT AND MARINE PLANS

- 4.5.1. The Marine Policy Statement (MPS) notes that a secure, sustainable and affordable supply of energy is of central importance to the economic and social wellbeing of the UK. It goes on to say that the marine environment will make an increasingly major contribution to the provision of the UK's energy supply and distribution. This contribution includes the oil and gas sectors, which supply the major part of our current energy needs, and a growing contribution from renewable energy⁶.
- 4.5.2. The MPS cross-refers to EN-1, stating that decision makers should take account of the national level of need for energy infrastructure it describes. The MPS notes that the UK has some of the best wind resources in the world and that offshore wind will play a growing part in meeting our renewable energy and carbon emission targets and improving energy security⁷.
- 4.5.3. The East Inshore and East Offshore Marine Plans (EIEOMP) include policies relating to offshore wind energy infrastructure. Policy WIND2 states that proposals for offshore wind farms inside Round 3 zones, including relevant supporting projects and infrastructure, should be supported. Figure 15 confirms that the location of the proposed generating station is within a Round 3 zone, so the Proposed Development is supported by this policy. However, the EIEOMP notes that other policies should be considered when applying the support outlined in WIND2. This includes where OG2 is applicable which would take precedence over WIND2. Policy OG2 states that proposals for new oil and gas activity should be supported over proposals for other development.
- 4.5.4. Both the MPS and the EIEOMP address the issue of promoting compatibility and reducing conflict between activities in order to manage the use of space within the marine environment in an efficient and effective manner. Policy GOV2 states that opportunities for co-existence should be maximised wherever possible. The issue of whether or not the

⁶ Marine Policy Statement, paragraph 3.3.1

⁷ Marine Policy Statement, paragraph 3.3.19

application represents appropriate co-existence with oil and gas operations was controversial in this Examination. This matter is reported on in Chapter 7. At this stage of our analysis we note that the Proposed Development gains support from WIND2 but we reach no conclusion on overall compliance with the EIEOMP.

4.6. ENVIRONMENTAL IMPACT ASSESSMENT

Introduction

4.6.1. As recorded in Chapter 1, the application is for EIA development. This section records the documents comprised in the Environmental Statement (ES). It also sets out the environmental management documents which the Applicant proposes would govern the construction and operation of the Proposed Development. These documents, together with the requirements of the DCO and the conditions of the DMLs, are intended to secure the delivery of mitigation within the worst-case parameters assessed in the ES.

4.6.2. This section concludes on the question of whether the submitted ES and EIA process provide an adequate basis for decision-making by the SoS.

The applicable regulations

4.6.3. The EIA Directive is transposed into law for NSIPs in England and Wales by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 2017 EIA Regulations), which came into force on 16 May 2017. Regulation 37 of the 2017 EIA Regulations revokes the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (the 2009 EIA Regulations), subject to transitional provisions for certain applications in Regulation 37(2). This regulation provides that the 2009 Regulations continue to apply in circumstances where the Applicant has requested the Secretary of State to adopt a scoping opinion in respect of the development to which the application relates before the commencement of the 2017 Regulations. In this case a scoping opinion was sought in October 2016, so the transitional provisions apply.

The submitted ES

4.6.4. An ES was submitted with the application documents [APP-055 to APP-172]. Relevant chapters of the ES are discussed in the corresponding chapters of this Report. Schedule 1, Part 1, paragraph 2 of the draft DCO states that “environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order under Article 36 (certification of plans and documents etc) [REP9-003].

4.6.5. The final guide to the Application [REP9-002] lists what the Applicant considers to be the documents that make up the ES and identifies the following documents as superseded:

- APP-089 - onshore crossing schedule [REP3-012]
- APP-091 - layout development principles [REP10-033]
- APP-115 - outline written scheme of investigation [REP6-044]

- APP-159 - transport assessment [REP1-162 and REP5-009]

4.6.6. We note the significant number of additional documents that have been submitted during the course of the Examination and view these as either clarifications or additional analyses submitted either in response to questions we have asked or the views of IPs.

Environmental management documents

4.6.7. A number of environmental management documents were submitted with the application. Several of these were subject to discussion and development during the course of the Examination. Those listed below would be certified documents, as defined in Article 36 of the recommended DCO:

- design objectives and principles;
- the Development Principles;
- outline construction management plan;
- outline construction traffic management plan;
- outline code of construction practice;
- outline ecological management plan;
- outline landscape plan;
- outline onshore written scheme of investigation;
- in principle monitoring plan;
- outline offshore written scheme of investigation;
- outline fisheries co-existence and liaison plan; and
- in principle Hornsea Three Southern North Sea Site of Community Importance Site Integrity Plan.

4.6.8. Where the above plans are described as 'outline' or 'in principle', detailed plans would be submitted for the approval of the appropriate determining body either under Requirements of the DCO or under Conditions of the DMLs. Under Requirement 7 the detailed design proposals for the onshore booster station and substation would have to be substantially in accordance with the design objectives and principles. Under Condition 13 of the DML (Generation Assets – Schedule 11) and Condition 15 of the DML (Transmission Assets – Schedule 12) the design plans for the offshore infrastructure would be prepared and determined in accordance with the Development Principles.

4.6.9. In addition to the environmental management documents listed above, further such documents would be submitted for approval under requirements of the DCO as follows:

- a written scheme setting out the phases of construction of the authorised project (Requirement 6);
- a scheme to deal with the contamination of any land (including groundwater) (Requirement 14);
- a detailed surface water scheme (Requirement 15);
- a noise management plan for Work Nos. 9 and 10 (Requirement 21);
- a skills and employment plan (Requirement 22); and
- an onshore decommissioning plan (Requirement 23).

- 4.6.10. Turning to the offshore environment, the following environmental management documents would be submitted for approval under Conditions 13 and 14, respectively, of the DMLs for the generation assets and the transmission assets (Schedules 11 and 12):
- a construction programme;
 - a construction method statement;
 - a project management plan and monitoring plan;
 - a scour protection management plan;
 - a marine mammal mitigation protocol (in the event that driven, or part-driven pile foundations are proposed to be used);
 - a cable specification and installation plan;
 - an offshore operations and maintenance plan;
 - an aid to navigation management plan;
 - a plan for marine mammal monitoring; and
 - an ornithological monitoring plan.

- 4.6.11. The environmental management documents are discussed further in the relevant chapters of this Report.

An adequate Environmental Impact Assessment process and Environmental Statement

- 4.6.12. We note the concerns raised regarding the standard of evidence in the ES by NE [RR-097], RSPB [RR-113] and MMO [RR-085] but are satisfied that it meets the basic requirements of the 2017 EIA Regulations, as signified by the acceptance of the Application.
- 4.6.13. Specific concerns regarding discrepancies between the parameters as set out in the ES and the DCO were resolved by the Applicant in a document explaining the relationship between the DCO and environmental statement design parameters [AS-003] in response to section 51 advice. Other recurrent issues relating to matters such as baseline characterisations and whether worst case scenarios were realistic have been discussed in the relevant chapters of this report.
- 4.6.14. Given the above and considering all other matters raised, we are satisfied that the ES, together with the other information submitted by the Applicant during the Examination, is adequate and meets the requirements of the EIA Regulations. Full account has been taken of all environmental information in our assessment of the application and our recommendation to the SoS.

Conclusion on the Environmental Impact Assessment and the Environmental Statement

- 4.6.15. We conclude that the Proposed Development is EIA development to which the transitional provisions of the 2017 EIA Regulations apply.
- 4.6.16. Having regard to the EIA process, the ES submitted with the application and the environmental information submitted during the Examination, we conclude that the ES has provided an adequate assessment of the environmental effects of the Proposed Development. In our view the ES is sufficient to describe the Rochdale Envelope for the Proposed

Development and the recommended DCO, together with the environmental management documents secured by it, would be sufficient to secure its delivery within that envelope.

4.7. HABITATS REGULATIONS ASSESSMENT

- 4.7.1. As is recorded in Chapter 1, the application is subject to HRA. This section sets out the documents submitted to support the HRA process for this application.

The Competent Authority

- 4.7.2. The Secretary of State (SoS) is the Competent Authority for the purposes of the Habitats Directive, the Habitats Regulations and the Offshore Habitats Regulations for applications submitted under PA2008⁸.
- 4.7.3. Chapter 17 sets out our findings and conclusions in relation to effects on European sites and is intended to assist the SoS in performing their duty under the Habitats Regulations and the Offshore Habitats Regulations.

Habitats Regulation Assessment Documentation

- 4.7.4. The application was accompanied by a Report to Inform Appropriate Assessment (RIAA) [APP-051, APP-052, APP-053 and APP-054]. The ExA published a Report on the Implications for European Sites (RIES) [PD-024]. The RIES identifies all other relevant documentation. The Applicant's approach to HRA, the matters raised during the Examination and our findings and conclusions are reported on in Chapter 17.

⁸ The Directive and relevant regulations are described more fully in Chapters 3 and 17

5. ALTERNATIVES AND DESIGN FLEXIBILITY

5.1. INTRODUCTION

5.1.1. This chapter reports on the alternatives considered by the Applicant, and those proposed by other parties, and the degree of design flexibility sought by the Applicant in relation to the tests set out in the Overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Renewable Energy Infrastructure (EN-3). Alternatives and design flexibility is identified as a principal issue in our initial assessment [PD-006, Annex B].

5.1.2. This chapter is organised as follows:

- Policy considerations;
- Applicant's approach;
- Alternatives – consideration of general approach;
- Transmission systems – High Voltage Alternating Current (HVAC) and High Voltage Direct current (HVDC);
- Phasing and ducting;
- The landfall works;
- HVDC converter/ HVAC substation;
- Other alternatives suggested during the Examination; and
- Conclusions

5.2. POLICY CONSIDERATIONS

5.2.1. EN-1 does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option. However, it notes that applicants are obliged to include information about the main alternatives they have studied in their ES and that there may be specific legislative requirements, notably under the Habitats Directive, for alternatives to be considered⁹. EN-1 itself identifies circumstances where there is a requirement to consider alternatives:

- development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (paragraph 5.3.7);
- in respect of flood risk, a sequential test should be applied as part of site selection (paragraph 5.7.9); and
- in respect of Areas of Outstanding Natural Beauty, consideration should be given to the scope for developing outside the designated area (paragraph 5.9.10).

5.2.2. EN-1 goes on (at paragraph 4.4.3) to set out principles which should guide decisions about what weight should be given to alternatives. These include:

⁹ EN-1, paragraphs 4.4.1 and 4.4.2

- the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner;
- alternatives not among the main alternatives studied by the Applicant should only be considered to the extent that they are both important and relevant;
- alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant.

5.2.3. EN-1 states that it may not be possible at the time of an application for development consent for all aspects of a proposal to have been settled in precise detail. The Applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case. The ES should set out what the maximum extent of the proposed development may be and assess, on that basis, the effects which the project could have (the Rochdale Envelope). Similar points are made in EN-3¹⁰.

5.2.4. EN-3 notes that, owing to the complex nature of offshore wind farm development, many of the details of a proposed scheme may be unknown at the time of the application¹¹. This may include:

- precise location and configuration of turbines and associated development;
- foundation type;
- turbine tip height;
- cable type and cable route; and
- locations of offshore and/or onshore substations.

5.2.5. Consistent with EN-1, EN-3 notes that some flexibility may be required because wind farm operators are unlikely to know precisely which turbines will be procured for the site until some time after any consent has been granted. Any consent that is granted should be flexible to allow for micro-siting of elements of the proposed wind farm during its construction where requested at the application stage¹².

5.2.6. EN-3 states that an assessment of the effects of installing cables across the intertidal zone should include information about any alternative landfall sites and any alternative cable installation methods that have been considered by the applicant during the design phase and an explanation for the final choices made¹³.

¹⁰ EN-1, paragraphs 4.2.7 and 4.2.8 and EN-3, paragraphs 2.6.43 and 2.6.45

¹¹ EN-3, paragraph 2.6.42

¹² EN-3, paragraphs 2.6.43 and 2.6.44

¹³ EN-3, paragraph 2.6.81

5.3. THE APPLICANT'S APPROACH

Site selection and alternatives considered

- 5.3.1. The Applicant's approach to site selection and consideration of alternatives is set out in Chapter 4 of the ES [APP-059], supported by 4 technical appendices [APP-092, APP-093, APP-094 and APP-095].
- 5.3.2. The general location of the offshore wind farm was initially determined by the identification of Round 3 Zones by The Crown Estate (TCE). SMart Wind Ltd. was awarded the rights to the development of the former Hornsea Zone by TCE in 2009. SMart Wind gained development consent for Hornsea Project One in December 2014. In 2015 the Applicant acquired SMart Wind Ltd and development rights for Hornsea Project Two (which now has development consent), Hornsea Project Three and Hornsea Project Four (which has yet to be taken forward). Subsequently the Applicant and TCE have made project specific Agreements for Lease for each of the 4 Hornsea projects.
- 5.3.3. The Applicant began discussions with National Grid Electricity Transmission Ltd (NGET) regarding 6 potential connections to the national grid. NGET concluded that the preferred connection option, considering technical, cost, environmental and deliverability criteria, was Norwich Main substation. Hornsea Project Three was formally offered a grid connection to that substation which was signed on 24 October 2016.
- 5.3.4. The Applicant then carried out a strategic landfall assessment of approximately 85km of coastline from Kings Lynn to Great Yarmouth [APP-092]. Five landfall search zones were defined by excluding features such as high cliffs, environmental constraints or built up areas. This was then refined to two zones which were assessed further, including consideration of potential offshore cable corridor options [APP-093]. It was established that routeing to either zone would result in interaction with designated sites. However, the level of interaction with designated sites could be reduced through routeing to landfall Zone 2. Following appraisal of both offshore and onshore constraints the Applicant decided to take Zone 2 forward as the preferred landfall zone.
- 5.3.5. The ES describes how search areas for the offshore and onshore infrastructure were identified and subsequently refined, including through consultation with the public [APP-093]. Three potential sites for an onshore HVAC booster station and two sites for an onshore HVDC converter/HVAC substation were identified¹⁴ and were subject to consultation. Based on site assessments and technical constraints, taking account of consultation with statutory stakeholders and the local community, the Applicant concluded that Option C (Little Barningham) was the preferred option for the onshore HVAC booster station.
- 5.3.6. With regard to the two shortlisted substation options, the Applicant decided that Option B provided a greater availability of land for potential

¹⁴ [APP-059], figures 4.11 and 4.16

mitigation. Option A was found to be comparatively constrained by the railway line directly to the east and by the Norwich Main substation to the north. In addition, the Applicant considered that the potential access to Option B was less constrained and would involve less highway works and associated construction disruption. Option B became the preferred option for the substation.

5.3.7. Following submission of the Preliminary Environmental Information Report (PEIR) a number of modifications were made as a result of design refinements, stakeholder feedback and findings from environmental assessments. Some of these required the cable route to fall outside the PEIR corridor so further consultations were carried out. The changes included:

- a reduction in the maximum number of turbines from 342 to 300;
- removal of floating foundations as an option for the turbine foundations;
- refinement of the offshore HVAC booster station due to potential impacts on the North Norfolk Sandbanks and Saturn Reef (NNSSR) Special Area for Conservation (SAC) and potential impacts on shipping and navigation;
- reduction in offshore cable protection within designated sites;
- reduced number of phases in the construction programme and the associated period over which construction could occur; and
- the use of horizontal directional drilling rather than open cut trenching at over seventy points along the onshore cable corridor.

5.3.8. The offshore cable corridor search area was reviewed in relation to the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ) and NNSSR SAC. As requested by stakeholders, two potential alternative offshore routes were considered¹⁵. The Applicant decided to take forward the seaward potential alternative route. Although this would extend the length of the offshore cable corridor, it would reduce the direct impact of cable laying on the NNSSR SAC. The Applicant also decided to take forward the near shore potential alternative route. This would reduce the direct impact of cable laying on the Cromer Shoal Chalk Beds MCZ.

5.3.9. There were also post PEIR changes to the onshore cable route, which are described in the ES [APP-095], including a refined landfall location, a western re-route around Kelling and a re-route around Salle. These changes were designed to reduce impacts on ecologically sensitive sites, residential properties, heritage assets and public rights of way.

Design flexibility

5.3.10. Due to the scale and complexity of the project none of the proposed infrastructure would be designed in any detail until such time as a final investment decision had been taken and contractors had been appointed. Moreover, extensive pre-construction surveys would be required in order

¹⁵ [APP-059], figure 4.21

to inform the design process. These activities would take place after the grant of any development consent.

5.3.11. The ES includes indicative layouts for the wind turbine array. The final design plan would be submitted for the approval of the Marine Management Organisation (MMO) under Condition 13 of the Deemed Marine Licence (DML) (generation assets) (Schedule 11 of the recommended DCO). This would have to be in accordance with the Development Principles [REP10-033]. The following design parameters for the array would be controlled by Requirement 3 of the recommended DCO:

- Total number of wind turbine generators;
- Total rotor swept area;
- Maximum height to tip of vertical blade;
- Maximum rotor diameter;
- Minimum clearance between the tip of the rotor blade and sea level;
- Foundation types for wind turbine generators;
- Pile diameters for piled foundation types; and
- Seabed footprint area for wind turbine foundations.

5.3.12. In a similar way, design plans for other elements of the offshore infrastructure including cable laying, substations, booster stations (if required) and accommodation platforms would be approved under conditions of the DMLs. The design parameters for the offshore infrastructure (including foundation types and seabed footprint areas) would be controlled under Requirement 3 and conditions of the DMLs. The general width of the offshore export cable corridor would be 1.5km, in order to allow for micro-siting around features of ecological and/or heritage importance on the sea bed.

5.3.13. The detailed designs for the onshore HVAC booster station and the onshore HVDC converter/HVAC substation would be subject to approval by the relevant planning authority under Requirement 7. These would need to be within the limits of the onshore limits of deviation plan and substantially in accordance with the design objectives and principles [REP4-026]. The onshore cable corridor would typically be around 80m in width.

5.3.14. The Proposed Development may use HVAC or HVDC transmission or could use a combination of both technologies in separate electrical systems. It may be developed in a single phase or in a staged construction process with up to two main phases.

The Rochdale Envelope

5.3.15. Throughout the ES the worst-case scenario is defined in terms of the potential effect being considered. For example, if the effect being considered is loss of seabed habitat then the foundation type with the greatest seabed footprint would represent the worst-case scenario. However, if the effect being considered is noise in relation to marine mammals, then a foundation type involving piling would be the worst-

case scenario. The worst-case scenarios assumed for the purposes of the assessments are set out in each chapter of the ES.

5.4. CONSIDERATION OF THE APPROACH TO ALTERNATIVES

Connection to the national grid

- 5.4.1. The ES describes the process whereby NGET offered the Applicant a grid connection at Norwich Main substation [APP-059]. A Relevant Representation [RR-106] argued that if the Proposed Development were to be connected to the national grid at Necton, where it is proposed that Norfolk Vanguard would be connected, with Norfolk Vanguard connecting at Norwich Main, this would avoid the need for the cables to cross at Reepham and would save 22km of cable route. A representation [REP4-141] argues that the allocation of connection points for competing offshore projects is neither co-ordinated nor adequate for the future development of offshore wind farms. Options have not been explored or discussed sufficiently during public consultation.
- 5.4.2. In answer to our question Q1.1.11 [PD-008], NGET stated that an assessment was carried out of the connection options set out in the ES. The assessment looked at technical, commercial, regulatory, environmental, planning and deliverability aspects. Necton was discounted because, when the assessment was made, it had already been contracted as the connection point for a total of approximately 5.3GW. Connecting the Proposed Development to Necton would have overloaded the current capacity [REP1-070]. In answer to our question Q1.1.12, NGET confirmed that there was no question of Norfolk Vanguard and the Proposed Development being considered on a comparative basis because the Applicant applied after Norfolk Vanguard [REP-170].
- 5.4.3. The answers to these questions confirm the position set out in the ES which was that, by the time the Applicant's proposed grid connection was considered by NGET, Necton was no longer an option. It appears to us that the Applicant engaged with NGET, as it was bound to do, and accepted the connection point that it was offered. This effectively fixed one end of the cable corridor. The Applicant's approach to site selection was therefore reasonable in this respect. The alternative suggested in the Relevant Representation does not appear to be achievable, so we have not considered it further. Whilst we understand the concerns expressed regarding the transparency of the process for allocating grid connection points, we do not consider that matter to be within the scope of our Examination.

Applicant's general approach

- 5.4.4. The process of identifying the export cable route and the locations for the onshore infrastructure is set out in the ES [APP-059]. The two ends of the route were effectively defined by the location of the former Hornsea Zone and the grid connection. The process for linking the two has followed a logical sequence, starting with the identification of the landfall search zones. Information about alternative landfall sites has been

provided, in accordance with EN-3. The Applicant has sought to follow an iterative process of refining route options, giving clear reasons for the decisions that have been made. At each stage the Applicant has sought to avoid or minimise incursions into environmentally sensitive areas.

- 5.4.5. The ES demonstrates that, in refining the design, the Applicant has responded to stakeholder feedback, for example in relation to the offshore cable corridor re-routes and the decision to exclude floating foundations from the design envelope.
- 5.4.6. The Applicant's general approach to these matters was not challenged during the Examination. The Statement of Common Ground (SoCG) with Broadland District Council (BDC) records agreement that the process of route refinement has identified an appropriate route [REP10-022]. The SoCG with North Norfolk District Council (NNDC) records agreement on the selection of Zone 2 for the landfall. Notwithstanding its preference for HVDC, (which would avoid the need for a booster station altogether), NNDC has worked with the Applicant to find the least harmful location for the booster station [REP9-021].
- 5.4.7. We are satisfied that the ES has included information about the main alternatives studied. We conclude that there has been an iterative design process which has sought to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives, in accordance with EN-1. Insofar as EN-1 refers to alternatives in the context of Areas of Outstanding Natural Beauty and flood risk, these matters are discussed in Chapters 12 and 16.

5.5. TRANSMISSION SYSTEMS - HVAC AND HVDC

- 5.5.1. The Applicant is seeking a development consent that would leave open the choice of transmission system. Many parties express a preference for HVDC and some question whether this degree of design flexibility would be consistent with EN-3. The Local Impact Reports (LIR) for Norfolk County Council (NCC) [REP1-061] and NNDC [REP1-062] express a preference for HVDC, arguing that HVAC would have greater impacts in terms of the possible need for an onshore booster station, greater land-take and a longer construction period.
- 5.5.2. The Relevant Representation for CPRE Norfolk argues that the use of HVAC as the worst-case scenario in the PEIR documents obscures the additional impacts that HVAC would have in comparison with HVDC [RR-037]. CPRE Norfolk go on to suggest that inclusion of HVAC in the design envelope is not consistent with PINS Advice Note 9 on the Rochdale Envelope. CPRE Norfolk considers that, in the EIA process, it is not in the public interest to assess impacts of the worst-case scenario when in all cases, (except connection to the national grid), this is in effect HVAC. The assessments should make clear that HVDC would provide more mitigation with less land take and a shorter construction period [REP7-081].

- 5.5.3. The National Farmers Union and Land Interest Group (NFU/LIG) make representations on behalf of 53 landowners [for example RR-096] to the effect that the use of HVDC would greatly reduce the impact on land operations and farm businesses as the width of the area required would be less and it is likely that far fewer link boxes would be required. Link boxes are of concern to NFU/LIG because they may interfere with the use of farm machinery. Several Relevant Representations argue that HVDC would avoid the need for an onshore booster station [for example RR-026, RR-069 and RR-142]. NFU/LIG and N2RS (No to Relay Stations) [RR-026] (and others) highlight that Norfolk Vanguard and Norfolk Boreas have committed to HVDC and ask why this Applicant could not do the same.
- 5.5.4. However, not all parties prefer HVDC. South Norfolk Council (SNC) expresses a preference for HVAC in its LIR [REP1-100], a position it maintained throughout the Examination. This is on the basis that HVDC would require a substation of up to 25m in height, compared to 15m for HVAC. SNC is concerned about impacts on the landscape and on the setting of the Grade II listed Keswick Hall. Poringland Parish Council makes similar comments [RR-029].
- 5.5.5. In response to our Q1.1.7 [PD-008] the Applicant submitted a Transmission System Briefing Note [REP1-164]. The note states that connection of offshore wind farms via HVAC transmission has been commonplace since the development of the first large scale offshore windfarms. Long distance HVAC systems require reactive compensation (booster stations) which may be located onshore, offshore or in a combination of these options. HVDC technology may be appropriate in some circumstances for bulk power transfer over long distances. For example, HVDC is typically used for electricity interconnectors between different countries.
- 5.5.6. Table 2 [REP1-164] demonstrates that all UK offshore wind farms that are currently operational or under construction are using HVAC transmission technology. Whilst Dogger Bank Crekye Beck A and B, Dogger Bank Teesside A, and Sofia Offshore Wind Farm have been consented with HVDC they are not yet under construction. East Anglia Three was consented with HVDC but subsequently sought an amendment to enable use of HVAC. The Applicant points out that HVAC is a mature technology. It has been developed over many years and there are many suppliers for the system components. In contrast, the Applicant considers that HVDC is an emerging technology. There are just two major suppliers and there is a longer lead-in time between a procurement decision and delivery.
- 5.5.7. Nevertheless, the Applicant's position is that it does not have a bias for HVAC or HVDC. It is in discussions with potential suppliers to determine the most suitable transmission system. In order to continue to deliver reductions in the price of offshore wind energy the Applicant requires flexibility in the choice of transmission technology to encourage competition within the supply chain [REP1-164]. In answer to our questions at Issue Specific Hearing (ISH) 1, the Applicant confirmed that,

in a two phase scenario, the choice of HVAC or HVDC for phase 1 would not pre-determine any decisions in respect of phase 2 [REP3-003].

- 5.5.8. In response to our Q1.14.17 the Applicant set out the consequences of selecting HVAC or HVDC [REP1-164]. In the offshore environment, the 1.5km width of the cable corridor would not be affected. Offshore, the ES assessments are typically derived on a per cable circuit basis. As the maximum number of cables is 6 for HVAC and 4 for HVDC each worst-case assessment could be scaled by 2/3 for an HVDC scenario. In the onshore environment the permanent corridor width would be 60m for HVAC and 40m for HVDC. The temporary corridor width would be 80m for HVAC and 68m for HVDC, resulting in a temporary corridor area of 4,300,000m² for HVAC and 3,700,000m² for HVDC. Following discussion at the Compulsory Acquisition Hearing, the Applicant submitted a Clarification Note on Onshore Cable Widths [REP6-013] which amended this information, stating that the minimum corridor width for HVDC would be 60m.
- 5.5.9. Design flexibility in respect of the transmission system was explored further at ISH1. In response to our questions about lead-in times, the Applicant stated that HVDC is a complex system and the design expertise lies with manufacturers. It is necessary for the design of the transmission system to be completed before the design of offshore structures can commence. Consequently, it can take 4 to 5 years from design to delivery for a HVDC transmission system. In comparison, a HVAC transmission system can be designed and delivered in approximately 3 years as there is a greater understanding of the individual components [REP3-003].
- 5.5.10. At ISH1 we asked the Applicant about the comparison with Norfolk Vanguard, which has committed to HVDC. The Applicant was not aware of the precise reasons for that decision but assumed there may be environmental or technical factors influencing it. Also, Norfolk Vanguard may have a less cautious approach to risk. The Applicant commented that it is a leading offshore wind farm developer and has considerable experience to draw on [REP3-003]. The point was made that Norfolk Vanguard is not the only comparator and that all the projects listed in Table 2 [REP1-164] should be born in mind.
- 5.5.11. NCC and NNDC maintained a preference for HVDC and SNC maintained a preference for HVAC. However, in answer to our questions, none of the Councils suggested that the SoS should not grant an Order covering both options. Natural England supported the flexibility of applying for both options whilst advising that HVDC would be preferable on environmental grounds [EV-012].
- 5.5.12. At ISH1 NNDC argued that the design flexibility sought by the Applicant was essentially for the purposes of commercial flexibility. It was suggested that this went beyond the circumstances envisaged in EN-3 where design details were simply unknown at the time of the application. At ISH3 NNDC suggested wording for a requirement which would in effect prioritise HVDC over HVAC, with the latter only permissible if there were

"clear and compelling technological reasons" why HVDC could not be used [REP3-103].

- 5.5.13. Our Q2.1.11 [PD-012] asked whether it would be reasonable to impose (through a Requirement) a second tier of in-principle decision making in relation to a major element of the Proposed Development if the SoS finds that the degree of design flexibility sought by the Applicant is justified. In response, NNDC accepted that this would not be appropriate [REP4-134]. NCC and the Applicant took a similar view [REP4-114 and REP4-012]. The Applicant suggested that, if thought to be necessary, Requirement 7 (detailed design approval onshore) could be amended to require the undertaker to confirm its choice of transmission system and justification for that choice. To enable the SoS to consider this option possible drafting has been included in the Applicant's preferred DCO [REP10-041].
- 5.5.14. The final SoCGs with NCC [REP9-027] and NNDC [REP9-021] reflect acceptance of the design flexibility sought, albeit with disappointment (on behalf of NNDC) that the Applicant has not committed to HVDC. BDC also maintains a preference for HVDC [REP10-022] and SNC maintains a preference for HVAC [REP7-013].

Conclusions on HVAC and HVDC

- 5.5.15. During the course of the Examination we have been provided with information [REP1-164] that enables us to better understand the relative impacts of HVAC and HVDC, particularly in relation to the amount of land that would be needed for the onshore cable corridor.
- 5.5.16. Although many parties express a strong preference for HVDC, by the end of the Examination the Local Authorities and Natural England had accepted the principle of an Order covering both options. EN-1 and EN-3 address the need for design flexibility when considering energy projects. Whilst the example given in EN-3 is the procurement of wind turbines we see no reason in principle why the procurement of a transmission system should be viewed differently.
- 5.5.17. We agree with the Applicant that there will be many factors affecting the ultimate choice of transmission system, not least potential advances in technology and developments in the supply chain as more offshore wind farms come on stream. Those factors cannot all be known now and ruling out a transmission technology at this stage could place a significant constraint on the project. In our view this goes beyond mere commercial preference in that it relates to the deliverability of a renewable energy project, the need for which has been demonstrated in EN-1.
- 5.5.18. It is understandable that many parties are concerned about the contrasting approach of Norfolk Vanguard, which has committed to HVDC. However, we accept the Applicant's evidence that Norfolk Vanguard is not the only relevant comparator. Looking at UK offshore wind farms as a whole, there is not yet an example of a HVDC connector in operation or under construction. We consider that the Applicant is entitled to reach its own view on the risks to delivery of the Proposed Development.

- 5.5.19. The Applicant has explained its reasons for seeking design flexibility in respect of the transmission system. It has set out the maximum extent of the proposed development and carried out the assessment of impacts on that basis. Our conclusions on those assessments are set out in the relevant chapters of this report. At this stage we conclude that the general approach is in accordance with EN-1 and EN-3. We consider that the Applicant has justified the approach it is taking to this matter. For the same reasons, we consider that the Applicant's approach is consistent with Advice Note 9 - Using the Rochdale Envelope.
- 5.5.20. If the Secretary of State (SoS) agrees that the extent of design flexibility proposed is justified then, in our view, it would not be appropriate to limit that flexibility at a later stage by way of a Requirement. That would derogate unacceptably from the benefit of any DCO that the SoS sees fit to grant.
- 5.5.21. There would however be a legitimate public interest in understanding why the undertaker had selected HVAC or HVDC. The Applicant does not consider it is necessary to make specific provision for this in a requirement. Nevertheless, the Applicant has provided drafting for the SoS to consider. The following could be added to Requirement 7:
- (4) The connection works in either Work No.9 or Work No. 10 shall not commence until explanation of the choice of HVDC or HVAC for that phase has been provided in writing to the relevant planning authority, either before, or at the same time as, the details referred to in paragraph (1)*
- 5.5.22. The choice of transmission system would have important consequences in terms of the amount of land required and the need for, and scale of, onshore infrastructure. We therefore consider that it would be appropriate for this explanation to be communicated in this way and we recommend that this drafting is included.
- 5.5.23. In response to our question (Q2.1.11) [PD-012] North Norfolk District Council [REP4-134] set out its view that:
- NNDC consider it incumbent on the ExA to set out its view on the transmission preference with any final DCO decision.*
- 5.5.24. However, we have concluded that the approach that the Applicant has taken to design flexibility is justified and we are satisfied that all relevant impacts have been assessed on the worst-case scenario. Consequently, we do not think it is necessary for us to express a preference on this matter because any such preference would not inform our recommendation to the SoS.

5.6. PHASING AND DUCTING

- 5.6.1. The ES states that the maximum number of construction phases would be two and that there may be a gap in construction of up to 3 years. This could be due to constraints in the supply chain or the timing of auctions for the Government's Contract for Difference (CfD) process [APP-058].

- 5.6.2. The Relevant Representations from NFU/LIG [RR-096 for example] draw attention to the potential effects of phasing on the overall construction period. It is suggested that reference to the CfD process calls into question the availability of funding for any second phase. NFU/LIG would like to see a commitment to laying the onshore cables in ducts. They suggest that laying ducting for phase 2 during phase 1 would minimise excavation and disruption. Other Relevant Representations express concern about a phased implementation leading to extended construction impacts, including Wood Dalling Parish Council, Plumstead Parish Council and Councillor Georgina Perry-Warne [RR-015, RR-031 and RR-069].
- 5.6.3. In response to our Q1.1.6 [PD-008] the Applicant states that there may be a gap in construction because of a potential cap on the amount of generating capacity awarded in any one year through the CfD process. In response to our Q1.1.10 the Applicant commits to laying all onshore cables in ducts. The ducting for phase 2 would be laid at the same time as phase 1 if there were a CfD or alternative funding structure in place at that time. [REP1-122].
- 5.6.4. At ISH1 we asked about the interrelationship between the CfD process and the timeline for delivery of the Proposed Development. The Applicant stated that it would be ready to submit a bid in the 2021 CfD auction round. This would enable construction to start in 2023, although it was possible that some elements could start in 2022. The Applicant's success in future CfD rounds would depend on the capacity cap available and competition from other developers at that time. At present the cap is anticipated to be 2GW per delivery year from 2021 [REP3-003].
- 5.6.5. The Applicant explained that CfD is not the only factor driving the approach to phasing, nor is it the only potential means of funding. Whilst alternative funding is relatively new for an offshore windfarm of this scale, it would be possible through a power purchase agreement. Alternatively, the Applicant may decide to fund the Proposed Development internally. (Funding is discussed further in Chapter 19). The Applicant reiterated that supply chain considerations could also affect delivery. There are currently two main turbine suppliers and therefore limitations on the quantity of turbines that can be produced for each offshore wind farm project. Constraints on cable manufacture and installation vessels may also limit how and when projects can be taken forward [REP3-003].
- 5.6.6. At ISH1, NFU/LIG, NNDC and NE supported pre-ducting for phase 2 and sought to understand why the ability to pre-duct would be affected by the availability of funding. NFU/LIG stated that pre-ducting would enable land to be brought back into agricultural use sooner which would be beneficial for soil re-instatement. NFU/LIG drew attention to Norfolk Vanguard's proposal to lay ducting for the Norfolk Boreas project [EV-012].
- 5.6.7. We asked whether ducts could be installed that would be suitable for a range of possible specifications. In response, the Applicant explained that it would not be possible to optimise the scale of phase 2 or to predict the

transmission technology until such time as funding had been identified. Whilst a number of assumptions could be made, it would be necessary to build in a degree of contingency which could ultimately limit voltage. Moreover, any pre-ducting could be over-engineered. This would result in excessive costs which could not be passed on the eventual Offshore Transmission Owner [REP3-003].

5.6.8. The ES has assessed two construction phases with a gap of up to 3 years as a worst-case scenario. For example, the assessment of construction traffic assumes that the haul road would be removed and re-instated between phases.

5.6.9. The effects of uncertainty on landowners arising from the approach to phasing, and the means of mitigating such effects, are discussed in Chapter 19.

Conclusions on phasing and ducting

5.6.10. The Proposed Development would have an estimated generating capacity of 2.4GW. Whilst alternative sources of funding are potentially available, the probability is that the CfD process will impact on the delivery timetable. As demonstrated in Table 2 [REP1-164], there is a significant amount of consented capacity which may come forward in a similar time frame. There are also current applications for development consent for further offshore wind farms which may well bid in CfD auctions.

5.6.11. Clearly there can be no certainty as to the outcome of that process. However, given the anticipated cap of 2GW per delivery year, a scenario whereby the Proposed Development achieves CfD funding on a phased basis appears to us to be realistic. Potential supply chain restrictions add further weight to this conclusion. We therefore conclude that the ability to implement the Proposed Development on a phased basis is justified on the basis that it would improve the prospects for delivery of the NSIP.

5.6.12. We note that the approach to phasing would have implications for some of the effects assessed in the ES, for example in relation to effects on agricultural operations and the need to remove and re-instate the haul road. Phased implementation has been considered as a worst-case scenario where appropriate and the effects assessed accordingly.

5.6.13. The Applicant has committed to laying all the onshore cables in ducts, which is welcomed by landowners and other parties. The commitment to pre-ducting phase 2 is conditional upon a final investment decision having been taken for the whole project. We acknowledge that pre-ducting phase 2 would be beneficial in terms of limiting the time land would be taken out of agricultural production. However, for the reasons discussed in the previous section, the design and specification of a transmission system for phase 2 would not have taken place in the absence of a final investment decision. In those circumstances we accept that pre-ducting phase 2 would result in an unacceptable risk of constraining the effectiveness of the NSIP as a whole.

5.7. THE LANDFALL WORKS

- 5.7.1. EN-3 states that an assessment of the effects of installing cables across the intertidal zone should include information about any alternative landfall sites and any alternative cable installation methods that have been considered¹⁶. The approach to alternative landfall sites has been described above and we have concluded that it accords with EN-3. The design flexibility sought by the Applicant would leave open the selection of cable installation methods at the landfall. Both horizontal directional drilling (HDD) and open cut techniques have been considered.
- 5.7.2. NNDC's Relevant Representation expresses disappointment that open cut techniques are still included in the design envelope. NNDC is concerned about beach closures of up to one month per cable and associated impacts on public rights of way. NNDC is also concerned about the impact of open cut trenching on the Weybourne intertidal area, including effects on the MCZ, adjacent SSSI and nearby SAC. It considers that HDD would result in fewer adverse impacts on coastal processes [RR-133].
- 5.7.3. In response to our Q1.1.5 [PD-008] the Applicant notes that both the ES and the HRA have considered the worst-case scenario which would be HDD for some receptors and open cut for others. Neither option would result in significant adverse effects in EIA or HRA terms. Whilst HDD would minimise effects on the beach and coastal path, open cut installation would be a less complex approach providing greater certainty in construction and installation programmes. Open cut installation would avoid the need for offshore HDD exit pits and associated dredge and backfill operations. Open cut activities typically entail less onshore traffic and a smaller associated construction compound [REP1-122].
- 5.7.4. The Applicant states that the ES assessment of changes to beach morphology at the nearshore area has included monitoring data from 1994 to 2014. This understanding of beach dynamics at the landfall would feed into the detailed engineering design to minimise the risk of cable exposure [REP2-008]. In response to our Q2.15.14 [PD-012] the Applicant comments that open cut would be a durable design solution because cables would be buried at a sufficient depth below the mobile sediments at the landfall [REP4-012].
- 5.7.5. These matters remain unresolved at the end of the Examination. The final SoCG with NNDC notes that NNDC maintains a strong objection to open cut trenching at the landfall from the perspective of effects on nearshore coastal processes, increased erosion in future years, weaknesses during storm events, impacts on the tourism economy due to beach closures and diversion of the Norfolk Coast Path [REP9-021].
- 5.7.6. We are satisfied that the ES has taken account of the potential for coastal erosion at the landfall. Whilst we note that NNDC remains concerned on this matter, it has not produced convincing evidence in support of those

¹⁶ EN-3, paragraph 2.6.81

concerns. Effects on beach closures, the coastal path, tourism and climate change resilience are discussed in the relevant chapters of this report. We have not identified any impacts that would lead us to conclude that open cut techniques should be excluded from the design envelope.

5.8. THE HVDC CONVERTER / HVAC SUBSTATION

- 5.8.1. Mulbarton Parish Council (MPC) argues that the Applicant has not adequately justified selection of Option B for the HVDC converter/HVAC substation [REP8-016]. It suggests an alternative location (Option E) which is discussed below and also argues that Option A would be preferable to Option B. MPC draws attention to the Written Representations of Historic England [REP1-107] in relation to effects on the settings of listed buildings and other heritage assets at Mangreen Hall, Gowthorpe Manor, Intwood Hall and Keswick Hall. MPC considers that the Option A site is less sensitive than the Option B site in a number of respects, such that it is likely that development there would have lesser landscape and heritage impacts. MPC concludes that the Applicant has not discharged the requirement in paragraph 5.8.14 of EN-1 to provide a clear and convincing justification for harm to designated heritage assets.
- 5.8.2. In response, the Applicant relies on the site selection methodology set out in the ES and described above [REP10-045]. The Applicant points out that all matters within the remit of Historic England have been agreed [REP9-026]. As noted above, the Applicant considers that Option B provides a greater availability of land for potential mitigation and that the potential access to Option B is less constrained and would involve less highway works and associated construction disruption [APP-059].
- 5.8.3. EN-1 states that applicants are obliged to include in their ES information about the main alternatives they have studied. Whilst this should include an indication of the main reasons for the Applicant's choice, EN-1 advises that the consideration of alternatives should be carried out in a proportionate manner¹⁷. We have concluded above that the ES has included information about the main alternatives studied.
- 5.8.4. We consider that the Applicant has carried out a reasonable site selection process and has provided information about the choices it has made as required by EN-1. Landscape and visual impacts are discussed in Chapter 12 and the historic environment is discussed in Chapter 13. We comment on the relevant policy tests in respect of the application as submitted in those chapters. At this stage it is sufficient to note that we have not identified any impacts that would lead us to conclude that Option B should be excluded from the Order.

¹⁷ EN-1, paragraph 4.4.3

5.9. OTHER ALTERNATIVES SUGGESTED DURING THE EXAMINATION

The nearshore re-route

- 5.9.1. The Relevant Representation [RR-070] from the Eastern Inshore Fisheries and Conservation Authority (EIFCA) supports the decision to move the cable route away from the sensitive chalk features of the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ). However, EIFCA questions why a more direct route from Weybourne across the north west corner of the MCZ has not been proposed. Such a route, it is suggested, would reduce the total footprint of the cable route and reduce the impacts on the fishing industry and seabed habitats.
- 5.9.2. In response to our question (Q1.1.4) [PD-008] the Applicant accepted that the re-route would increase the total footprint of the cable route. However, the route suggested by EIFCA would be subject to technical constraints [REP1-122]. The Applicant comments that the nearshore re-route responds to concerns from stakeholders about impacts on features of the MCZ, particularly clay exposures and chalk reef, such that the overall impact on designated sites would be reduced.
- 5.9.3. The SoCG between the Applicant and EIFCA records that this matter was not agreed [REP7-016]. Nevertheless, we consider that the Applicant has given proper consideration to the alternative raised by EIFCA and has provided reasons for the choices that it has made.

Smallholdings near Kelling Heath

- 5.9.4. Relevant Representations from the owners of a smallholding [RR-002 and RR-003] argued that the cable route should pass through a nearby agricultural field rather than through their smallholding. In response the Applicant referred to the route refinement process described in the ES [APP-059]. The alignment suggested in the representation would result in the cables crossing the North Norfolk Railway at a bend rather than at a straight section of track. This would be undesirable in engineering terms. The suggested alignment would also increase the length of a section of HDD and require construction of a new access road [REP1-131].
- 5.9.5. We note that the crossing schedule at Appendix E to the Outline Code of Construction Practice [REP9-063] shows that HDD would be used at this location, which would minimise the impacts on the smallholdings near Kelling Heath. We are satisfied that the Applicant has carried out a reasonable route refinement process taking account of a wide range of constraints and has provided reasons for the choices that it has made.

The HVDC converter / HVAC substation – Option E

- 5.9.6. In its Relevant Representation MPC objects to the proposed location for the HVDC converter/HVAC substation and suggests that it should be sited on part of the Lafarge Aggregates site near Norwich Main substation [RR-049]. In response to our Q1.1.4 [PD-008] the Applicant states that the positioning of the HVDC converter/ HVAC substation adjacent to the

existing Norwich Main substation was not considered to be feasible due to the technical constraints associated with the site being in close proximity to a quarry including limitations on the footprint available, accessibility and health and safety considerations. Furthermore, the quarry has plans to expand resulting in some areas being discounted as a site alternative.

5.9.7. MPC provided further information during the Examination, including at Deadline 8 when it set out the relative advantages and disadvantages (as it sees them) of Option B and Option E [REP8-015]. In response, the Applicant relies on the site selection methodology set out in the ES [REP10-045 and APP-059].

5.9.8. We note that Option E is not one of the options considered in detail by the Applicant, having been discounted for the reasons given above. It appears not to be achievable and we have not therefore considered it further.

An offshore ring main

5.9.9. A Written Representation suggests that there should be an offshore extension to the national electricity transmission system with collecting substations on platforms similar to those proposed by current wind farm developers. It is suggested that this would avoid the need for successive offshore developers will continue to apply for consent to bury transmission cables across the countryside [REP4-141].

5.9.10. This alternative has not been considered by the Applicant and we do not have any detailed information on which to assess it. We cannot therefore comment on the merits of this suggestion, nor can we consider it further.

5.10. CONCLUSIONS ON ALTERNATIVES AND DESIGN FLEXIBILITY

5.10.1. The ES has included information about the main alternatives studied. We conclude that there has been an iterative design process which has sought to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives, in accordance with EN-1.

5.10.2. The Applicant has explained its reasons for seeking design flexibility in respect of the transmission system. It has set out the maximum extent of the proposed development and carried out the assessment of impacts on that basis. We consider that the Applicant has justified the approach it has taken to this matter and we find that the general approach is in accordance with EN-1 and EN-3.

5.10.3. The ability to implement the Proposed Development on a phased basis is justified on the basis that it would improve the prospects for delivery of the NSIP. If there were to be a phased implementation, we acknowledge that pre-ducting phase 2 as part of phase 1 would be beneficial in terms of limiting the time land would be taken out of agricultural production. However, if a final investment decision had not been reached in respect of phase 2, we accept that pre-ducting phase 2 would result in an

unacceptable risk of constraining the effectiveness of the NSIP as a whole.

- 5.10.4. We have not identified any impacts that would lead us to conclude that open cut techniques for installation of cables at the landfall should be excluded from the design envelope.
- 5.10.5. We consider that the Applicant has carried out a reasonable site selection process and has provided information about the choices it has made. We have not identified any impacts that would lead us to conclude that Option B for the location of the HVDC converter/ HVAC substation should be excluded from the Order.
- 5.10.6. Whilst we have had regard to alternatives not considered in detail by the Applicant, we do not think that these should be important considerations for this Examination.
- 5.10.7. In summary, we conclude that the Applicant's approach to alternatives and design flexibility is in accordance with EN-1 and EN-3. This is not a factor which weighs against the Order being made.

6. OFFSHORE ECOLOGY

6.1. INTRODUCTION

- 6.1.1. This chapter considers the effect of the Proposed Development with regard to the natural environment seaward of Mean High Water Springs. This was identified as one of the principal issues in the Examination through a Rule 6 letter [PD-006]. Whilst the potential impacts and policy relating to Natura 2000¹⁸ (N2K) sites will be considered in Chapter 17 of this report, it should be read in conjunction with this chapter which will focus on the substantive ecological and geophysical issues.

6.2. POLICY CONSIDERATIONS

- 6.2.1. The Overarching National Policy Statement for Energy (EN-1), taken together with the National Policy Statement for Renewable Energy Infrastructure (EN-3), provides the primary basis for decision making on applications for nationally significant renewable energy infrastructure. On this basis and bearing in mind the facts of the case, the EN-3 policy tests for offshore ecology are as follows:
- specific effects on fish, intertidal habitats, subtidal habitats, marine mammals and birds (paragraph 2.6.59);
 - general effects on marine ecology and biodiversity (paragraph 2.6.68);
 - the degree to which cable installation and decommissioning takes account of intertidal habitats (paragraph 2.6.85);
 - the extent to which adverse effects on intertidal habitats are temporary or reversible (paragraph 2.6.86);
 - whether noise mitigation would reasonably minimise significant disturbance to marine mammals (paragraph 2.6.95);
 - a bird collision risk assessment that has been conducted to a satisfactory standard having had regard to the advice from the relevant statutory advisor (paragraph 2.6.104); and
 - mitigation of subtidal habitat impact through micrositing, cable burial and limited use of anti-fouling paints (paragraph 2.6.119).
- 6.2.2. There are a number of generic tests for biodiversity and geological conservation in EN-1 that also apply. These are as follows:
- likely significant effects, including any significant residual effects taking account of proposed mitigation measures and whether the effects and any associated mitigation have been identified for the different project stages (paragraph 4.2.4);
 - how the effects of the development would combine and interact with the effects of other development including proposals for which

¹⁸ Natura 2000 is a network of nature protection areas in the territory of the European Union. It is made up of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated respectively under the Habitats Directive and Birds Directive.

consent is being sought as well as proposals that have either been consented or built (paragraph 4.2.5);

- whether the development would be consistent with the Government's biodiversity strategy Working with the Grain of Nature within the context of the challenge of climate change (paragraph 5.3.6);
- whether opportunities to conserve and enhance biodiversity and geological conservation have been taken (paragraph 5.3.4); and
- mitigation of adverse effects on habitats and species of principal importance for the purpose of conserving biodiversity through conditions (paragraph 2.3.17).

6.2.3. EN-1 also highlights the fact that the decision-maker needs to take account of any mitigation measures that may have been agreed between the Applicant and Natural England (NE) or the Marine Management Organisation (MMO), and whether either organisation has granted or refused or intends to grant or refuse, any relevant licences, including protected species mitigation licences.

6.2.4. Further legal tests relating to Marine Conservation Zones (MCZ) also apply. These zones were enacted through the Marine and Coastal Access Act 2009 (MCAA) and are areas that have been designated for the purpose of conserving marine flora or fauna, marine habitats or types of marine habitat or features of geological or geomorphological interest. EN-1 states that decision-makers are bound by the duties imposed by sections 125 and 126 of the MCAA.

6.2.5. Section 125 of MCAA requires all public authorities to exercise their functions in a manner to best further (or, if not possible, least hinder) the conservation objectives of an MCZ. Section 126 also requires them to consider the effect of proposed activities on an MCZ before giving authorisation and imposes restrictions on activities that may have a significant risk of hindering its conservation objectives.

6.2.6. Additionally, the Marine Policy Statement 2011 requires decision-makers to take account of how developments will impact on the aim to halt biodiversity loss and the legal obligations relating to all Marine Protected Areas (MPA), including MCZs¹⁹.

6.2.7. Turning to the responsibilities of the Applicant, EN-3 sets out a number of requirements as follows:

- undertake early consultation with statutory advisors (paragraph 2.6.65);
- assess all stages of an offshore wind farm development (paragraph 2.6.64);
- secure mitigation through sensitive design and construction (paragraph 2.6.70);
- consider the cumulative impact on intertidal habitats, marine mammals and subtidal habitats (paragraphs 2.6.89, 2.6.92 and 2.6.120); and

¹⁹ Paragraph 3.1.7

- undertake ecological monitoring during the construction and operational phases and utilise the results to mitigate impacts and to inform future projects (paragraph 2.6.71).

6.2.8. EN-3 also advises that the Applicant (and the decision-maker) should have regard to specific elements of offshore biodiversity including fish, intertidal habitats, marine mammals, subtidal habitats and birds. The relevant considerations are set out for each element as follows:

- fish - paragraphs 2.6.72 to 2.6.77;
- intertidal habitats - paragraphs 2.6.78 to 2.6.89;
- marine mammals - paragraphs 2.6.90 to 2.6.99;
- birds - paragraphs 2.6.100 to 2.6.110; and
- subtidal habitats - paragraphs 2.6.111 to 2.6.120.

6.2.9. The East Inshore and East Offshore Marine Plans 2016 also require cumulative impacts to be addressed (policy ECOL1), appropriate weight to be attached to marine biodiversity (policy BIO1), enhancement of biodiversity and geological interests where appropriate (policy BIO2) and consideration of the overall effects on MPAs to ensure that an ecologically coherent network is maintained (policy MPA1).

6.3. APPLICANT'S APPROACH

The Application

6.3.1. The main Environmental Statement (ES) chapters that address offshore ecological issues, as required by EN-3, are as follows:

- Fish and Shellfish Ecology [APP-063];
- Benthic Ecology [APP-062];
- Marine Mammals [APP-064];
- Offshore Ornithology [APP-065]; and
- Marine Processes [APP-061].

6.3.2. These chapters are supported by a number of technical annexes and assessments as follows:

- Statutory and Non-Statutory Nature Conservation Sites (Offshore) [APP-020];
- Marine Processes Technical Report [APP-101];
- Benthic Ecology Technical Report [APP-102];
- Marine Conservation Zone Assessment [APP-104];
- Fish and Shellfish Ecology Technical Report [APP-105];
- Marine Mammal Technical Report [APP-106];
- Seabird Baseline Characterisation Report [APP-107];
- Displacement Impacts on Seabirds [APP-108];
- Seabird Collision Risk Modelling [APP-109];
- Seabird Data Hierarchy Report [APP-110]; and
- In-Principle Monitoring Plan [APP-182].

6.3.3. The In-Principle Monitoring Plan [APP-182], which was replaced at Deadline 9 [REP9-066], was the only document that was superseded during the course of the examination.

General Approach

- 6.3.4. The ES identified a number of potential ecological impacts. The impact pathways were considered either in terms of direct loss or damage to habitats or adverse effects on particular species bearing in mind the maximum design scenario, as set out in the project description of the ES [APP-058]. The impact pathways in the following sections were identified by the Applicant as the principal mechanisms leading to adverse effects during different phases of development, either in relation to specific ecological receptors or key marine processes.
- 6.3.5. One impact would be common to all receptor groups and phases of the project, excepting marine processes. This would be the accidental release of pollutants (eg anti-fouling biocides, drilling muds, heavy metals and hydrocarbons). Further, receptor-specific impacts are summarised in the following sections.
- 6.3.6. Fish and Shellfish Receptors - Table 3.11 [APP-063]

Construction Phase

- temporary habitat loss and disturbance from seabed preparation, foundation installation and cable laying operations;
- increased suspended sediment concentrations and deposition from foundation installation, cable laying operations and seabed preparation; and
- increased underwater noise from foundation installation (eg piling) and other construction activities (eg cable burial).

Operation Phase

- long term habitat loss from the presence of foundations, scour/ cable protection;
- increased underwater noise from turbine operation and the movement of maintenance vessels;
- creation of artificial reefs on foundations, scour protection and cable protection;
- electric and magnetic field (EMF) emissions from array interconnector and export cables;
- temporary habitat loss and disturbance arising from maintenance activities (eg jack-up operations and cable reburial); and
- increased fishing pressure outside the array area.

Decommissioning Phase

- temporary habitat loss and disturbance from the removal of foundations, array interconnector and export cables;
- increased suspended sediment concentrations and deposition from the removal of foundations, array interconnector and export cables;
- increased underwater noise from the removal of turbines/ cables and associated vessel movements;

- loss of artificial reefs from the removal of foundations, scour protection and cable protection; and
- permanent habitat loss from leaving turbine foundations and scour/cable protection in situ.

6.3.7. Benthic Receptors - Table 2.14 [APP-062]

Construction Phase

- temporary habitat loss and disturbance from seabed preparation, foundation installation and cable laying operations;
- increased suspended sediment concentrations and deposition from foundation installation, cable laying operations and seabed preparation; and
- increased underwater noise as a result of foundation installation (eg piling) and other construction activities (eg cable burial).

Operation Phase

- long term habitat loss from the presence of foundations, scour protection and cable protection;
- increased underwater noise from turbine operation and the movement of maintenance vessels;
- creation of artificial reefs on foundations, scour protection and cable protection;
- introduction or spreading of invasive and non-native species from vessels and introduced substrate;
- disruption of physical processes (eg sediment transport) from foundations; and
- temporary habitat loss and disturbance from maintenance activities (eg jack-up operations and cable reburial).

Decommissioning Phase

- temporary habitat loss from the removal of foundations, array interconnector and export cables;
- increased suspended sediment concentrations and deposition from the removal of foundations, array interconnector and export cables;
- loss of artificial reefs from the removal of foundations, scour protection and cable protection; and
- permanent habitat loss from leaving turbine foundations and scour/cable protection in situ.

6.3.8. Marine Mammal Receptors – Table 4.15 [APP-064]

Construction Phase

- increased underwater noise as a result of foundation installation (eg piling) and other construction activities (eg cable installation);
- increased underwater noise from Unexploded Ordnance (UXO) clearance;
- increased disturbance and collision risk from increased vessel movements;

- reduced foraging ability from increased suspended sediment concentrations arising from foundation installation, cable laying operations and seabed preparation; and
- changes in prey availability arising from construction activity impacts on fish and shellfish communities.

Operation Phase

- increased underwater noise and vibration from turbine operation;
- increased underwater noise from maintenance vessel movements;
- EMF emissions from array interconnector and export cables; and
- changes in prey availability resulting from operation activity impacts on fish and shellfish communities.

Decommissioning Phase

- increased underwater noise resulting from turbine and cable removal operations;
- increased disturbance and collision risk from increased vessel movement;
- reduced foraging ability from increased suspended sediment concentrations arising from infrastructure removal; and
- reduction in prey availability arising from infrastructure removal activity impacts on fish and shellfish communities.

6.3.9. Offshore Ornithological Receptors – Table 5.8 [APP-065]

Construction Phase

- disturbance or displacement of birds from important foraging areas from increased vessel movement and underwater noise; and
- reduction in the abundance and distribution of prey from benthic habitat loss.

Operation Phase

- displacement of birds from important foraging areas due to the presence of physical infrastructure;
- reduction in the abundance and distribution of prey from benthic habitat loss;
- increased mortality from direct collision with rotating turbine blades;
- disruption of foraging and migratory movements from the presence of turbines and ancillary structures;
- increased mortality of migratory birds from attraction to illuminated surface structures; and
- disturbance of birds in important foraging areas from maintenance vessel movement and associated activities.

Decommissioning Phase

- disturbance or displacement of birds from important foraging areas from increased vessel movement and underwater noise; and

- reduction in the abundance and distribution of prey from benthic habitat loss.

6.3.10. Marine Process – Table 1.11 [APP-061]

Construction Phase

- changes to seabed morphology from indentations left by jack-up vessels;
- removal of sandwaves from array interconnector and export cable installation; and
- changes to hydrodynamics, sediment transport and beach morphology from nearshore export cable installation.

Operation Phase

- changes to the tidal regime and associated impacts to sandbanks from foundation structures;
- changes to the wave regime and associated impacts to sandbanks and adjacent shorelines from foundation structures;
- increased scour of seabed sediments from foundation structures;
- changes to sediment transport and associated impacts to sandbanks from foundations and cable protection measures;
- changes to water column stratification with associated potential impacts to the Flamborough Front from foundation structures; and
- changes to beach morphology, hydrodynamics and sediment transport (littoral drift) at the nearshore area from cable protection measures.

Decommissioning Phase

- removal of sandwaves impacting sandbank systems from cable removal; and
- changes to hydrodynamics, sediment transport and beach morphology at the nearshore area from cable removal and HDD duct filling.

6.3.11. The Applicant proposed a range of designed-in mitigation measures in the ES. Some are common to all receptor groups, excepting marine processes. These include the Project Environmental Management and Monitoring Plan (PEMMP) that seeks to control the accidental release of pollutants and the introduction or spread of invasive or non-native species during construction and operation phases and the associated, post consent Decommissioning Plan to control these impacts after operation ceases. Receptor-specific measures are summarised in the following sections.

6.3.12. Fish and Shellfish Receptors - Table 3.16 [APP-063]

- a target burial depth between 1 to 2m for all cables to control EMF emissions as informed by a post consent Cable Burial Risk Assessment (CBRA)²⁰; and
- soft-start piling with lower hammer energies used at the beginning of a piling sequence to reduce acoustic injury to nearby fish.

6.3.13. Benthic Receptors - Table 2.18 [APP-062]

- a pre-construction survey along the offshore export cable corridor to determine the location, extent and composition of any Annex I reefs occurring in Special Areas of Conservation (SAC);
- a pre-construction survey along the export cable corridor to determine the location, extent and composition of any biogenic or geogenic reefs outside SACs;
- micro-siting cable route through areas of “*lower quality*” Annex I reef and cable installation on the periphery of continuous reef features to ensure they are not bisected; and
- a Cable Specification and Installation Plan (CSIP) specifying matching sediment/ substrate type and grain size for use within MPAs.

6.3.14. Marine Mammal Receptors – Table 4.19 [APP-064]

- a target burial depth between 1 to 2m for all cables to control EMF emissions as informed by a post consent CBRA;
- soft-start piling with lower hammer energies used at the beginning of a piling sequence to reduce acoustic injury to nearby marine mammals;
- an approved Marine Mammal Mitigation Protocol (MMMP) that would use Acoustic Deterrent Devices (ADDs) as the primary mitigation measure prior to a soft start;
- a code of conduct for vessel operators to avoid collisions through course changes or deliberate approach; and
- an approved UXO MMMP that would use ADDs, marine mammal observers and scare charges as the primary mitigation measure prior to detonation.

6.3.15. Offshore Ornithological Receptors – Table 5.16 [APP-065]

- installation of appropriate lighting to minimise the risks to migrating birds; and
- a minimum wind turbine hub-height giving a lower blade tip height clearance of 33.17m above Mean Sea Level (MSL)²¹.

6.3.16. Marine Process – Table 1.15 [APP-061]

- scour protection measures around the base of foundations to avoid localised effects on seabed structure;
- a CSIP to minimise risk of cable exposure; and

²⁰ This was superseded by a preliminary trenching assessment that was submitted at Deadline 6 [REP6-026]

²¹ The mitigation effects of increasing this clearance to 37.5m and 40m above MSL was subsequently explored by the Applicant in Deadline 7 and Deadline 10 submissions [REP7-030, REP7-031 and REP10-038].

- open cut trenching using excavated material for backfill to minimise risk of future erosion in the nearshore area.

6.4. ISSUES ARISING DURING THE EXAMINATION

Benthic Receptors

- 6.4.1. Whilst the potential impacts on N2K sites will be considered in Chapter 17 of this report, it should be read in conjunction with this chapter which will focus on the substantive ecological and geophysical issues relating to the benthic environment.

Cromer Shoal Chalk Beds MCZ

- 6.4.2. The nearshore section of the cable export corridor would pass through the Cromer Shoal Chalk Beds MCZ. The site covers an area of approximately 315.64 km² and lies approximately 200m from the coastal low water mark and extends up to 10km out to sea.
- 6.4.3. The site description and conservation objectives for this site were not submitted as evidence to the Examination library. Consequently, the preceding paragraph is based on a hyperlink that NE submitted at Deadline 7. Should the SoS be minded to verify this evidence we suggest that a further request is made to NE for the appropriate documents.
- 6.4.4. The draft conservation advice for this site is to maintain or secure the favourable condition of each of its designated features which are as follows [REP7-070]:
- High energy circalittoral rock;
 - High energy infralittoral rock;
 - Moderate energy circalittoral rock;
 - Moderate energy infralittoral rock;
 - North Norfolk coast (subtidal);
 - Peat and clay exposures;
 - Subtidal chalk;
 - Subtidal coarse sediment;
 - Subtidal mixed sediments; and
 - Subtidal sand.
- 6.4.5. This means that each feature should be either stable or increasing and the structure, function, quality and composition of their biological communities should be sufficient to ensure an ongoing, healthy condition. For geological features this is achieved when the physical integrity of its components is maintained both in terms of their extent and natural functioning.
- 6.4.6. NE acknowledged that the baseline survey provides a good level of coverage across the site and is sufficient to characterise the site features in order to assesses potential impacts [REP7-070]. On this basis, the Applicant identified that the cable export corridor would only overlap with the subtidal sand feature [REP9-016].

- 6.4.7. Draft targets have been set for a range of physical and biological attributes of this feature. Operations likely to affect its conservation status include cable burial, protection, maintenance and decommissioning. However, the effects of the cabling associated with Dudgeon and Sheringham Shoal Offshore Wind Farms (OWF) on this site are yet to be assessed. The absence of a condition assessment for the site was confirmed at Deadline 7 [REP7-070]. Bearing this in mind, the following targets would potentially be affected by the export cable route:
- maintain the presence and spatial distribution of subtidal sand communities;
 - maintain the distribution of sediment composition types across the feature;
 - maintain all hydrodynamic and physical conditions such that natural water flow and sediment movement are not significantly altered;
 - maintain the species composition of component communities;
 - maintain the total extent and spatial distribution of subtidal sand; and
 - maintain natural levels of turbidity (eg concentrations of suspended sediment, plankton and other material) across the habitat.
- 6.4.8. The draft conservation advice suggests that the first four targets could change to “recover” rather than “maintain” if offshore infrastructure were to affect the site and lead to an unfavourable condition assessment. The Applicant provided a summary of feedback it submitted concerning the draft conservation advice package at Deadline 2 [REP2-021] that highlighted a number of concerns, including apparent inconsistencies with advice provided on other MCZs in UK waters.
- 6.4.9. However, no evidence was submitted to demonstrate whether these concerns were more widely held amongst other consultees. Nor do we have the full facts concerning the circumstances that led to different conservation advice being applied to other sites. Consequently, the challenge to the validity of the conservation advice package for this site carries little weight.
- 6.4.10. Although The Wildlife Trusts (TWT) agreed that there would be no significant effect on the site, subject to the outcome of related monitoring [REP9-024], there remained a number of outstanding areas of disagreement with NE. The Applicant identified these at Deadline 10 and they also apply to other MPAs [REP10-045]. These are:
- the ability to bury cables;
 - rock protection assumptions and decommissioning;
 - recovery of sandwaves following clearance work; and
 - the effect of horizontal directional drilling (HDD) exit pits.
- 6.4.11. The ability to reach an optimum cable burial depth and minimise the need for rock protection was disputed by NE in response to our questions at Issue Specific Hearing (ISH) 2 [REP3-076]. NE highlighted the need for further geotechnical evidence in order to demonstrate that the installation tools would be capable of achieving the necessary burial depths, thereby avoiding the issues that have arisen at Race Bank Offshore Wind Farm (OWF). The need for greater clarity on this issue was

also highlighted at the beginning of the examination by both NE [RR-097] and TWT [RR-047].

- 6.4.12. Additional evidence was submitted by the Applicant at Deadline 5 [REP5-010] in response to these concerns. The same evidence was also submitted at Deadline 6 with higher resolution graphics in response to a request by the Panel [REP6-026]. This evidence comprised an initial geological ground model that was based on geophysical and geotechnical investigations in and around the project area that was cross-referenced to historic data sets held by the British Geological Survey.
- 6.4.13. The resulting assessment indicates that three different trenching methodologies would be feasible along the export cable route, namely jet trenching, mechanical trenching and cable plough trenching. It concludes that the last two methodologies could be consistently applied along the entire cable route in combination with hydro-assisted jet trenching where looser sediments occur. This assessment covers the trenching tools that were characterised in the original project envelope [APP-058]. It also highlights the fact that a harder grade of the chalk than would otherwise be encountered in the export cable corridor was successfully trenched at Rampion OWF. Despite having a higher shear strength, the necessary target burial depth was nevertheless achieved.
- 6.4.14. We note that NE would have preferred a more detailed evaluation of cable burial risk and a greater sampling intensity [REP6-048 and REP7-074]. Despite this fact, we accept that the trenching assessment is sufficiently robust. This is because we have no substantiated technical evidence before us to suggest that the ground model is fundamentally flawed or that the trenching tools that have been evaluated are incapable of penetrating the geological formations that have been described.
- 6.4.15. Moreover, we note that all samples penetrated the seabed to a depth of 6m, including chalk deposits, and that the particle size range was within the design parameters of the tools that were evaluated [REP7-009]. Even if harder substrates, relating to Egmond Ground Formation, are encountered we have no engineering evaluation before us to suggest that the Applicant's assumptions are misplaced.
- 6.4.16. Given the above, we conclude that substrate related export cable burial failure would be minimised and that any uncertainty resulting from gaps in the ground model data would be controlled through the Outline CSIP [REP7-021]. This would be secured by Conditions 13(1)(h) of the generation assets DML and 14(1)(h) of the transmission assets DML which commit the undertaker to develop and secure detailed plans for site clearance and cable installation prior to the commencement of any works [REP10 041].
- 6.4.17. Turning to the rock protection, NE remains concerned about whether or not the 10% rock protection worst case scenario (WCS) within MPAs would be realistic [REP7-076]. We do not share those concerns. This is because practical experience has shown that cable protection up to 4%

was only previously needed in seven out of eight OWFs with the eighth only requiring 6.3% [REP1-138].

- 6.4.18. Bearing in mind the results of the preliminary trenching assessment [REP5-010 and REP6-026], we conclude that the 10% assumption is suitably precautionary. This is consistent with the views of the MMO [REP3-092]. This would be secured through Conditions 3(3) of the generation assets DML and 3(3) of the transmission assets DML which commit the undertaker to no more than 10% of the length of cables within an N2K site or MCZ being subject to cable protection, unless otherwise agreed with the MMO [REP10-041].
- 6.4.19. The precise extent of rock protection cannot be known at this stage. It may well turn out to be below 10%. However, as we regard 10% to be a precautionary assumption, we have carried out our assessment on that basis.
- 6.4.20. NE do not think that seabed disturbance from maintenance activities should have been scoped out of the cumulative assessment because up to 25% of the rock protection installed during the construction phase may need replenishment in the operation phase [REP1-212]. NE further clarified that it was concerned that this could lead to the spreading of rock armouring within MPAs thus leading to a greater loss of qualifying features during the operation phase [REP4-130].
- 6.4.21. The Applicant confirmed that the 25% replenishment volume had not been separated out from the total cable protection volume within the draft DCO but noted that the specified volumes within the draft DCO included the 25% replenishment estimate [REP7-007]. We also note that the maximum design scenario for rock protection, in terms of its volume and footprint, was subsequently specified in the CSIP and that this would control the maximum volume within the MCZ and other MPAs [REP7-021]. Consequently, we are satisfied that the effect of replenishment has been adequately evaluated.
- 6.4.22. NE suggests that the CSIP would not control potential rock protection impacts and that greater certainty would be achieved if the draft DCO was altered to explicitly control the maximum volume, area and length of cable protection permitted in each designated site as well as the placement of any replenishment material during the operation phase [REP7-076].
- 6.4.23. However, we are satisfied that this is adequately controlled by Conditions 13(1)(h) of the generation assets DML and 14(1)(h) of the transmission assets DML which require the undertaker to produce a cable specification and installation plan that will include
a cable protection plan for all designated sites where cable protection is required, including details of the volumes, material, locations and seabed footprints for cable protection measures.
- 6.4.24. The MMO suggests that remedial cable protection works should be subject to separate marine license applications during the operation

phase of the project because they would constitute new construction works rather than what might strictly be construed as maintenance works [REP9-082]. This position is consistent with earlier representations [REP7-103, REP7-104 and REP6-072] and is supported by NE [REP7-076].

- 6.4.25. The MMO proposed draft condition wording to the effect that any cable protection authorised under the DCO is required to be deployed within 15 years of the issue date of the Order [REP9-082]. The Applicant maintains that this would not be necessary because the remedial protection is included in the 10% WCS estimate and therefore does not need to be assessed a second time through a separate marine license application [REP10-045]. Nevertheless, the Applicant has provided suggested wording that reflects this suggestion in the draft DCO, as submitted at Deadline 10 [REP10-041].
- 6.4.26. We find that whilst, the CSIP offers adequate protection in relation to replenishment activities in the short to medium term, it is difficult to fully assess impacts that may occur in up to 35 years time. Moreover, remedial works could occur in areas where rock protection has not previously been present. Consequently, the risk of potential impacts on the MCZ and other MPAs is greater and the approach suggested by MMO would give greater control of impacts that may occur well into the future.
- 6.4.27. Given the above, we conclude that the wording of the conditions suggested by the Applicant (in response to the MMO) should be incorporated into the final Order if granted.
- 6.4.28. Turning to the predicted impact on the MCZ and assuming the 10% WCS, it is estimated that less than 0.02% of the subtidal sand feature of the site would potentially be affected by this activity. This would equate to an area of approximately 4,200m² [APP-062]. As a result, the Applicant concludes that it would not pose a significant risk to the achievement of the conservation objectives for the site [REP10-045]. However, any rock protection would clearly be contrary to the stated targets. Namely, to maintain the distribution of sediment composition types and subtidal sand communities as well as the total extent of the subtidal sand feature.
- 6.4.29. Whilst we accept that the recovery of some ecological function arising from infaunal and epifaunal colonisation of rock berms may occur [REP1-138], this would not be an appropriate substitute for the loss of a designated feature or represent adequate mitigation for this loss. This is because it would have fundamentally different physical and ecological characteristics as a result of its larger particle size (100mm to 250mm) and graded 2m high profile. This would subject rock berms to different geophysical processes in comparison to the surrounding seabed which has been assessed as having a variable lithology, primarily comprising loose sand [REP5-010 and REP6-026].
- 6.4.30. Whether or not rock protection would have a significant effect on the long-term conservation objectives for the site turns on whether there would be a permanent reduction in the extent or distribution of this

feature and associated biological communities. That is to say, whether the feature and underlying natural processes would be recoverable over time. NE has advised that the placement of cable protection should be viewed as a permanent impact in the absence of empirical evidence to the contrary [REP7-076]. MMO also has concerns regarding the feasibility of rock protection decommissioning [REP7-104].

- 6.4.31. It follows that recoverability turns on the feasibility of rock protection decommissioning within MPAs. We are satisfied that the Applicant has established that existing equipment, in the form of a backhoe dredger or trailing suction hopper dredger, would be capable of removing rock protection within the MCZ as well as other MPAs [REP6-018]. However, this evidence falls short of demonstrating the potential recoverability of the feature because it only deals with logistical feasibility.
- 6.4.32. Moreover, we note that the positioning system for the trailing suction hopper dredger is such that 30cm of the seabed below the rock protection would be removed. It was confirmed at ISH7 [EV-024] that this would also be the case for the backhoe dredger. Given that the sandy Holocene sediments that coincide with the MCZ export cable corridor route show a variation in depth of 1m or less in Figure 4.3 of the Preliminary Trenching Assessment [REP5-010 and REP6-026], the chances of exposing different stratigraphies and the permanent loss of the feature cannot be ruled out.
- 6.4.33. Given the above, we conclude that the rock protection would lead to a permanent change in the distribution and extent of the subtidal sand feature to the detriment of its physical structure and associated biological communities. We acknowledge that this would only affect a relatively small area of habitat but nevertheless find that the effect would not be negligible owing to its permanent nature and the potential for small, but nonetheless cumulative, effects.
- 6.4.34. Turning to sandwave recovery, the geophysical data suggest that small sandwaves characterise the export cable route where it coincides with the subtidal sand feature [REP5-010 and REP6-026]. The Applicant has highlighted the fact that the export cable route at Race Bank passes through similarly dynamic areas of seabed characterised by highly mobile sediments with migrating bedform features [APP-061].
- 6.4.35. Subsequent monitoring at Race Bank showed that after five months either partial or full recovery had occurred at ten out of 12 monitoring locations comprising 14 out of 19 sandwaves [REP1-183]. A further bathymetric monitoring report, including data from 2018, concluded that the seabed had either completely recovered or was close to recovering to pre-construction levels along most of the 9 monitoring locations that were selected [REP2-020].
- 6.4.36. NE accepts that the first document provided "*some confidence*" that sandwaves would recover but question how analogous the Race Bank example would be to the Proposed Development [REP3-076]. In

particular, whether the same conclusions apply within the MCZ (and also The Wash and North Norfolk Coast SAC).

- 6.4.37. We note that the depth is comparable bearing in mind that Race Bank seabed varies between -4m and -14m below the Lowest Astronomical Tide (LAT) [REP1-183] whilst the MCZ seabed varies between -5m to -9m LAT [REP5-010]. Consequently, the rate of local sediment transport processes would be similar given the wave action exposure and high mobility of the impacted sediment.
- 6.4.38. However, whilst the dynamic environment may be similar, it is unclear whether there would be sufficient sediment available to ensure recovery of shallower sandwave features along this section of the export cable route given the proximity of different sediments to the surface of the seabed (Figure 4.3 [REP5-010 and REP6-026]).
- 6.4.39. We note that the Applicant states that the sandwave clearance corridor would be up to 30m in width and would affect up to 90,000m² of the site²² (Table 2.23 [APP-062]). The Applicant states that the total impact on the sandwave feature would amount to 1.04% of its area. The Applicant considers that this would be a temporary effect because the feature would recover. However, we do not share that view. We agree that some of the affected area would recover but we are not confident that all of it would. The precise area of permanent impact is not known. Consequently, a significant impact cannot be ruled out on the basis of the evidence that has been submitted, even though the precise extent of this impact cannot be determined.
- 6.4.40. This would add to the lack of sandwave recovery in areas affected by rock protection measures and any associated decommissioning. In addition, we consider that the recovery of sandwaves could be compromised where underlying sediments are exposed through a combination of post levelling erosion and the excavation of divergent substrata that would be deposited onto surrounding areas of intact subtidal sand.
- 6.4.41. We therefore conclude that sandwave clearance, in combination with rock protection, would result in a permanent change to the geomorphological condition of the subtidal sand feature within this site.
- 6.4.42. Turning to the HDD exit pits, NE is concerned that these would either expose different site features that have not been assessed or that impacts would arise from disposal activities, particularly in relation to the proposed coffer dams [REP4-130].
- 6.4.43. In relation to the first point, the ES states that while subcropping rock, most likely chalk, has been identified within the export cable corridor, it did not outcrop above the overlying sediments to form a subtidal chalk reef at any point [APP-102]. This is unequivocal and establishes that the

²² Table 2.23 indicates that the 90,000m² area affected by sandwave clearance would be in addition to an area of 90,000m² affected by cable burial

designated feature impact to be considered is subtidal sand and not subtidal chalk. As the interest feature definition for the latter states:

subtidal chalk is a geomorphological feature comprising exposed chalk beds and outcrops

6.4.44. In relation to the second point, the ES [APP-014] considered the impact that would arise from the excavation of up to eight HDD exit pits, the disposal of dredged material and up to five jack-up operations per HDD exit pit. Explicit consideration is also given to coffer dams in relation to wave energy and sediment transport as well as the placement of excavated material which would be side-cast to the adjacent seabed, with material subsequently used as backfill. This would be within the DCO consent limit and would be subject to prior agreement through the CSIP.

6.4.45. We conclude that neither the HDD exit pits nor the coffer dams would lead to significant impacts on the designated features of the MCZ.

Overall Conclusion

6.4.46. We conclude that none of the impact pathways would pose a significant risk of hindering the conservation objectives of this site apart from the placement of rock protection and sandwave clearance. We accept that the need for rock protection is unlikely to result from the failure of trenching operations as a result of impenetrable substrates being present. We also accept that the WCS of up to 10% of the cable corridor within the MCZ being subject to rock protection is suitably precautionary given previous operational experience.

6.4.47. However, we consider that the effectiveness of rock protection decommissioning remains unproven and the recovery of sandwaves in areas of shallow sediment is uncertain. We therefore find that there would be a small but permanent loss to the extent and distribution of one of the designated features and that this would be contrary to the stated conservation objectives.

6.4.48. This outcome would be contrary to the conservation objectives of this site and thus pose a significant risk of hinderance which conflicts with section 126(6) of the MCAA. Consequently, the requirements of section 126(7) are engaged and we recommend that a Stage II assessment as described in the MCZ assessment guidance [REP3-093] is necessary prior to any consent being granted.

Stage II Assessment

6.4.49. This assessment requires the Secretary of State (SoS) to be satisfied that:

- there is no other means of proceeding with the act which would create a substantially lower risk of hindering the achievement of those objectives;

- the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment that will be created by proceeding with it; and
- the person seeking the authorisation will undertake, or make arrangements for the undertaking of, measures of equivalent environmental benefit (MEEB) to the damage which the act will or is likely to have in or on the MCZ.

6.4.50. We asked how the Applicant would meet the above tests if the requirements of section 126(7) of the MCCA were engaged in relation to Cromer Shoal and Chalk Beds MCZ (Q2.2.46 [PD-012]). NE and the MMO were also asked what measures of equivalent environmental benefit might be needed if this were the case (Q2.2.47 [PD-012]). We sought further clarification from the parties at ISH7 [EV-024] and through a Rule 17 request (F2.17 [PD-019]). The final positions at the close of the examination were as follows:

- The Applicant's primary case is that there would not be a significant risk of hindering the achievement of the conservation objectives of the site but that, as a matter of principle, there would be no difficulty in meeting the requirements of section 126(7) of the MCAA [REP10-038]. However, no detailed submissions were made to support this assertion with the expectation that sufficient time would be made available for further detailed representations before the application for development consent is determined. The Applicant has nevertheless proposed a DML condition on a 'without prejudice' basis to secure MEEB, as requested by us at ISH7 [REP10-038].
- NE is unable to provide definitive advice on the significance of potential impacts on the MCZ or offer any advice on MEEB due to a lack of established guidance [REP7-070]. The MMO is also unable to recommend any measures on the same basis [REP1-125]. It suggests that a DML condition should be applied but it did not offer any further advice on the wording that the Applicant made available prior to its final submission [REP9-082]. The MMO also suggests that any assessment of impact should be based on the WCS as submitted and that it should be similar to a Habitats Regulations Assessment (HRA).

6.4.51. However, as the Applicant points out, the same legal tests do not apply nor do the same evidential standards [REP10-038]. Therefore, while the SoS must be satisfied that there is no significant risk of hindering the achievement of the conservation objectives, that should not be construed as meaning 'beyond reasonable scientific doubt' or associated with the statutory tests as set out in the Conservation of Habitats and Species Regulations 2017.

6.4.52. In the event that the Secretary of State considers that there is a significant risk of hindering the achievement of the conservation objectives, he is obliged to inform the appropriate statutory conservation body at least 28 days before making a decision under sections 126(2) and 126(3) of the MCAA. This comprises NE within the territorial sea limit (ie 12nm) and the Joint Nature Conservation Committee outside the seaward limits of the territorial sea.

- 6.4.53. In relation to the first test, we conclude that there would be no other means of proceeding. This is because the export cable corridor route was modified on the basis of Preliminary Environmental Information Report (PEIR) and subsequent Section 42 consultation in order to minimise the impact on the subtidal chalk feature of this site [APP-062].
- 6.4.54. In relation to the second test, we conclude that the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment because of the national need for this infrastructure as set out in EN-1 and EN-3.
- 6.4.55. In relation to the third test, we conclude that whilst the condition proposed by the Applicant at Deadline 10 [REP10-038] would ensure further consideration of MEEB, we do not feel we can recommend the imposition of a condition in circumstances where we have no knowledge of the nature of the measures that may be proposed. Consequently, we are unable to advise the SoS on the application of this test which would require further consultation prior to any consent being granted.

Markham's Triangle pMCZ

- 6.4.56. The northeast section of the array area would overlap with Markham's Triangle pMCZ. This site has been proposed for subtidal seafloor habitats predominantly associated with coarse sediments and sand. It would cover an area of approximately 200km² and would lie approximately 137km from the Humberside coastline on the eastern side of England.
- 6.4.57. Markham's Triangle was a proposed MCZ (pMCZ) and was subject to a consultation exercise in 2018. The outcome of that consultation was unknown at the close of the Examination²³. This led the Applicant to point out that there was no certainty as to whether Markham's Triangle would be designated or on what basis [REP10-038].
- 6.4.58. If the site remains a pMCZ up until this application is determined then the statutory provisions, as set out in sections 125 and 126 of the MCAA, are not engaged and the SoS is not obliged to apply the necessary tests of section 126. However, we have taken a precautionary approach and considered the effect of the proposal on this area should designation occur before the determination of this application. Even if the site is not designated, it has an established biodiversity and geomorphological value that remains a significant material consideration under the policies that were set out at the beginning of this chapter.
- 6.4.59. The broadscale habitats that are likely to become the features against which conservation objectives would be set if the pMCZ is designated are as follows:
- Subtidal coarse sediment;
 - Subtidal mixed sediment;

²³ As noted above, this was the position at the close of the Examination. The Markham's Triangle MCZ was subsequently designated on 31 May 2019.

- Subtidal sand; and
- Subtidal mud.

- 6.4.60. According to NE [REP7-073], the most widespread habitat is subtidal coarse sediment with an approximate area of 145.56km². The next most dominant being subtidal mixed sediment (27.54km²) followed by subtidal sand (26.35km²) and then subtidal mud (1.49km²). NE highlights the fact that subtidal mud is not within the order limits and consequently need not be assessed [REP7-073].
- 6.4.61. As the proposed site is yet to be designated, there are no formal conservation objectives. However, the Applicant used the Cromer Shoal Chalk Beds MCZ conservation advice package as a proxy for the purposes of the application [REP9-016]. NE confirmed that this was an acceptable basis for the assessment of Markham's Triangle in response to the first round of written questions [REP1-212]. The consultation document for the site set a general target to restore all the features to favourable condition [REP7-073].
- 6.4.62. Bearing this in mind, it follows that each feature should be recovered to favourable condition so that it is either stable or increasing and the structure, function quality and composition of associated biological communities should be sufficient to ensure an ongoing, healthy condition. For geological features this would be achieved when the physical integrity of its components is maintained, both in terms of their extent and natural functioning.
- 6.4.63. Despite initial concerns over the adequacy of the baseline survey in relation to the assignment of biotopes [RR-097], NE subsequently acknowledged that there was a good level of coverage across the proposed site and that the Applicants' conclusions align with other survey results [REP7-073]. NE accepts that sufficient information is present to accurately characterise the location of broadscale habitats and assess potential impacts [REP7-073].
- 6.4.64. The Applicant identifies the following outstanding areas of disagreement with NE at Deadline 10:
- the extent of impact and effect on each habitat; and
 - rock protection and decommissioning.
- 6.4.65. These are, in part, related to a revision of the Maximum Design Scenario (MDS). As originally presented, it was assumed that up to 24% of the array area infrastructure (ie foundation and cable infrastructure) would be placed within the pMCZ [APP-104]. This was reduced from 24% to 10.5% and the implications for temporary and long-term or permanent habitat loss were set out in full in the Applicant's response to NE at Deadline 2 [REP2-004].
- 6.4.66. In response, NE emphasised the importance of knowing the extent of operations expected to occur in each feature in order to undertake an impact assessment and acknowledged that the Applicant had presented such information [REP3-023]. However, NE declined to comment on the

conservation implications before the close of the Examination because it was unclear how the values for the revised MDS of 10.5% of coincident array infrastructure were calculated [REP7-073].

- 6.4.67. We do not share this lack of clarity because the way in which the MDS impacts were apportioned was originally set out in Volume 2, Chapter 2 of the ES [APP-062]. The impacts of different project elements in different phases were calculated for the whole of the array, apportioned (at 24%) to the overlapping pMCZ area and then sub-divided according to the extent of each habitat feature that is present, ie 12.95% within subtidal mixed sediment and 10.63% within subtidal sand. The potential for all of the apportioned infrastructure to be placed within the subtidal mixed sediment habitat type was assumed for each phase because it covered the majority of the overlapping pMCZ area.
- 6.4.68. If the same proportions and extent of habitat are assumed and the revised apportioning (at 10.5%) is applied, then the derivation of the revised estimates can be understood in the light of the original assessment [REP2-004 and REP3-023]. Although we note that the habitat patches are not contiguous in Figure 4.5 of [APP-104], we are nevertheless satisfied that this approach gives a reasonable approximation of the extent of likely impacts. This is because the chances of encountering a particular habitat would be broadly proportional to its spatial extent.
- 6.4.69. Given the above, we conclude that the extent and detail of the impacts on different habitat features in the pMCZ have been adequately assessed for each phase of the project for both a 24% and 10.5% MDS. The 10.5% MDS would be secured through conditions 2(9) of the of the generation assets DML and 2(11) of the transmission assets DML which commit the undertaker to a fixed amount of infrastructure in the event that Markham's Triangle is designated an MCZ.
- 6.4.70. Turning to rock protection, we draw the same conclusions as we have for the Cromer Shoal and Chalk Beds MCZ. Namely, that the effectiveness of rock decommissioning cannot be adequately demonstrated at the current time. This means that the area of rock protection associated with interconnector cables, crossings and foundations within the pMCZ should be treated as a permanent habitat loss.
- 6.4.71. The Applicant confirmed at ISH7 [REP7-009] that the permanent habitat loss, assuming no rock protection decommissioning, would be approximately 540,038m². Assuming the 10% WCS and following the above method of apportioning, the likely impacts would be:
- Subtidal coarse sediment (540,038m²) = 0.37%;
 - Subtidal mixed sediment (69,935m²) = 0.25%; and
 - Subtidal sand (57,406m²) = 0.22%.
- 6.4.72. Whilst small, these losses would nevertheless hinder the recovery of these habitat features because it would be in addition to the bottom trawling and dredging that have already contributed to the unfavourable condition of the benthic habitats in this part of the North Sea. If

designated, the rock protection would also be contrary to the broad objective to maintain the extent of different features.

- 6.4.73. We note that “sensitive” cable protection would be deployed comprising gravel and cobbles with a mean grain size between 100mm to 250mm and foundation scour protection up to 360mm [APP-062]. Whilst this would be more akin to the particle distribution size of at least two of the qualifying features, it would nevertheless be subject to different geophysical processes given its prominence in comparison to the surrounding seabed. As such, we do not accept that this provides sufficient mitigation to outweigh the harm that would be caused.
- 6.4.74. Given the above, we conclude that the rock protection would lead to a permanent change in the distribution and extent of its subtidal coarse sediment, subtidal mixed sediment and subtidal sand features to the detriment of their physical structure and associated biological communities.
- 6.4.75. Turning to the temporary pre-construction and construction phase impacts, the Applicant has defined the extent of habitat features that are likely to be affected as follows:
- Subtidal coarse sediment (3,914,975m²) = 2.69%
 - Subtidal mixed sediment (507,180m²) = 1.84%
 - Subtidal sand (416,002m²) = 1.58%
- 6.4.76. These calculations are based on the total temporary habitat loss (ie 3,914,975 m²), as set out for the 10.5% MDS [REP3-023].
- 6.4.77. Temporary habitat loss during the operation phase that would arise from maintenance activities such as cable reburial, jack-up operations and anchor placement would be as follows:
- Subtidal coarse sediment (716,518m²) = 0.49%
 - Subtidal mixed sediment (92,824m²) = 0.34%
 - Subtidal sand (76,137m²) = 0.29%
- 6.4.78. These calculations are based on the total temporary habitat loss for cable re-burial (ie 131,324m²) and jack-up operations/ anchor placement (ie 585,194m²), as set out for the 10.5% MDS [REP3-023].
- 6.4.79. The Applicant concludes that the sensitivity of the benthic habitat features to temporary loss/ disturbance within the pMCZ is low and that the construction and operation phase would only lead to minor and negligible adverse effects respectively. Bearing in mind the extent of the predicted impacts and the supporting assessment [APP-104], we accept this conclusion which is not disputed.

Overall Conclusion

- 6.4.80. We conclude that there would be a permanent adverse effect on habitats and species of principal importance for the purpose of conserving biodiversity resulting from rock protection measures and that this could

not be mitigated through its removal. This would be contrary to the EN-3 in respect to the general need to mitigate impacts on subtidal habitats (paragraph 2.6.119) and EN-1 in respect to the need to mitigate any adverse impacts on habitats or species of principle importance for the purposes of conserving biodiversity (paragraph 2.3.17). It would also be contrary to one of the aims of the Government's Working with the Grain of Nature²⁴ in that it would fail to maintain and promote the recovery of the overall quality of our seas, their physical and biological processes and biodiversity (paragraph 5.3.6).

- 6.4.81. The remainder of these conclusions only apply if the site has been designated as an MCZ before the application is determined. In our view, the permanent adverse effects referred to above would hinder the achievement of conservation objectives. Consequently, if this proves to be the case, then a Stage II assessment would be recommended.
- 6.4.82. The same respective positions would apply to this site, as discussed above in relation to the Cromer Shoal Chalk Beds MCZ, in the event that it is designated before the application is determined. For the sake of brevity this text will not be repeated although we will conclude on the tests as set out under section 126(7) of the MCCA.
- 6.4.83. In relation to the first test, we are unable to conclude that there would be no other means of proceeding. This is because the Applicant did not consider it reasonable to go further in submissions on section 126(7) [REP10-038] in response to a question that we asked during the examination (Q2.2.46 [PD-012]).
- 6.4.84. In relation to the second test, we conclude that the benefit to the public of proceeding with the act would clearly outweigh the risk of damage to the environment because of the national need for this infrastructure as set out in EN-1 and EN-3.
- 6.4.85. In relation to the third test, we conclude that whilst the condition proposed by the Applicant at Deadline 10 [REP10-038] would ensure further consideration of MEEB, we do not feel we can recommend the imposition of a condition in circumstances where we have no knowledge of the nature of the measures that may be proposed. Consequently, we are unable to advise the SoS on the application of this test which would require further consultation prior to any consent being granted.

Marine Mammal Receptors

- 6.4.86. A total of five species of marine mammal were identified as valued ecological receptors in the ES [APP-064] as follows:
- Harbour porpoise;
 - White-beaked dolphin;
 - Minke whale;

²⁴ Working with the grain of nature: a biodiversity strategy for England (2011). Department for Environment, Food & Rural Affairs.

- Harbour seal; and
- Grey seal.

- 6.4.87. The following conclusions apply to all species apart from harbour porpoise which is considered in Chapter 17. The ES concludes that the Proposed Development would not lead to significant disturbance or physical injury to these species or significantly contribute to any cumulative harm [APP-064].
- 6.4.88. The MMO agrees with the conclusions of the ES, subject to the mitigation that would be provided by the Marine Mammal Mitigation Protocol (MMMP) and a separate UXO clearance marine license application [REP9-023]. The MMMP would be secured by condition 13(1)(g) of the generation assets DML and 14(1)(g) of the transmission assets DML which commit the undertaker to develop and secure approval of marine mammal mitigation in the event that pile driven foundations are used.
- 6.4.89. NE also agrees with the conclusions of the ES, subject to the above mitigation as well as the production of a Site Integrity Plan (SIP) [REP4-066] and strategic measures that would ensure that Round 3 OWF projects do not exceed the 20% disturbance threshold through simultaneous piling activity [REP1-218 and REP9-022]. The SIP would be secured through conditions 13(5) of the generation assets DML and 14(5) of the transmission assets DML which commit the undertaker to developing and securing approval of a SIP prior to the commencement of any pile-driven works.
- 6.4.90. In relation to the strategic management of underwater noise, we note that the Review of Consents process offers a potential control mechanism but that this is a separate regulatory regime that is beyond the scope of an application made PA2008. Consequently, this matter will not be considered further.
- 6.4.91. TWT and Whale and Dolphin Conservation (WDC) have a number of outstanding concerns [REP1-023, REP1-022 and REP4-117, REP9-024] which have been addressed in Chapter 17. None of these were found to weigh significantly against the Proposed Development.
- 6.4.92. Given the above and considering all other matters raised, we conclude that there would be no significant individual or cumulative harm to marine mammal species.

Offshore Ornithology Receptors

- 6.4.93. Offshore ornithology impacts are considered in Chapter 17 and will not be repeated here. Having considered the evidence and mitigation measures relating to offshore birds, we conclude that there would be no significant individual or cumulative harm to these species.

Fish and Shellfish Receptors

- 6.4.94. Impacts on fish and shellfish receptors from all stages of the project were assessed in the ES, including impacts from habitat loss, underwater

noise, increased suspended sediments and deposition, pollution events and EMF [APP-063 and APP-105].

- 6.4.95. Throughout the construction, operation and decommissioning phases, all impacts were found to have either negligible, minor adverse or minor beneficial effects on fish or shellfish receptors (which is not significant in EIA terms) within the fish and shellfish study area [APP-063].
- 6.4.96. Furthermore, no underwater noise from construction activities, such as pile driving, was predicted to overlap with key fish spawning habitats within the fish and shellfish study area. No barrier effects were predicted in relation to migratory fish species listed as qualifying features of N2K sites, including the Humber Estuary SAC [APP-063].
- 6.4.97. NE agrees that the baseline characterisation, assessment of impacts and ES conclusions are acceptable [REP1-218]. The MMO raised concerns over the effects of simultaneous piling on the Flamborough Head herring spawning grounds, sandeel disturbance during the spawning season and the need for post-construction monitoring to include sandeel habitat suitability mapping. However, these matters were resolved during the course of the Examination and no outstanding matters remain [REP9-023].
- 6.4.98. This is not the case for the Eastern Inshore Fisheries and Conservation Authority (EIFCA) and concerns remain over the scope of the ES and EMF emissions. More specifically, EIFCA highlights the need for a wider regional assessment of the cumulative impacts of OWF development on important spawning and nursery areas off the East Anglian coast as well as a greater understanding of the impacts of EMF on fish and shellfish receptors [REP1-118].
- 6.4.99. The Applicant accepts that there are uncertainties in relation to the effects of EMF on fish and shellfish receptors and has committed to a further review of available evidence prior to construction as secured through the CSIP [REP7-016]. The EIFCA acknowledges that there are still large knowledge gaps regarding the impacts of EMF on fish and shellfish receptors but has highlighted a study by Scott et al. (2018)²⁵ which identifies potential impacts on the behaviour and physiology of edible crab [REP1-118].
- 6.4.100. However, as a copy of this study was not submitted as evidence, we can only give it negligible weight. We are also conscious of the fact that the study only relates to a single species and we have no other substantiated evidence before us concerning potential EMF impacts. Given the acknowledged gaps in fundamental knowledge we find that a further review of available evidence prior to construction is both a proportionate

²⁵ Scott, K., Harsanyi, P. and Lyndon, A.R. (2018) Understanding the effects of electromagnetic field emissions from Marine Renewable Energy Devices (MREDs) on the commercially important edible crab, *Cancer pagurus* (L.). Marine Pollution Bulletin, 131: 580-588.

and reasonable approach to managing uncertainty and consequent risk to these receptors.

- 6.4.101. Turning to the need for a wider, regional assessment, such matters are of a strategic nature and are beyond the scope of an application made under PA2008. Consequently, this matter will not be considered further.
- 6.4.102. We note that the Applicant has evaluated the cumulative effects of the Proposed Development on fish and shellfish populations which includes the effects associated with EMF and other projects [APP-063]. We consider that this assessment satisfies the requirements.
- 6.4.103. Given the above and considering all other matters raised, we conclude that there would be no significant individual or cumulative harm to fish and shellfish species.

Marine Processes

- 6.4.104. The potential impacts on marine processes are set out in the ES which concludes that all stages of the Proposed Development would only lead to either negligible or minor adverse individual or cumulative effects [APP-061]. Significance was specifically assessed in relation to physical changes to the shoreline, offshore sandbanks and the Flamborough Front. These features are considered to be sensitive receptors by the Applicant. No other features were identified during the course of the Examination.
- 6.4.105. The Flamborough Front is an oceanographic feature that occurs where the different water masses from the northern and southern North Sea combine. This creates an area rich in nutrients, forming an important ecological feature which supports a wide range of marine fauna. It extends offshore from Flamborough Head and through the general area of the former Hornsea Zone in the summer months [APP-061 and APP-101].
- 6.4.106. NE has not disputed the conclusions of this assessment and has only commented on marine process issues insofar as they relate to site specific issues, as discussed above and in Chapter 17 [REP9-016]. The MMO does not have any outstanding concerns [REP9-023] despite a number of issues that were raised at an earlier stage of the Examination [REP1-224].
- 6.4.107. Given the above, and notwithstanding the harm that we have identified in relation to benthic habitats, we conclude that there would be no significant individual or cumulative harm to broader marine processes.

6.5. CONCLUSIONS

- 6.5.1. The Applicant has carried out meaningful consultation through the Marine Processes, Benthic Ecology and Fish and Shellfish Ecology Expert Working Group which comprised the MMO, Centre for Environment, Fisheries and Aquaculture Science, NE and TWT as detailed in Tables 1.4, 2.6 and 3.6 of the ES [APP-061, APP-062 and APP-063 respectively].

- 6.5.2. We are satisfied that the ES describes those aspects of the marine environment likely to be significantly affected by all stages of the Proposed Development as well as measures for avoiding or mitigating any significant adverse effects that may arise. Some of the proposed mitigation measures have resulted from the process of engagement whilst others originate from established best practice.
- 6.5.3. The ES clearly sets out the Applicant's view on the potential effects on specific elements of offshore biodiversity including fish, intertidal habitats, marine mammals, subtidal habitats and birds. It has assumed a realistic worst-case scenario in relation to the width of export cable corridor and the extent of infrastructure within the array area. Transboundary effects have been considered and the screening exercise found that there was no potential for significant transboundary effects with regard to offshore ecology or marine processes.
- 6.5.4. However, we do not agree that the effect of rock protection measures or sandwave clearance on benthic habitats can be adequately mitigated as set out in the ES [APP-062] or subsequent representations [REP1-183, REP4-012, REP6-018 and REP10-045]. We consider that rock protection would lead to a permanent change in the distribution and extent of the subtidal sand feature to the detriment of its physical structure and associated biological communities. We acknowledge that this would only affect a relatively small area of habitat but nevertheless find that the effect would not be negligible owing to its permanent nature and the potential for small, but nonetheless cumulative, effects.
- 6.5.5. We do not agree that the effects of sandwave clearance would be temporary. We agree that some of the affected area would recover but we are not confident that all of it would. The precise area of permanent impact is not known.
- 6.5.6. Consequently, the use of such measures would lead to a small but permanent loss of habitat which would harm the qualifying features and hinder the conservation objectives of the Cromer Shoal Chalk Beds MCZ. This would also be the case for Markham's Triangle pMCZ if similar objectives are set once designated.
- 6.5.7. Rock protection measures and sandwave clearance would also have wider impacts on marine biodiversity that would not be mitigated by the incidental colonisation of these structures.
- 6.5.8. We conclude that the Proposed Development would be contrary to EN-1, EN-3, the MCAA, the Marine Policy Statement 2011 and Policies MPA1 and BIO1 of the East Inshore and East Offshore Marine Plans 2016. We consider that these issues weigh significantly against the Order being made.

7. NAVIGATION AND OTHER OFFSHORE OPERATIONS

7.1. INTRODUCTION

7.1.1. This chapter reports on the effects of the Proposed Development on navigation and other offshore operations, particularly oil and gas operations, in relation to the tests set out in the National Policy Statement for Renewable Energy Infrastructure (EN-3). Effects on navigation and other offshore operations are identified as a principal issue in our initial assessment [PD-006, Annex B]. Effects on commercial fishing are covered in Chapter 8.

7.1.2. This chapter is organised as follows:

- Policy considerations;
- Applicant's approach;
- Effects on navigational safety;
- Other users;
- Allision risk to Spirit Energy's assets;
- Helicopter access to Spirit Energy's assets;
- Effect on future Spirit Energy operations;
- ALARP and safety considerations;
- Proposed protective provisions; and
- Conclusions.

7.2. POLICY CONSIDERATIONS

7.2.1. EN-3 sets out policy in relation to the effects of offshore wind farms on navigation and shipping, including the following:

- Wind farms should not be consented where they would pose unacceptable risks to navigational safety after mitigation measures have been adopted (paragraphs 2.6.147 and 2.6.165).
- The use of the sea by recreational craft is an important consideration (paragraph 2.6.151).
- Applicants should establish stakeholder engagement with interested parties in the navigation sector early in the development phase of the proposed offshore wind farm (paragraph 2.6.153).
- Applicants should undertake a navigational risk assessment in accordance with relevant Government guidance prepared in consultation with the Maritime and Coastguard Agency (MCA) and other navigation stakeholders (paragraph 2.6.156).
- Development consent should not be granted in relation to the construction of an offshore wind farm if interference with the use of recognised sea lanes essential to international navigation is likely to be caused (paragraph 2.6.161).
- Site selection should be made with a view to avoiding or minimising disruption or economic loss to the shipping and navigation industries with particular regard to approaches to ports and to strategic routes (paragraph 2.6.162).

- Where a proposed offshore wind farm is likely to affect less strategically important shipping routes, a pragmatic approach should be employed by the decision maker²⁶ - the applicant should minimise negative impacts to as low as reasonably practicable (ALARP) (paragraph 2.6.163).
- A detailed Search and Rescue (SAR) response assessment should be undertaken prior to commencement of construction (paragraph 2.6.164).
- Providing proposed schemes have been carefully designed and the necessary consultation has been undertaken at an early stage, mitigation measures may be possible to negate or reduce effects on navigation to a level sufficient to enable consent to be granted (paragraph 2.6.167).
- Mitigation measures will include site configuration, lighting and marking of projects to take account of any requirements of the General Lighthouse Authority and also the provision of an acceptable active safety management system (paragraph 2.6.174).

7.2.2. EN-3 goes on to set out policy in relation to oil, gas and other offshore activities, including the following:

- Where a potential offshore wind farm is proposed close to existing operational offshore infrastructure or has the potential to affect activities for which a licence has been issued by Government, the Applicant should undertake an assessment of the potential effect of the Proposed Development on such existing or permitted infrastructure or activities (2.6.179).
- Applicants should engage with interested parties in the potentially affected offshore sectors early in the development phase of the proposed offshore wind farm with an aim to resolve as many issues as possible prior to the submission of an application (paragraph 2.6.180).
- Stakeholder engagement should continue throughout the life of the development - such engagement should be taken to ensure that solutions are sought that allow offshore wind farms and other uses of the sea to successfully co-exist (paragraph 2.6.181).
- Where a proposed offshore wind farm potentially affects other offshore infrastructure or activity, a pragmatic approach should be employed. Much of this infrastructure is important to other offshore industries as is its contribution to the UK economy. In such circumstances the decision maker should expect the applicant to minimise negative impacts and reduce risks to as low as reasonably practicable (paragraph 2.6.183).
- The decision-maker should be satisfied that the site selection and site design of the proposed offshore wind farm has been made with a view to avoiding or minimising disruption or economic loss or any adverse effect on safety to other offshore industries. The decision-maker should not consent applications which pose unacceptable risks to

²⁶ EN-3 refers to the former IPC (Infrastructure Planning Commission) which was expected to have a decision making function at the time the NPS was prepared. References to the IPC have been amended to "the decision-maker".

safety after mitigation measures have been considered (paragraph 2.6.184).

- Where a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity, the decision-maker should give these adverse effects substantial weight in its decision-making (paragraph 2.6.185).
- Providing proposed schemes have been carefully designed by the applicant, and that the necessary consultation with relevant bodies has been undertaken at an early stage, mitigation measures may be possible to negate or reduce effects on other offshore infrastructure or operations to a level sufficient to enable the decision-maker to grant consent (paragraph 2.6.186).
- 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. As such, appropriate mitigation should be included in any application and ideally agreed between relevant parties (paragraph 2.6.187).
- The decision-maker may wish to consider the potential to use requirements involving arbitration as a means of resolving how adverse impacts on other commercial activities will be addressed (paragraph 2.6.188).

7.2.3. The policies of the East Inshore and East Offshore Marine Plans (EIEOMP) include WIND2 which states that proposals for offshore wind farms inside Round 3 zones, including relevant supporting projects and infrastructure, should be supported. However, the EIEOMP notes that other policies should be considered when applying the support outlined in WIND2. This includes Policy OG2 which states that proposals for new oil and gas activity should be supported over proposals for other development.

7.2.4. Both the Marine Policy Statement (MPS) and the EIEOMP address the issue of promoting compatibility and reducing conflict between activities in order to manage the use of space within the marine environment in an efficient and effective manner. Policy GOV2 states that opportunities for co-existence should be maximised wherever possible.

7.3. THE APPLICANT'S APPROACH

7.3.1. The ES includes indicative layouts for the wind turbine array. The final design plan would be submitted for the approval of the Marine Management Organisation (MMO) under Condition 13 of the Deemed Marine Licence (DML) (generation Assets) (Schedule 11 of the recommended Development Consent Order (DCO)). In a similar way, design plans for other elements of the offshore infrastructure including cable laying, substations, booster stations (if required) and accommodation platforms would be approved under conditions of the DMLs. An important aspect of the Applicant's approach has been to seek to agree with stakeholders a set of Layout Development Principles that the detailed design plans would conform to. By the end of the Examination the Layout Development Principles had been agreed with the MCA [REP10-033].

- 7.3.2. The Proposed Development would lie to the east of Hornsea Project One and Hornsea Project Two. Together, the three projects would have an east/west extent of around 80 nautical miles (nm). To facilitate north/south shipping movements the Applicant proposes a navigation corridor between Hornsea Projects One and Two (to the west) and the Proposed Development (to the east). The Layout Development Principles state that the western boundary of the Proposed Development shall be broadly parallel to the eastern boundaries of Hornsea Project One and Hornsea Project Two and that the navigation corridor shall be no less than 3.91nm in width. The general location of the navigation corridor can be seen in Figure 18.9 of the Navigational Risk Assessment [APP-112].
- 7.3.3. The ES chapters of relevance to this topic are:
- Chapter 7 – Shipping and Navigation [APP-067];
 - Chapter 8 – Aviation, Military and Communications [APP-068]; and
 - Chapter 11 – Infrastructure and Other Users [APP-071].
- 7.3.4. These are supplemented by the following technical reports:
- Navigational Risk Assessment (NRA) [APP-112];
 - Aviation, Military and Communications Technical Report [APP-113]; and
 - Radar Early Warning Technical Report [APP-119].
- 7.3.5. A hazard workshop was undertaken during which a project and site-specific hazard log was prepared. This information fed into a formal safety assessment process which formed part of the NRA, in accordance with relevant MCA guidance.
- 7.3.6. Potential impacts assessed in the Shipping and Navigation chapter of the ES [APP-067] include:
- displacement of vessels during construction leading to increased journey times;
 - increased vessel to structure allision risk²⁷ during construction, including for recreational and fishing vessels;
 - increased risk of gear snagging for fishing vessels during construction;
 - displacement of commercial vessels (including ferries) during operation leading to increased journey times during adverse weather;
 - presence of infrastructure may cause vessels to deviate leading to increased vessel to vessel collision risk;
 - presence of infrastructure may increase vessel to structure allision risk, including for recreational and fishing vessels and vessels not under command (NUC);
 - presence of subsea HVAC booster stations and cable protection may increase vessel to subsea structure allision risk for all vessels; and
 - increased risk of gear snagging for fishing vessels during operation.

²⁷ The risk of a vessel coming into contact with a fixed structure

- 7.3.7. The designed in-measures to reduce these potential impacts include:
- use of safety zones during construction, maintenance and decommissioning;
 - minimum rotor blade clearance (34.97m above Lowest Astronomical Tide);
 - buoyed construction areas;
 - cable burial risk assessment;
 - guard vessels;
 - aids to navigation;
 - information and warnings to be distributed via Notices to Mariners and other appropriate media; and
 - vessel traffic monitoring for the duration of the construction period.
- 7.3.8. The ES concludes that there would be no impacts of major or moderate significance in the construction or decommissioning phases. In the operational phase one impact is assessed to be moderate adverse. This relates to increased collision risk due to subsea HVAC booster stations and cable protection. Further mitigations are proposed to reduce this impact to minor, including further consultation with MCA and Trinity House, detailed siting of subsea booster stations and additional buoyage. All cumulative effects are assessed as minor adverse.
- 7.3.9. Transboundary issues could arise from the array area having an effect upon commercial shipping routes between the UK and European ports. However, given the minor deviations expected, the impact is assessed to be not significant.
- 7.3.10. Potential impacts assessed in the Aviation, Military and Communications chapter of the ES [APP-068] include:
- helicopter operations associated with construction may affect the available airspace for other users;
 - wind turbines will form an obstruction resulting in disruption to helicopters using helicopter routes;
 - wind turbines will form an obstruction and may disrupt helicopter access to oil and gas platforms; and
 - wind turbines will form an obstruction and may disrupt helicopter access to helideck equipped drilling rigs and vessels conducting operations at subsea infrastructure and well locations.
- 7.3.11. The designed-in measures to reduce these potential impacts include:
- the UK Hydrographic Office would be informed of the locations, heights and lighting status of the wind turbines prior to the start of construction, to allow inclusion on aviation charts;
 - an emergency response and cooperation plan would be in place during the operational phase and would detail specific marking and lighting of the wind turbines; and
 - continued consultation with the Ministry of Defence regarding aviation lighting requirements.

- 7.3.12. The ES concludes that there would be no significant effects during construction, operation, maintenance or decommissioning phases. Nor would there be any significant cumulative or transboundary effects.
- 7.3.13. Potential impacts assessed in the Infrastructure and Other Users chapter of the ES [APP-071] include:
- during construction and operation, wind farm infrastructure and safety zones may displace recreational craft and recreational fishing vessels resulting in a loss of recreational resource;
 - construction activities may affect (or restrict access to) existing cables and pipelines;
 - construction activities may lead to increased suspended sediment concentrations and deposition, which could cause a change in aggregate resource in aggregate extraction areas;
 - during construction, wind farm infrastructure and safety zones may restrict seismic survey activity, drilling and placement of infrastructure by other users;
 - piling of wind farm foundations may interfere acoustically with seismic survey operations;
 - the presence of wind farm infrastructure may restrict potential seismic survey activity, drilling and the placement of infrastructure by other users;
 - the presence of new wind turbines in previously open sea areas may cause interference with the performance of the radar early warning systems located on oil and gas platforms or a change in the alarms on platforms protected by such systems; and
 - wind turbines and associated infrastructure will form a physical obstruction and may disrupt vessel access to oil and gas platforms and subsea infrastructure.
- 7.3.14. The designed-in measures to reduce these potential impacts include:
- cable crossing agreements and pipeline crossing/proximity agreements would be established with relevant operators;
 - the undertaker would seek 500m safety zones around wind turbines and other infrastructure whilst construction/decommissioning works are taking place;
 - during the operational phase, the undertaker would seek a 500m safety zone around manned offshore platforms;
 - the undertaker would recommend 1,000m advisory safety distances around vessels undertaking construction, major maintenance and decommissioning activities;
 - promulgation of information including regular Notices to Mariners, navigational aids and marine charting updates; and
 - mitigation measures to reduce the effect on the radar early warning system on the J6-A platform.
- 7.3.15. The ES concludes that there would be no significant effects during the construction, operation, maintenance or decommissioning phases. Nor would there be any significant cumulative or transboundary effects.

7.4. EFFECTS ON NAVIGATIONAL SAFETY

- 7.4.1. This section covers the matters relating to navigational safety that arose during the Examination, other than those relating to effects on the current and future operations of Spirit Energy Nederland BV; Spirit Energy North Sea Limited and Spirit Energy Resources Limited (Spirit Energy). Matters relating to Spirit Energy are covered in later sections of this chapter.

Vessel to vessel collision risk

- 7.4.2. The Navigational Risk Assessment (NRA) [APP-112] describes the collision risk modelling that has been undertaken. The modelled vessel to vessel collision risk in the Hornsea Project Three array area is a major collision return period of 1 in 193 years. Following construction of the proposed array the risk would increase to 1 in 152 years. The ES [APP-067] characterises this as a negligible effect. In response to our Q1.5.1 [PD-008] the Applicant states that this value is precautionary. Table 1.1 [REP1-153] shows that the modelled increase in collision risk of 21% compares favourably with other consented offshore wind farms, including Hornsea Project Two (41%) and Dogger Bank Teesside A & B (29%). Moreover, the Applicant emphasised that collision risk modelling is only one input to the ES assessment. Those attending the hazard workshop had agreed that the increased risk was negligible [REP1-122].
- 7.4.3. In its SoCG with the Applicant [REP10-021] the MCA confirms that both the hazard workshop and the mathematical modelling undertaken for the application meet the requirements of the Methodology for Assessing Marine Navigational Safety Risks of Offshore Wind Farms (MCA, 2015). MCA also confirms that the outputs from the models were within broadly acceptable parameters. We note that the hazard workshop process allowed local users to input into the NRA process. Having regard to the MCA's endorsement of the process followed, we attach significant weight to the outcome of the NRA.

Allision risk – subsea structures

- 7.4.4. The ES [APP-067] discusses the vessel to subsea structure allision risk resulting from presence of subsea high voltage alternating current (HVAC) booster stations and cable protection. The NRA [APP-112] identifies a key area of risk approximately 5nm north of the landfall location, together with specific cable/pipeline crossings which may be of concern.
- 7.4.5. In answer to our Q1.5.3 [PD-008] the Applicant stated that the MCA accepts up to a 5% reduction in water depth in surrounding charted depths. If the reduction is greater, consultation must be undertaken with the MCA to show that any navigational risks can be satisfactorily mitigated. The cables would cross shallows near Sheringham Shoal and the NRA identifies specific cable/ pipeline crossings of potential concern. The risk would be controlled through carrying out full bathymetric surveys post-consent, completing crossing agreements with relevant operators and through the Cable Specification and Installation Plan

(CSIP). Further mitigation, if required, could include allision modelling, marking on Admiralty charts and buoyage [REP1-122].

- 7.4.6. We note that under Condition 13(1)(h)(iii) (Schedule 11) and Condition 14(1)(h)(iii) (Schedule 12) of the Deemed Marine Licences the cable laying plan would identify any cable protection that exceeds 5% of navigable depth. The cable laying plan would be part of the CSIP, which would be subject to the approval of the MMO. Details of any measures needed to ensure that safe navigation would not be compromised would have to be approved by MMO, in consultation with MCA and Trinity House. We consider that this is an appropriate control measure to address the risk identified in the NRA.

The Layout Development Principles

- 7.4.7. The Layout Development Principles were amended during the Examination, in response to discussions between the Applicant and MCA. MCA's Relevant Representation [RR-060] identified a concern relating to the suggested tolerance for siting turbines up to 150m from the centre line of a development corridor. MCA considered this would be harmful to SAR capabilities and navigational safety. MCA also wished to see provision for a helicopter refuge area, perpendicular to the orientation of the development lanes. In answer to our Q1.5.5 [PD-008] the MCA stated that a helicopter refuge area would enable SAR helicopters to turn within the array, rather than continuing to the end of a development lane.
- 7.4.8. At ISH1 [EV-012] the Applicant's SAR expert presented evidence about the ability of helicopters to carry out search operations and to turn within development lanes. In response to our request for further information [PD-016], MCA reiterated its view (and that of its SAR contractor) that SAR aircraft will not normally attempt to turn within a development lane or to transit between adjacent lanes. MCA had considered the suggestion that fitting automatic identification transmitters on selected turbines would aid orientation for SAR pilots. Whilst this would aid identification of turbines, MCA does not accept that it would obviate the need for a helicopter refuge area, particularly if there is to be only one line of orientation [REP7-102].
- 7.4.9. Technical issues relating to the manoeuvring and search capabilities of SAR aircraft remained unresolved at the end of the Examination. Nevertheless, at ISH8 [EV-028] the Applicant stated that agreement had been reached on all but one of the Layout Development Principles. In particular, the Applicant had agreed that there would be a helicopter refuge area in circumstances where there was a phased development (with different SAR access lane alignments) or where the detailed layout comprises SAR access lanes based on a single line of orientation exceeding 10nm. The agreed tolerance for surface infrastructure would be up to 100m from the centre line of any internal development lane. These agreements are reflected in the final Layout Development principles [REP10-033] and the SoCG between the Applicant and MCA [REP10-021].

- 7.4.10. The outstanding point at ISH8 was the question of whether there should be a single line of orientation for the turbines. MCA had stated [REP7-102] that MGN 543 was rewritten in 2016 to require two lines of orientation unless there was a suitable safety reason why only one was considered acceptable. In answer to our question (Q2.5.1) [PD-012] Trinity House had stated that the recommendations of MGN 543 should be adhered to as closely as practicable. It commented that two lines of orientation are optimal for surface and air SAR operations. Whilst it acknowledged that there are windfarms with one line of orientation, it was argued that these had been individually assessed [REP5-024].
- 7.4.11. The Applicant submitted a Safety Justification for a Single Line of Orientation at Deadline 9 [REP9-054]. Factors considered included:
- Feedback from regular operators;
 - Generally low traffic densities;
 - Minimum turbine spacing of 1km which is significantly greater than previous offshore wind farms;
 - Analysis of behaviour of yachts and fishing vessels passing through the London Array shows small craft do not follow lines of orientation; and
 - Mitigation through adherence to MGN 543, with the Layout Development Principles considered to be a refinement of the guidance to meet the requirements of Hornsea Three.
- 7.4.12. The final SoCG with MCA records that MCA accepts the safety justification for a single line of orientation. However, there are aspects which remain unresolved, so this acceptance is on the understanding that mitigation measures remain open for discussion and that discussions regarding the layout will continue [REP10-021]. The SoCG also records agreement on the approach to offshore safety management set out in the Deemed Marine Licences. Under Condition 15 (Schedule 11) and Condition 16 (Schedule 12) an Emergency Response Co-operation Plan, which would accord with guidance in MGN 543, would be submitted for the approval of MMO, in consultation with MCA.
- 7.4.13. Whilst we note that some technical aspects have not been resolved between the Applicant and MCA, we attach significant weight to the agreements reached in relation to the Layout Development Principles and the approach to offshore safety management. The final design plan to be approved by the MMO would have to accord with those principles.

Conclusions on navigational safety

- 7.4.14. The Applicant has carried out an assessment of navigational risk in accordance with the relevant guidance, taking account of inputs from the MCA and other navigational stakeholders including local operators.
- 7.4.15. This is not a case where the Proposed Development would affect a strategic route. Whilst there would be some deviation of shipping, including vessels on east/west routes between the UK and European ports, the extent of deviation would not be significant. The Applicant has proposed mitigation in the form of a north/south navigation corridor, the

Layout Development Principles and other measures described in the ES. Taken together, we consider that these mitigation measures would reduce navigational risks to as low as reasonably practicable.

- 7.4.16. The Applicant has carried out an assessment of the effects on SAR operations. We consider that concerns about effects on SAR operations expressed during the Examination have been addressed through amendments to the Layout Development Principles.
- 7.4.17. Where the NRA has identified potential risks, mitigation measures have been proposed. These measures would be secured through the Deemed Marine Licences. Taking account of the proposed mitigation, we conclude that the Proposed Development would not pose unacceptable risks to navigational safety. It would accord with EN-3 in this respect.

7.5. OTHER USERS

- 7.5.1. This section covers matters relating to other users, other than matters relating to effects on the current and future operations of Spirit Energy which are covered in later sections of this chapter.

Recreational users

- 7.5.2. Recreational users are considered in Chapter 11 of the ES [APP-071], which notes that the level of recreational activity within the proposed array area is low, and recreational fishing activity is likely to be limited, giving a very low frequency of impact. The effect on recreational users is assessed as negligible. During pre-application consultation neither the Cruising Association nor the Royal Yachting Association expressed any concerns given the low level of recreational activity at the distance offshore of the proposed array. The Royal Yachting Association had no concerns with the indicative layouts which were presented at the PEIR stage.
- 7.5.3. No significant concerns relating to recreational users were raised during the Examination and we see no reason to disagree with the assessments in the ES. We conclude that the Applicant has had regard to the effects on recreational users as required by EN-3.

Other offshore operations

- 7.5.4. Effects on helicopter operations are considered in Chapter 8 of the ES [APP-068]. Effects on marine aggregates and on cables and pipelines belonging to other offshore operators are considered in Chapter 11 of the ES [APP-071]. No significant effects are identified.
- 7.5.5. A Relevant Representation from Equinor [RR-032], the current operator of the Dudgeon transmission assets, stated that it was expected that proximity and crossing agreements would be sought in due course. Relevant Representations from Conoco Philips [RR-036] and Shell UK Limited [RR-150] referred to the need for asset protection arrangements for their pipelines, including crossing and proximity agreements. Neptune E&P UK Limited [RR-063] referred to potential effects on helicopter

flights between Norwich Airport and its operations in the Cygnus gas field. In response to our Q1.5.8 [PD-008], Conoco Phillips also expressed concern about access to its platforms [REP1-116].

- 7.5.6. At the end of the Examination the Applicant stated that it had engaged with Conoco Phillips and both parties had agreed that no further action was required in the context of the Examination. Crossing and proximity agreements would be entered into closer to the time of construction [REP10-024]. Shell UK Limited confirms that it has entered an agreement with the Applicant which would ensure appropriate protection for its pipelines [REP10-007]. Neptune had provided a letter of comfort at Deadline 1 which indicates that there were continuing discussions regarding any mitigation measures that would be required [REP1-101].
- 7.5.7. We are satisfied that these matters have been resolved to the extent that they need to be for the purposes of this Examination. There is no reason to think that there would be significant adverse effects on the offshore operations discussed in this section.

7.6. ALLISION RISKS TO SPIRIT ENERGY'S ASSETS

- 7.6.1. Spirit Energy operates a number of assets in the area to the east of the proposed array. These are described more fully in Spirit Energy's Written Representation and shown on Figure 2 of that document [REP1-041]. Platform J6-A is a production hub located 4.5nm from the proposed array. The Chiswick platform is 1.5nm from the proposed array and the Grove platform is 2.4nm. These are normally unmanned installations (NUI) connected by subsea gas pipelines to J6-A. Spirit Energy has proposals to drill new subsea wells (C6 and C7) within the area of the Proposed Development, approximately 2nm to the west of Chiswick platform. Spirit Energy has other assets in the same field including the Grove G5 subsea well-head which is 1.1nm west of Grove Platform and 1.5nm from the edge of the proposed array. In relation to allision risks, Spirit Energy was particularly concerned about Chiswick and Grove platforms.
- 7.6.2. Spirit Energy submitted a Review of Marine Hazards [REP1-102] which identified a number of concerns including:
- Displacement of third-party traffic towards Spirit Energy assets, increasing traffic density and the risk of allision with severe or catastrophic consequences;
 - Reduction of drift and reaction times to vessels going NUC close to the eastern edge of the wind farm;
 - A reduction in the effect of the warning systems at J6-A which are required to monitor and manage errant vessels.
- 7.6.3. These matters were explored further at ISH1 [EV-012]. Spirit Energy stated that a 50kJ impact between a ship (such as a container ship) with a gas platform would result in total destruction of the platform. It was argued that the seriousness of this risk had not been addressed in the NRA. Amongst other concerns, Spirit Energy questioned the Applicant's assumption that ships on east/ west passages would not pass through

the proposed wind farm. Spirit Energy also commented on the time it might take for a NUC vessel to drift from the eastern edge of the proposed wind farm to the vicinity of Chiswick Platform, which was estimated to be 30 minutes to 2 hours depending on wind, tide and the nature of the NUC vessel.

- 7.6.4. At Deadline 3 Spirit Energy suggested that the proposed wind farm layout would have the effect of channelling vessels towards its platforms [REP3-060]. It was also argued that, in westerly gale conditions, a volume of displaced traffic travelling north/ south would pass to the east of the wind farm, rather than using the navigational corridor between the Proposed Development and Hornsea Projects One and Two. This would bring shipping closer to gas platforms. It was suggested that, in northerly gale conditions, a volume of displaced traffic travelling east/ west would divert around the south east corner of the proposed wind farm, bringing them close to Grove Platform.
- 7.6.5. Our Q2.5.8 [PD-012] drew attention to the baseline shipping routes shown in figure 3.3 and the predicted post-construction routes shown in figure 3.4 of the Applicant's Racon and AIS Review J6A Platform Technical Note [REP1-177]. We asked why vessels travelling north/ south would not use the navigational corridor and whether Spirit Energy's concern was limited to westerly gale conditions. Spirit Energy's response was that vessels may divert in any westerly winds, to avoid the risk of being driven on to the wind farm. Spirit Energy did not suggest that significant numbers would divert but argued that any increase is a risk which must be reduced to ALARP due to the catastrophic consequences of a collision [REP4-138].
- 7.6.6. The Applicant's response to Q2.5.8 [PD-012] was that the navigational corridor is designed for use in all weathers and has been agreed with MCA and Trinity House. Whilst some vessels may divert to the east of the proposed wind farm, this would not be common. [REP5-008]. Moreover, the baseline position is that much of the limited north/ south traffic in the area to the east of the Proposed Development is associated with Spirit Energy [REP1-177].
- 7.6.7. The Applicant states that baseline shipping routes were reviewed on a route by route basis. It was estimated that approximately 60% of east/ west traffic would re-route to the north and 40% to the south. For eastbound vessels, where it is efficient to re-route to the south, (approximately 1-2 per day), there is no benefit in then turning sharply north east towards Grove. These vessels are anticipated to carry on eastbound to either cross or join the Off Botney Ground Traffic Separation Scheme. North/ south traffic is not expected to route to the east of the wind farm in conditions of westerly gales as alternative inshore routes are available [REP9-030].
- 7.6.8. In answer to our questions at ISH8, Spirit Energy accepted that navigational corridors passing between wind farms are found elsewhere in UK waters. It was also accepted that the navigational corridor

proposed here would be used by most vessels, other than in westerly gale conditions. [EV-028]

- 7.6.9. MCA advice does not preclude vessels from navigating through wind farms and Spirit Energy consider that this may become more common in the future [REP1-102]. In response to our Q2.5.10 [PD-012] the Applicant submitted survey evidence of vessels tracks in the vicinity of wind farms at various locations around the UK [REP4-093]. The Applicant submits that the survey evidence, together with extensive consultation with local users, indicates that commercial shipping would not pass through the array [REP5-008]. The Applicant highlights the position of the ferry operator DFDS Seaways, who indicated they would instruct their ships to route around the outside of the wind farm.
- 7.6.10. At ISH8 Spirit Energy confirmed that J6-A is equipped with a Radar Early Warning System (REWS) which provides the required 20 minute warning of vessels heading towards gas platforms. Following further discussions with the REWS provider, Spirit Energy advised that there was confidence that the system would remain effective following construction of the array. There would be a need for post-construction testing of the system which may require some software updates. However, this was a matter which could be addressed through protective provisions [REP7-093].
- 7.6.11. At ISH8 the Applicant and Spirit Energy agreed that construction operations within the array would be subject to weather limits, such that barge movements would only be undertaken when conditions were suitable. It was also agreed that jack-up barges, once on station, would not be at risk from extreme weather. To the extent that there would be a risk from construction vessels becoming NUC, Spirit Energy agreed that this could be controlled by a management agreement [EV-028]. The Applicant submits that strict procedures would be in place to mitigate the risk of a drifting construction vessel, bearing in mind that the highest risk would be to wind farm structures which would generally be very much closer than oil and gas platforms [REP10-031].
- 7.6.12. Spirit Energy suggests that there should be a 2nm wide channel between Chiswick and Grove platforms and the eastern edge of the proposed array [REP7-093]. Without such a channel, Spirit Energy considers that there would be an unacceptable allision risk and a significant increase in REWS false alarms due to vessels heading towards Chiswick platform. The channel is also required, in Spirit Energy's view, to ensure adequate sea room for vessels servicing platforms and subsea infrastructure, a matter which is discussed below [REP9-077].
- 7.6.13. The Applicant states that any vessels likely to pass within 500 metres of the NUIs would be monitored from J6-A. Currently the number of alarms is low and mainly from fishing vessels. The alarms from commercial vessels are expected to reduce due to the displacement effect of the wind farm. The Applicant also states that it is illegal for a Master of a third-party vessel to pass within 500m of an oil and gas installation. An occasional vessel passing to the east of the wind farm would no doubt be

aware of the NUIs from navigational charts and would plan to pass at a safe distance [REP10-029].

Conclusions on allision risk

- 7.6.14. We have considered whether the Proposed Development would increase traffic density in the vicinity of the gas platforms. Baseline information is given in figure 3.3 [REP1-177]. This shows that, for east/ west traffic, there are routes to the north of Chiswick, between Chiswick and J6-A and to the south of Grove. The predicted post-construction routes shown in figure 3.4 indicate that most of these routes would be diverted further away from the platforms whilst the route south of Grove would be unaffected. Spirit Energy's assertion that shipping diverting to the south of the wind farm would then turn north east, towards Grove, was not in our view supported by convincing evidence. We attach greater weight to the Applicant's predicted routing which incorporates feedback from operators.
- 7.6.15. It is expected that commercial fishing would resume during the operation of the wind farm (see Chapter 8). However, commercial fishing vessels are already present so this would not represent any increase in allision risk. We accept that commercial shipping would not be precluded from passing through the wind farm. However, the Applicant's evidence on this point is based on extensive survey evidence which shows that, in general, commercial shipping will not pass through the array. This is reinforced by the results of consultation with existing operators. We find the evidence of the ferry operator DFDS Seaways very relevant because the ferry route currently passes through the area of the proposed array.
- 7.6.16. To the extent that some vessels may emerge from the array heading towards the platforms, allision risk would be managed by monitoring from J6-A as it is now. By the end of the Examination there was confidence that the REWS would continue to be effective during the operational phase of the wind farm. Should any mitigation be required, in terms of a post-construction update to REWS, this would be secured through protective provisions which are discussed further below.
- 7.6.17. Turning to north/ south traffic, we note that existing traffic to the east of the proposed array is light and mainly associated with Spirit Energy. Navigational corridors between wind farms are found elsewhere in UK waters and the survey evidence [REP4-093] shows that shipping tends to follow such corridors. The design of the navigational corridor proposed by the Applicant is intended for use in all weather conditions and is supported by MCA [REP10-021]. Its location appears to be well-aligned with pre-construction routes and we see no reason why it would not be effective in facilitating north/ south traffic.
- 7.6.18. Masters of individual vessels are free to navigate where they see fit, subject to any safety zones or traffic separation schemes that may be in place. We therefore take into account that a small number of vessels might divert around the east side of the Proposed Development as Spirit Energy suggests. Some commercial shipping (other than fishing vessels) may pass through the array. Nevertheless, the evidence before us clearly

indicates that the net effect of the Proposed Development would be to divert shipping away from Chiswick and Grove platforms rather than towards them. It follows from this conclusion that any risks associated with third party shipping becoming NUC and the likelihood of REWS false alarms would not be increased.

7.6.19. The majority of construction activity would be at some distance from Chiswick and Grove platforms. Moreover, we note that marine operations associated with construction would be subject to weather limits. We have referred above to the Emergency Response Co-operation Plan that would be submitted for the approval of MMO, in consultation with MCA. We consider that there would be adequate control measures in place in relation to the potential risk of construction vessels becoming NUC in the vicinity of the platforms.

7.6.20. Drawing all the above together, our overall assessment is that there would be no increase in collision risks to Spirit Energy's assets. The suggested 2nm wide channel is discussed further below.

7.7. HELICOPTER ACCESS TO SPIRIT ENERGY'S ASSETS

7.7.1. Chapter 8 of the ES considers the effect of the proposed wind turbines on helicopter access to Chiswick and Grove platforms. It states that weather conditions are such that direct instrument approach procedures are required about 5% of the time. The turbines would create an obstruction such that, in some wind conditions, an Airborne Radar Approach (ARA) would not be possible. This would prevent instrument approaches to Chiswick up to 3.49 days per year and to Grove up to 2.18 days per year. This is assessed to be a minor adverse impact [APP-068]. Spirit Energy's Written Representation [REP1-041] stated that the proximity of the wind turbines to Chiswick and Grove platforms would preclude a one engine inoperative ascent under most common meteorological conditions and, with a westerly wind, almost all instrument approaches would be prevented.

7.7.2. At ISH1 we identified that there were considerable differences between the Applicant and Spirit Energy on aviation matters. We asked the parties to seek to agree common data where possible and to set out a joint statement of any unresolved matters. There was further discussion at ISH8, including in relation to alternative flight paths that might be used. The parties agreed to work towards a joint position statement on the number of flights that would be precluded based on a common set of data assumptions.

7.7.3. The Applicant remains of the view that the impact on helicopter access would not be significant. Nevertheless, at Deadline 7 protective provisions were offered in order to seek to meet Spirit Energy's concerns [REP7-055]. The suggested protective provisions are discussed further below. At this stage it is sufficient to note that they would include:

- A restricted area of 2.8nm around Chiswick platform;
- A protected area of 2.8nm around Grove platform; and

- Protected areas of 1nm around the proposed C6 and C7 subsea wells.

- 7.7.4. Spirit Energy also suggested protective provisions at Deadline 7. These would provide for obstacle free helicopter flight volumes with a horizontal radius of 6nm around Chiswick and Grove Platforms, the Grove 5 subsea well head, the Kew subsea well head and the proposed C6 and C7 subsea well heads. No development could be carried out in these zones unless agreed by Spirit Energy [REP7-093].
- 7.7.5. A statement of areas of agreement on aviation matters was submitted at Deadline 9 [REP9-053]. For the purposes of the comparison common weather data and common criteria governing the allowable flight paths were used. A separation distance of 2.8nm was applied. On this basis the percentage increase in flight restrictions due to the presence of the Proposed Development were predicted to be 3.5% by the Applicant and 5% by Spirit Energy. Some technical differences remained as detailed in the document. There was therefore broad agreement on the effect on helicopter access although there was not agreement on the impact that would have on Spirit Energy's operations.
- 7.7.6. The Applicant submitted an update to its calculations at Deadline 10 [REP10-028]. This incorporated an adjustment to the weather criteria for icing conditions together with separate assessments for daytime and night time. The ES had not considered night time because at that time the platforms were not equipped for night flights. The revised assessment is that the annual average amount of time when only ARA flights are available is 7.9% (day) and 18.5% (night). The increase in flight restrictions due to the presence of the Proposed Development would be 2.7% (day) and 5.7% (night). The Applicant notes that these figures are, respectively, above and below Spirit Energy's figure of 5%. The Applicant considers that good progress has been made on aligning the results between the Applicant and Spirit Energy.
- 7.7.7. Spirit Energy characterises the separation distance of 2.8nm as the Applicant's calculation of the required distance for a one engine inoperative ascent from a platform. However, Spirit Energy considers that this distance makes no allowance for environmental effects such as turbulence, nor does it take account of the workload on the pilots. Consequently, it was stated that that simulator trials, attended by the North Sea helicopter operators, should be undertaken to validate the separation distance [REP9-074].
- 7.7.8. The Applicant argues that 2.8nm is not a minimum separation distance, it is an agreed separation distance subject to validation to provide additional comfort to Spirit Energy [REP10-029]. The Applicant considers that 2.4nm provides sufficient space for a circling ARA approach to the platforms and that 1.81nm would allow for the worst-case scenario of a one engine inoperative ascent.
- 7.7.9. The Applicant does not consider that simulator trials provide the appropriate mechanism for verifying the approach distance footprints because these are standard profiles, flown every day by the helicopter operators, based on standard regulatory requirements. The Applicant

considers that the parameters that have been used in the preparation of the footprints have been agreed with Spirit Energy and shared with the helicopter operators. The Applicant's position is that turbulence is not an issue and that, in any event, it cannot realistically be modelled in a simulator. If verification is required, then real time measurements at an existing wind farm would be needed. The Applicant considers that any simulator trial should happen at a time when both parties can plan the trial and when all of the operators' test pilots are available [REP9-030].

- 7.7.10. Spirit Energy arranged for a simulator trial to take place on 31 March 2019 [REP10-058]. Spirit Energy is satisfied that the results of this trial show that a take-off (even with an engine failure) could be executed within 2.8nm as calculated by the Applicant and Spirit Energy. Nevertheless, Spirit Energy has concerns about landing in certain conditions. The following conclusions were drawn from the report of the simulator trial:

A descent (not into wind) followed by circling the platform to make the final approach into wind proved to be very challenging and it was assessed that contrary to earlier calculations performed by the Applicant and Spirit Energy, this manoeuvre cannot safely be undertaken within 2.8nm rather a distance of 3.3nm from the nearest WTG would be required.

The findings of the trial support a separation (radius) between Spirit Energy's platforms and subsea wells (existing and proposed) of 3.3nm for the reasons set out in Appendix 4

- 7.7.11. This is basis for the protective provisions suggested by Spirit Energy which are discussed further below.

- 7.7.12. The Applicant and Spirit Energy submitted a joint position statement at Deadline 10 [REP10-025]. This was prepared before the simulator trials took place. The parties agreed that if a sufficient separation distance is maintained between any proposed turbines and Spirit Energy's assets, there would be a manageable impact on Spirit Energy's commercial flight operations. The note states that:

The simulator tests scheduled for 31 March 2019 were intended by Spirit Energy to provide the Examining Authority with a practicable assessment of the distances that will be required in protective provisions prior to the end of the examination phase on 2 April 2019. The Applicant does not agree that the results of this trial should inform any distances in the protective provisions as it considers that it was not given sufficient notice in order to participate in the simulations. As the helicopter operators will require more time to determine definitively the limits to which they will operate, this detailed information will not become available within the examination hearing period. Therefore, the parties intend to provide updated details to the Secretary of State after the end of examination, during the 3 month determination period.

Discussion of final positions on helicopter access

- 7.7.13. By the end of the Examination the Applicant and Spirit Energy had made considerable progress on narrowing their differences on aviation matters, including by reaching agreement on:
- the flight regulations underpinning the assessments;
 - the availability of alternative flight paths including en route descents, shuttle flights and circling ARA;
 - a common weather data set; and
 - the weather conditions that require ARA to be flown.
- 7.7.14. This resulted in an agreed position statement at Deadline 9 [REP9-053] in which the increase in flight restrictions due to the presence of the Proposed Development was predicted to be 3.5% by the Applicant and 5% by Spirit Energy. We do not consider this difference to be significant for the purposes of the Examination and have proceeded on the basis that the increased flight restrictions are likely to be in a range of 3.5% to 5%. The Applicant's subsequent analysis of daytime and night time flight restrictions adds weight to that conclusion. For the purposes of this comparison the separation distance was assumed to be 2.8nm.
- 7.7.15. Spirit Energy considered that the separation distance of 2.8nm required verification through simulator trials. Having carried out simulator trials on 31 March 2019, Spirit Energy submits that a separation distance of 3.3nm is required [REP10-058]. However, the report of the trials (Appendix 4 to REP10-058) does not make it clear how that figure was arrived at. As this information was submitted on the last day of the Examination, we did not have an opportunity to ask anything further about it. The Applicant (and other parties) did not have an opportunity to comment on the report of the simulator trials during the Examination. We consider there would be risk of procedural unfairness if we were to rely on data which other parties have not had the opportunity to comment on. Moreover, the Applicant had expressly stated that any trials would need to be jointly planned and carried out if they were to be of any value. That was not possible in the time available. For all these reasons we attach very little weight to the report of the simulator trials or to the specific figure of 3.3nm which it arrived at.
- 7.7.16. The joint position statement [REP9-053] was based on a separation distance of 2.8nm. Notwithstanding Spirit Energy's reservations, we accept the Applicant's evidence that this distance is based on standard flight profiles which are flown by the helicopter operators that the Applicant has consulted with. We therefore consider that a distance of 2.8nm is a sound basis for predicting the operational impacts of the Proposed Development. We find that the predicted increase in flight restrictions of 3.5% to 5% represents the best available evidence before us at the end of the Examination.
- 7.7.17. It will be open to the Secretary of State to seek further information from the parties if he considers that this is an important and relevant matter. As noted above, the parties may submit further information to the Secretary of State in any event.

Operational impact of restrictions on helicopter access

- 7.7.18. Spirit Energy states that in 2017 there were 66 unplanned visits to Chiswick platform. It is calculated that the loss of flights (assuming a 2.8nm separation distance) would result in £600,000 lost revenue per year due to delays in restoring production. This impact would increase rapidly with less separation. It is also stated that the G5 subsea well and the proposed C6 and C7 subsea wells are integral to maximising economic recovery from the Chiswick Field and each of these wells needs to be afforded the same space as for a NUI [REP9-077].
- 7.7.19. The Applicant does not agree with Spirit Energy's assessment of revenue impact because Spirit Energy has assessed helicopter access on the basis of 12 hour shift patterns [REP10-029]. We share that view because, in circumstances where a fault required an unplanned visit to restore production, it seems reasonable to assume that the flight would take place as soon as weather conditions allowed.
- 7.7.20. The Applicant also argues that Spirit Energy's requirement for the same helicopter access to the proposed C6 and C7 wells as for the NUIs is not justified when these wells will only be visited once every three years. The Applicant has offered a 1nm buffer zone at C6 and C7 and submits that, based on the agreed weather data set, visual flight rules would apply 77% of the time and shuttle flights would be available for a further 10% of the time. We agree that this would provide a reasonable level of access to assets which are visited infrequently [REP10-029].
- 7.7.21. In assessing the operational impact of flight restrictions, it is relevant to note that Chiswick and Grove are NUI which are visited on both a planned and unplanned basis. They are remotely controlled and can be shut down if the need arises. There are some days on which weather conditions do not allow helicopter operations in any event but on most days access is possible using one or other of the flight paths described in the evidence. The number of days when flights would be restricted by the Proposed Development is relatively small at 3.5% to 5%. The ES describes this as a minor adverse effect and we consider that to be a reasonable assessment.
- 7.7.22. Turning to the requirements of EN-3, we do not consider that the operational impact would be so severe as to affect the future viability of Spirit Energy's operations. EN-3 advises that a pragmatic approach should be employed where a proposed wind farm potentially affects other offshore activity, stating that the Applicant should minimise negative impacts and design the wind farm with a view to avoiding or minimising disruption or economic loss. Mitigation measures may be possible to negate or reduce effects on other operations to a level sufficient to enable the decision-maker to grant consent. We consider that these policy objectives can be addressed by appropriate protective provisions, which we discuss further below.

7.8. EFFECT ON FUTURE SPIRIT ENERGY OPERATIONS

Ability to manoeuvre construction barges

- 7.8.1. At ISH1 Spirit Energy stated that a gap of only 1.5nm between the wind farm and Chiswick platform would hinder the ability to manoeuvre construction barges which are controlled by means of an anchor spread. We asked about the comparison between the operation of barges required for oil and gas operations and those used to construct wind farms, bearing in mind the likely spacing of wind turbines [EV-012]. The Applicant's response was that the vessels would be similar. Spirit Energy commented that whilst the operational issues may be similar, the consequences of a collision would be more severe in the case of a gas platform.
- 7.8.2. For vessels servicing Spirit Energy's platforms and subsea infrastructure, Spirit Energy suggests that a 2nm channel should be provided between the eastern edge of the Proposed Development and Grove and Chiswick Platforms. This would be to ensure adequate sea room to place anchors and/or adopt appropriate stand-off positions. Without such a channel, it is suggested that vessels working on Spirit Energy infrastructure would face restrictions, particularly in terms of appropriate weather conditions, which Spirit Energy considers would significantly add to the cost of such operations [REP9-077].
- 7.8.3. The Applicant notes that a statutory safety zone of 500m is already provided for oil and gas installations, beyond which other sea users are free to operate [REP10-045]. The Applicant considers that anchor spread vessels can be operated within restricted waters, including near turbines within wind farm arrays [REP4-012]. The Applicant states that it has experience of operating in close proximity to Spirit Energy's assets in the Walney Extension Offshore Wind Farm where the nearest turbine is at a distance of 0.86nm from an exploration well [REP10-045].

Proposed C6 and C7 subsea wells

- 7.8.4. At ISH1 Spirit Energy stated that its existing oil and gas licence overlaps with the area of the proposed array. Under that licence Spirit Energy is obliged to maximise economic recovery of oil and gas reserves. The Applicant commented that there was no evidence that these wells would be feasible and would come forward at a reasonable time [EV-012]. In response to our Q2.5.18 [PD-012] Spirit Energy states that the current evaluation of C6 is dependent upon the results of ongoing drilling operations at C5. Subject to that review, it is anticipated that C6 would progress to a final investment decision in 2020 and that that drilling would commence in 2021 or 2022. C7 is dependent on the results at C6 and it is anticipated that drilling at C7 would not commence until 2025. [REP4-138].
- 7.8.5. At Deadline 9 Spirit Energy submitted a statement from its Reservoir Engineering Manager stating that the proposed C6 and C7 wells fulfil the requirement to book them as contingent resources [REP9-075]. A further statement from its reserves auditor concludes that, while the C6 and C7

wells are not yet planned in detail, the resources that they represent exist and are adequately defined. Development of these resources depends on the definition of economic development plans [REP9-076].

- 7.8.6. The C6 and C7 wells were not within the knowledge of the Applicant at the time the ES was submitted. By the end of the Examination, the Applicant had accepted that the proposed wells have met the criteria to be categorised as contingent resources although they are neither confirmed nor proven at this stage. Nevertheless, the Applicant has made an offer to Spirit Energy of a buffer of 1nm around the proposed C6 and C7 wells. The Applicant considers that this would provide Spirit Energy with access for drilling activities via vessel and via helicopter, albeit with restricted access in certain weather conditions [REP10-045].

Discussion of effect on future operations

- 7.8.7. We accept that the construction of wind farm infrastructure at a distance of 1.5nm from Chiswick platform and Grove subsea well head may impose some restrictions on the ability to manoeuvre anchor spread barges required by Spirit Energy. However, EN-3 advocates a pragmatic approach. The evidence before us indicates that marine construction operations can be carried out satisfactorily within searoom that is more restricted than Spirit Energy is seeking. We conclude that, for the existing assets of Chiswick and Grove platforms and Grove sub-sea well head, the operational impact would not be so severe as to affect the future viability of Spirit Energy's operations.
- 7.8.8. The weight to be attached to the proposed C6 and C7 wells requires careful consideration, given that there is as yet no certainty that it will be economic to recover the resources they are intended to exploit. Further approvals would be required before these proposed wells could proceed. The MPS and the EIEOMP seek to promote compatibility and reduce conflict between activities in order to manage the use of space within the marine environment. On that basis we consider that the C6 and C7 proposals are sufficiently defined for weight to be attached to them in this Examination.
- 7.8.9. We consider that it would be appropriate to include protective provisions in the DCO with a view to maximising the opportunities for co-existence in accordance with EIEOMP Policy GOV2. The protective provisions are discussed later in this chapter. We are satisfied that the suggested 1nm buffer zone would be sufficient to enable these wells to be constructed.

7.9. ALARP AND SAFETY CONSIDERATIONS

Approach to safety considerations

- 7.9.1. Paragraph 2.6.183 of EN-3 states:

Where a proposed offshore wind farm potentially affects other offshore infrastructure or activity, a pragmatic approach should be employed by

the IPC.²⁸ Much of this infrastructure is important to other offshore industries as is its contribution to the UK economy. In such circumstances the IPC should expect the applicant to minimise negative impacts and reduce risks to as low as reasonably practicable.

7.9.2. Throughout the Examination there was extensive discussion of the application of the concept of “as low as reasonably practical” (ALARP), including at ISH1 and ISH8 and in written submissions [Spirit Energy: RR-107, RR-108, RR-109, REP1-041, REP3-030, REP3-053, REP3-055, REP3-060, REP3-062, REP7-093, REP7-094, REP9-077 and REP10-058; Applicant: REP2-004, REP9-030, REP10-029 and REP10-045].

7.9.3. In summary, Spirit Energy’s position is that the Applicant has applied ALARP in an EIA context which has had the effect of downplaying risks with potentially catastrophic consequences. At paragraph 2.6.156, EN-3 states that:

Applicants should undertake a Navigational Risk Assessment (NRA) in accordance with relevant Government guidance prepared in consultation with the MCA and the other navigation stakeholders listed above.

7.9.4. The relevant guidance, published by MCA, is MGN 543 (M+F) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response [REP3-044]. Spirit Energy notes that MGN 543 is to be read in conjunction with Methodology for Assessing the Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations (the Methodology) [REP3-038]²⁹. The Methodology includes a requirement to consider whether the cost of further measures would be grossly disproportionate to the value of the benefit obtained and whether relevant good practice has been followed³⁰.

7.9.5. The ES concludes that the impact would be minor adverse, which is not significant in ES terms. Spirit Energy argues that the Applicant has meshed ALARP into the EIA process when the two ought to be regarded as distinct. Consequently, it is suggested that the Applicant has failed to consider ALARP at all. Spirit Energy notes that MCA has signed a SoCG in which it accepts the Applicant’s NRA. However, it is argued that the Methodology identifies two types of assessment – “general” and “other”³¹. The agreed statements can be regarded as consistent with a general NRA whereas an “other” type of assessment has not been done, even though required.

7.9.6. Spirit Energy has submitted a note [REP7-094] which seeks to compare the requirements of MGN 543 and the Methodology with the outputs of

²⁸ As noted above, the IPC (Infrastructure Planning Commission) has since been merged with The Planning Inspectorate and the decision making function now rests with the SoS

²⁹ Spirit Energy has submitted the 2013 version of the document whereas the MCA has referred to the 2015 version in its SoCG [REP10-021].

³⁰ REP3-038, page 59, Question (ii), bullet 1 and bullet 2

³¹ REP3-038, page 11

the NRA. The note concludes that there are significant gaps and that the Applicant has failed to reduce risks to ALARP. Spirit Energy has made legal submissions to the effect that the protective provisions that it proposes would be a proxy for the absence of a proper assessment to reduce the risks to Spirit Energy's assets to ALARP. Without such provision, it is argued, the requirements of EN-3 would weigh heavily against the application [REP7-093].

- 7.9.7. The Applicant maintains that the reference to "*as low as reasonably practicable*" in EN-3 should be attributed its ordinary meaning and not interpreted so as to require the Applicant to perform an ALARP assessment within the meaning of the HSE Regulations [REP4-012, response to Q2.5.13]. The Applicant considers that ALARP is defined by the duty holder of a safety case. Consequently, the Applicant cannot define whether ALARP is met at Spirit Energy's installations. However, the Applicant maintains that the proposed development does not result in a significant change to safety risk at a distance of 1.5nm from the Chiswick platform [REP10-045].
- 7.9.8. We note that the final SoCG with MCA [REP10-021] records agreement that the Applicant has comprehensively identified navigational safety impacts on shipping and navigational receptors. Moreover, MCA confirms that the NRA meets the requirements of MGN 543 and the Methodology. MCA agrees that the hazard workshop meets the relevant requirements and that the hazard log allowed local users' inputs into the impacts assessed. The MCA's role in developing guidance and regulations for navigational safety includes the provision of navigation risk assessment guidance to ensure that offshore developments maintain safe navigation around the waters of the UK. Consequently, we attach significant weight to the MCA's endorsement of the Applicant's approach. Had the MCA believed that some further "*other*" type of assessment is needed at this stage we have no doubt that it would have said so.
- 7.9.9. The correct interpretation of EN-3 is ultimately a matter for the courts. Our view is that, by carrying out the NRA in accordance with MGN 543, and by proposing appropriate mitigation which would be secured through the DCO and DMLs, the Applicant has satisfied the requirements of paragraph 2.6.183 of EN-3. That said, our recommendation does not turn on the difference of interpretation as between the Applicant and the Spirit Energy. Rather, we reach our conclusion on the basis of the evidence on risks to safety that was before the Examination.

Spirit Energy's outstanding safety concerns

- 7.9.10. All parties agreed on the paramount importance of safety for those working offshore, including those reliant on use of helicopters. Our attention was drawn to Civil Aviation Authority Policy and Guidelines on Wind Turbines CAP 764 [REP3-043] which emphasises the importance of safety.
- 7.9.11. Commenting on the Applicant's response to our Q2.5.13 [PD-012], Spirit Energy [REP5-028] stated that:

It is important to distinguish between risk during flights and risks to personnel on installations that rely upon the availability of flights to minimise risks. Spirit Energy will only permit flights to take place when it is safe to do so. The risk to personnel during a flight would therefore remain ALARP. The effect of the windfarm would be to reduce the occasions on which such safe flights could be conducted.

- 7.9.12. It follows that any restrictions on helicopter operations that may arise from the installation of wind farm infrastructure are essentially operational impacts. The Applicant and Spirit Energy agreed that the flights themselves are strictly controlled in accordance with the regulations and procedures discussed in the evidence. No helicopter operator would undertake a flight that was deemed to be unsafe. Nevertheless, Spirit Energy maintains that any restriction on helicopter use would represent a risk to safety as well as having an operational impact.
- 7.9.13. At the end of the Examination Spirit Energy summarised its safety concerns [REP9-077], stating that there would be a small increase in risk to personnel as a result of:
- Personnel spending more time on NUIs than they would have done had the windfarm array not been present;
 - Greater risk of vessel allision as a result of the presence of the windfarm; and
 - Greater risk of vessel allision as a result of windfarm construction traffic, especially larger vessels.
- 7.9.14. Spirit Energy considers that the presence of personnel on NUIs exposes them to risk of injury, accident or loss of life and that these risks increase proportionately with the period of time personnel are there. Spirit Energy also argues that the safety cases for Chiswick and Grove NUIs identify helicopters as the preferred means of evacuation, except in case of fire or explosion. A reduction in the potential availability of helicopter access thus represents a change to the basis on which the safety cases were prepared [REP7-093, appendix 5].
- 7.9.15. We explored the issue of personnel being left at NUIs at ISH8 [EV-028]. Spirit Energy confirmed that it will not plan to fly personnel to the NUIs where weather conditions are such that there are not good prospects of collecting them at the end of their shift. The risk that they may not be collected due to unexpected adverse weather conditions exists now. We were told that, in practice, this is a very infrequent occurrence. As discussed above, the Proposed Development would result in a small increase in the number of days when flights would not be available. However, notwithstanding the discussion at ISH8, it is not clear to us why that would increase the number of occasions when personnel cannot be collected. With or without the wind farm, the operator would be making essentially the same judgement based on the weather forecast.
- 7.9.16. At ISH8 the Applicant pointed out that J6A platform is an accommodation hub and Spirit Energy can shuttle personnel there for overnight accommodation. The temporary refuge areas on the NUIs must comply

with HSE regulations so, even if personnel were left overnight, this would be a comfort issue rather than a safety issue. Moreover, the operator is required to demonstrate that there is a good prospect of rescue. In case of injury to a person on a NUI, a commercial helicopter could not be used for evacuation and it would be necessary to rely on a SAR helicopter. The Applicant advised that the MCA has conducted numerous flights to bring personnel off platforms [REP7-010].

- 7.9.17. The current situation is that personnel are routinely transferred to NUIs by helicopter and collected at the end of their shift. Whilst there may be a small increase in the number of days when that could not happen, the evidence does not indicate that staff would be left on the NUIs longer as a result. In circumstances where personnel are unexpectedly left on the NUI, for example overnight, then the operator is obliged to provide a safe refuge.
- 7.9.18. We conclude that restrictions on helicopter access to NUIs would not increase risks to personnel in relation to the baseline situation. We have concluded above in relation to allision risk. Our overall assessment is that any impacts on Spirit Energy's assets are operational impacts rather than safety impacts.

7.10. PROPOSED PROTECTIVE PROVISIONS

- 7.10.1. The Applicant remains of the view that the operational impact of any restrictions on helicopter access would not be significant. Nevertheless, at Deadline 7 protective provisions were offered in order to seek to meet Spirit Energy's concerns [REP7-055]. These would provide for:
- A restricted area of 2.8nm around Chiswick platform;
 - A protected area of 2.8nm around Grove platform;
 - Protected areas of 1nm around the proposed C6 and C7 subsea wells; and
 - If required, a REWS mitigation proposal to be agreed by both parties and funded by the undertaker.
- 7.10.2. No wind turbines would be constructed in the restricted area and any works in the protected areas would be subject to proximity agreements. If agreements were not reached in respect of proximity agreements or the REWS mitigation proposal the matter would be referred to arbitration.
- 7.10.3. Spirit Energy's final position on suggested protective provisions is set out in [REP10-058]. Two sets of protective provisions are put forward. The first set would provide for:
- Restricted areas of 6nm around Chiswick and Grove platforms, Grove G5 subsea well and proposed subsea wells C6 and C7;
 - A vessel exclusion area 2nm in width between Chiswick and Grove platforms and the proposed array; and
 - A validation test in respect of the effective operation of REWS at J6-A platform.

- 7.10.4. No wind farm infrastructure would be constructed in the Chiswick restricted area. Restrictions for Grove platform and Grove G5 subsea well would be subject to time limits and those at proposed wells C6 and C7 would be subject to specified project milestones being achieved. No wind farm infrastructure would be constructed within the vessel exclusion area unless agreed by Spirit Energy.
- 7.10.5. Spirit Energy's primary position is that the 6nm separation distances would be required in the absence of an ALARP assessment by the Applicant to ensure that the risk profile in relation to the risks addressed by the protective provisions remain at their current ALARP level, in line with EN-3 (paragraph 2.6.183 to 2.6.186). However, Spirit Energy states that, if the ExA and SoS disagree that the Applicant is required to reduce risks to ALARP, then an appropriate separation distance would still be required to ensure successful co-existence. The second set of suggested protected provisions would provide for restricted areas of 3.3nm around Chiswick and Grove platforms, Grove G5 subsea well and proposed subsea wells C6 and C7. Provisions relating to the vessel exclusion area and REWS would be the same. Spirit Energy submits that this would not reduce risks to ALARP but the increased risks would be likely to be tolerable and the commercial cost of the flight restrictions would be acceptable.
- 7.10.6. Given the policy requirement to maximise the opportunities for co-existence, we thought it relevant to ask the Applicant about the effect of Spirit Energy's suggested protective provisions on potential generating capacity [PD-020, F3.6]. This was based on Spirit Energy's Deadline 7 suggestions [REP7-093] which were for 6nm helicopter zones and a 2nm vessel exclusion area. The Applicant's response set out various scenarios [REP9-013]. The Applicant calculates that the combined effect of all the restrictions proposed by Spirit Energy would reduce the array area by 36% which would reduce the anticipated generation capacity from 2.4GW to 1.53GW.
- 7.10.7. We also asked about the effect of the Applicant's own suggested protective provisions [PD-020, F3.7]. The Applicant calculates that the combined effect of its protective provisions could reduce the array area by up to 3% which would reduce the anticipated generation capacity from 2.4GW to 2.32GW.

Conclusions on suggested protective provisions

- 7.10.8. With regard to helicopter access to Chiswick and Grove platforms, we have concluded that a separation distance of 2.8nm is a sound basis for predicting the operational impacts of the Proposed Development. On that basis, the predicted increase in flight restrictions is 3.5% to 5%. We consider that the protective provisions suggested by the Applicant would be justified in that they would maintain helicopter access to the platforms sufficiently to minimise negative impacts and minimise disruption and/or economic loss. Whilst there would be some impact on the potential generating capacity of the proposed wind farm, this would be at a level consistent with the objective of maximising the opportunities for co-existence.

- 7.10.9. We attach very little weight to the figure of 3.3nm as presented in [REP10-058] for the reasons given above. Moreover, we consider that the 6nm separation distances suggested by Spirit Energy are not justified and that they would have a significant impact on the potential generating capacity of the proposed wind farm. That would not be consistent with the policy objective of maximising the opportunities for co-existence.
- 7.10.10. We accept that the construction of wind farm infrastructure at a distance of 1.5nm from Chiswick platform and Grove subsea well may impose some restrictions on the ability to manoeuvre anchor spread barges required by Spirit Energy. However, we have concluded above that marine construction operations can be carried out satisfactorily within searoom that is more restricted than Spirit Energy is seeking. Having regard to the separation distances that would exist in any event, and the statutory protection zones around gas platforms, we do not consider that further protective provisions are required.
- 7.10.11. There is no certainty that the proposed subsea wells C6 and C7 will come forward. Nevertheless, we have concluded that they are sufficiently defined for weight to be attached to them in this Examination. The Applicant has offered a 1nm buffer zone at C6 and C7. We are satisfied that this would provide Spirit Energy with access for drilling activities via vessel and via helicopter, albeit with restricted access in certain weather conditions. We consider that, during the operational life of the proposed wells, this would also provide a reasonable level of access to assets which are visited infrequently.
- 7.10.12. Spirit Energy has suggested a vessel exclusion zone. However, we note that existing north/south traffic in the area to the east of the proposed array is light and mainly associated with Spirit Energy. The design of the navigational corridor proposed by the Applicant is supported by MCA and its location appears to be well-aligned with pre-construction routes. We see no reason why it would not be effective in facilitating north/ south traffic. We do not consider that the Proposed Development would increase collision risks in relation to Spirit Energy's assets. For all these reasons, we see no justification for the suggested vessel exclusion zone.
- 7.10.13. The Applicant and Spirit Energy are proposing broadly similar provisions in relation to the possible need for an upgrade to the J6-A REWS. Although the need for this is now thought to be unlikely, there is a potential risk and we consider that it should be addressed through protective provisions. The provisions suggested by the Applicant are more specific in this regard and we consider that they would provide appropriate mitigation.
- 7.10.14. The suggested protective provisions include the use of arbitration to resolve matters that cannot be agreed, consistent with EN-3.
- 7.10.15. Our overall assessment is that the protective provisions suggested by the Applicant are reasonable and necessary to secure co-existence between the Proposed Development and Spirit Energy's current and future

operations, in accordance with MPS, EIEOMP and EN-3. We therefore recommend that these provisions should be included in the DCO.

- 7.10.16. We conclude that the protective provisions suggested by Spirit Energy are not justified and go beyond what is reasonably necessary to secure co-existence.

7.11. CONCLUSIONS

- 7.11.1. The Applicant has carried out an assessment of navigational risk in accordance with the relevant guidance, taking account of inputs from the MCA and other navigational stakeholders including local operators. We consider that the proposed mitigation measures would reduce navigational risks to as low as reasonably practicable. Taking account of the proposed mitigation, we conclude that the Proposed Development would not pose unacceptable risks to navigational safety.
- 7.11.2. Effects on SAR operations, recreational users and other offshore operations have been considered as required by EN-3.
- 7.11.3. With regard to assets operated by Spirit Energy, we conclude that there would be no increase in allision risks and no increased risks to personnel working at those assets. Restrictions on helicopter access to NUIs would have operational impacts but would not increase risks to personnel. The number of days per year when helicopter flights would be restricted by the Proposed Development would be relatively small and we do not consider that the operational impacts would be so severe as to affect the future viability of Spirit Energy's operations.
- 7.11.4. Effects on current and future Spirit Energy operations could be mitigated by protective provisions in order to maximise the opportunities for co-existence. The protective provisions suggested by the Applicant are reasonable and necessary to secure co-existence, in accordance with MPS, EIEOMP and EN-3. We therefore recommend that these provisions should be included in the DCO. The protective provisions suggested by Spirit Energy are not justified and would not be consistent with the objective of maximising opportunities for co-existence.
- 7.11.5. Overall, we consider that the Applicant has sought to minimise negative impacts and to design the project envelope for the wind farm with a view to avoiding or minimising disruption or economic loss. Mitigation measures have been identified to negate or reduce effects on other operations to a level sufficient to enable consent to be granted. We consider that the Applicant's approach to navigational safety and other offshore operations is in accordance with EN-3, MPS and EIEOMP. In our view this is not a matter which weighs significantly against the Order being made.

8. COMMERCIAL FISHING

8.1. INTRODUCTION

- 8.1.1. This chapter reports on the effects of the Proposed Development on commercial fishing in relation to the tests set out in the National Policy Statement for Renewable Energy Infrastructure (EN-3). Commercial fishing is identified as a principal issue in our initial assessment [PD-006, Annex B]. Effects on fish and shellfish ecology are covered in Chapter 6.
- 8.1.2. This chapter is organised as follows:
- Policy considerations;
 - Applicant's approach;
 - Issues arising during the Examination; and
 - Conclusions.

8.2. POLICY CONSIDERATIONS

- 8.2.1. EN-3 states that offshore windfarms can have both positive and negative effects on fish and shellfish stocks. Applicants are advised to carry out early consultation with statutory advisors and fishing industry representatives. The assessment should include surveys of fish stocks and any likely constraints on fishing activity. The potential effects of safety zones around offshore infrastructure should be considered and, where the precise extent of such zones is not known, a realistic worst-case scenario should be assessed. Transboundary issues may occur where fishermen from other countries fish in waters where wind farms are sited (paragraphs 2.6.121 to 2.6.131).
- 8.2.2. EN-3 requires the decision-maker to consider the extent to which the proposed development occupies any grounds of recognised fishing importance and whether the project would prevent or significantly impede the protection of sustainable commercial fisheries. Mitigation proposals should result from consultation with representatives of the fishing industry and the decision-maker should consider the extent to which any disruption to the fishing industry has been mitigated (paragraphs 2.6.132 to 2.6.136).
- 8.2.3. The UK Marine Policy Statement 2011 expresses support for the fishing sector and seeks solutions such as co-existence between fishing and other activities (paragraph 3.8.10). Within areas of fishing activity, Policy FISH1 of the East Inshore and East Offshore Marine Plans states that proposals should demonstrate, (in order of preference), that they will not prevent fishing activities, that they will minimise any adverse effects and that they will mitigate any effects that cannot be minimised. Policy FISH2 seeks to protect spawning and nursery areas. Policy GOV2 states that opportunities for co-location of fisheries should be maximised. Policy GOV3 seeks, in order of preference, to avoid, minimise or mitigate displacement of other activities.

8.3. APPLICANT'S APPROACH

- 8.3.1. The effect of the Proposed Development on commercial fisheries is assessed in Chapter 6 of the Environmental Statement (ES) [APP-066] and in a related technical appendix [APP-111]. Pre-application engagement with fishing interests is documented in the ES. An Outline Fisheries Co-existence and Liaison Plan (FCLP) was subject to discussions with stakeholders during the application with the final agreed version being submitted at Deadline 10 [REP10-032].
- 8.3.2. The ES identified that fishing activity within the area of the proposed array is dominated by landings of sole and plaice. These are targeted principally by the Dutch fishing fleet as well as by Belgian, UK and German fishing vessels. The UK potting fleet is active in the area of the proposed cable corridor. The impacts assessed included:
- exclusion from or reduced access to fishing grounds during construction;
 - displacement of fishing activity during construction leading to increased pressure on adjacent fishing grounds;
 - presence of wind farm infrastructure resulting in reduced access to fishing grounds during operation;
 - presence of wind farm infrastructure leading to displacement of fishing activity and increased pressure on adjacent fishing grounds during operation;
 - electric and magnetic fields and other ecological effects on fish and shellfish of commercial value;
 - increased vessel traffic in fishing grounds due to changes in shipping routes and maintenance vessels;
 - decommissioning; and
 - cumulative effects.
- 8.3.3. The maximum design scenario assessed included advisory safety distances around infrastructure under construction and vessels engaged in construction activities. During operation, advisory safety distances around manned offshore platforms and vessels engaged in maintenance operations were considered. Floating turbines were removed from the design envelope to maximise opportunities for co-existence. Other designed-in measures to reduce impacts on commercial fisheries include:
- advance warning of construction operations and advisory safety distances;
 - liaison with fishing fleets including regular Notices to Mariners;
 - marking partially constructed infrastructure with temporary aids to navigation;
 - post construction surveys to detect and remove construction debris;
 - advance warning of maintenance operations;
 - notification of all offshore and seabed structures, including cable protection; and
 - developing a FCLP in collaboration with fishing industry representatives.

- 8.3.4. The offshore cable corridor route would overlap with fishing grounds routinely used by potting vessels targeting brown crab and lobster. The ES [APP-066] assesses the reduction of access to fishing grounds during construction as a moderate adverse effect for the UK potting fleet. All other impacts on commercial fishing are assessed as minor or negligible, in construction, operation and decommissioning.
- 8.3.5. With regard to cumulative effects, the ES finds that there would be moderate adverse effects relating to a reduction in access and displacement (leading to gear conflict and increased fishing pressure on alternative grounds) for demersal trawlers during all stages of the Proposed Development.
- 8.3.6. The ES has considered transboundary impacts from potential displacement of fishing effort from UK waters into the Dutch Exclusive Economic Zone. It was concluded that any such effects would not be significant.
- 8.3.7. The Outline FCLP [REP10-032] is intended to support co-existence of commercial fisheries with the Proposed Development. A detailed FCLP would be subject to approval by the Marine Management Organisation (MMO). The Outline FCLP includes a commitment to employ a Fishing Liaison Officer to communicate with fishermen and other stakeholders throughout the life of the Proposed Development. In addition, there would be an onshore Fishing Industry Representative who would liaise with fishing skippers to provide a day to day point of contact for fishermen to log any concerns. The Outline FCLP makes provision for commercial compensation for disruption and displacement of the UK potting fleet. This would be a last resort, if there were significant residual impacts that could not be mitigated. It would be subject to an evidence-based process which is set out in the Outline FCLP.

8.4. ISSUES ARISING DURING THE EXAMINATION

Eastern Inshore Fisheries and Conservation Authority

- 8.4.1. The Eastern Inshore Fisheries and Conservation Authority (EIFCA) raised concerns about the amount of rock cable protection that might be required, potentially affecting fishing operations. EIFCA also drew attention to the importance of the nearshore area to the potting fishery which contributes to both local and national economies [RR-070]. The issue of rock cable protection is reported on in Chapter 6.
- 8.4.2. In answer to our written questions (Q1.6.2 and Q1.15.14 [PD-008]) EIFCA agreed that the mitigation outlined in the Fisheries and Liaison with Offshore Wind and Wet Renewables Group Guidance, in combination with the Outline FCLP [APP-183], would be effective. There would need to be close and continuing engagement with the fishing community. EIFCA did not consider that any further amendments to the Outline FCLP were required [REP1-126]. The final Statement of Common Ground (SoCG) with EIFCA [REP7-016] records agreement that, if there is a requirement for regular working groups to be developed for fisheries liaison, this will

be done through the Fishing Liaison Officers and Fishing Industry Representatives.

National Federation of Fishermen's Organisations and VisNed

- 8.4.3. The National Federation of Fishermen's Organisations (NFFO) is the representative body for fishermen in England, Wales and Northern Ireland. It also represented three local fishermen's associations. VisNed is a federation of fish producer organisations in Dutch demersal fisheries and also represented the Dutch Fishermen's Association for the purposes of this Examination. NFFO and VisNed provided joint SoCGs with the Applicant [REP1-220, REP10-046].
- 8.4.4. The first SoCG between NFFO/ VisNed and the Applicant [REP1-220] identified disagreements about impact assessment methodology and conclusions, the approach to cumulative impact assessment, protocols for remediation of exposed submarine cables, the extent of safety zones and commitment to a community support fund.
- 8.4.5. These matters were explored at Issue Specific Hearing (ISH) 1 [EV-012]. NFFO/ VisNed argued that the ES overstates the extent to which fishing would resume after construction. It was suggested that seine netting and pair trawling would not resume due to the perceived hazards of operating within the array. All types of fishing would be limited to some extent, depending on weather conditions. In response, the Applicant drew attention to the minimum 1km spacing of wind turbines, pointing out that fishing would be precluded in just 1.5% of the array area. The Applicant stated that the ES had taken account of perceived risk and variable weather conditions. Some impact had been acknowledged but this would be minor [EV-012].
- 8.4.6. NFFO/ VisNed's concerns regarding cumulative assessments related to the fact that once a windfarm is operational it is regarded as part of the baseline for future assessments. Given the amount of wind farm development in the North Sea this could lead, over time, to an understatement of cumulative effects.
- 8.4.7. With regard to advisory safety distances, the Applicant stated at ISH1 that the distance of 1,000m, (which was of concern to NFFO/ VisNed) would only be required exceptionally. An example would be cable laying vessels with extensive towed equipment. In most cases a 500m distance would be sufficient.
- 8.4.8. Arrangements for reporting exposed cables which could pose a safety hazard to fishing vessels were discussed during the Examination. The final draft Development Consent Order (DCO) [REP10-041] included specific requirements to report cable exposures within 3 working days in the Deemed Marine Licences (DML) (Condition 7(11) of Schedule 11 and Condition 8(11) of Schedule 12). This approach was agreed by NFFO/ VisNed.
- 8.4.9. The final SoCG between the Applicant and NFFO/ VisNed [REP10-046] records that agreement had been reached in respect of the mitigation

measures. In particular, NFFO/ VisNed welcomed the final Outline FCLP [REP10-032] and agreed with the Navigational Risk Assessment and monitoring of dropped objects on the sea floor. They also accepted that any community support fund would be arranged at a later date and would not form part of any DCO or DML. The disagreement as to the assessment methodology and conclusions remained as described above.

ExA's response to issues raised

- 8.4.10. The approach to compensation in the Outline FCLP [REP10-032] is based on the guidance referred to above. The final FCLP, which would have to be in accordance with the Outline FCLP, would be submitted for the approval of the MMO. This would be secured by the DMLs (Condition 13(4) of Schedule 11 and Condition 14(4) of Schedule 12). On the basis that the Outline FCLP accords with relevant guidance and is agreed by stakeholders we are satisfied that it would provide appropriate mitigation for impacts on the UK potting fleet.
- 8.4.11. Given the absence of a defined layout for the array there is inevitably a degree of uncertainty over the prospects for the resumption of fishing during the operational stage. Nevertheless, we attach significant weight to the fact that the minimum spacing of the wind turbines would be larger than in previous wind farm developments and that the percentage of the surface area where fishing would be precluded would be small. Whilst we accept that not all types of fishing activity are likely to resume, we consider that the ES assessment of a minor adverse effect is reasonable.
- 8.4.12. The concerns of NFFO/ VisNed regarding the approach to cumulative impact assessment are understood. However, the approach of treating completed developments as part of the baseline is well established. There is no reason to think that the methodology of the ES is flawed in this respect.
- 8.4.13. Concerns regarding advisory safety distances and reporting cable exposures have been discussed during the examination. We are satisfied that these matters have been resolved and could be managed through the DMLs and the final FCLP which would be in accordance with the Outline FCLP.

8.5. CONCLUSIONS

- 8.5.1. The Applicant has carried out consultation with fishing industry representatives and has considered likely constraints on fishing activity. The proposed mitigation measures have resulted from that engagement. The assessment has assumed a realistic worst-case scenario in relation to safety zones. Transboundary issues have been considered and found not to be significant.
- 8.5.2. No stakeholder has suggested that the Proposed Development would prevent or significantly impede protection of sustainable commercial fisheries such that it would conflict with EN-3.

- 8.5.3. There would be some disruption to the fishing industry, in particular to the UK potting fleet. Impacts on the potting fleet would be minimised through the designed-in measures described above. Residual impacts would be mitigated through the FCLP, which would be approved under the DMLs. This would accord with EN-3 and Policy FISH1 of the East Inshore and East Offshore Marine Plans.
- 8.5.4. The ES finds that, on a cumulative basis, there would be moderate adverse effects of a reduction in access and displacement for demersal trawlers during all stages of the Proposed Development. This would be minimised and mitigated through the designed-in measures described above, as required by Policy FISH1.
- 8.5.5. In summary, we are satisfied that the findings of the ES are reasonable and that appropriate mitigation measures would be secured through the recommended DCO. We have not identified any conflict with EN-3, the Marine Policy Statement or the East Inshore and East Offshore Marine Plans. We conclude that commercial fishing is not a matter which weighs significantly against the Order being made.

9. LAND USE AND RECREATION

9.1. INTRODUCTION

- 9.1.1. This chapter considers the effects of the Proposed Development on onshore land use and recreation taking into consideration the tests set out in the Overarching National Policy Statement for Energy (EN-1). Land use and recreation is identified as a principal issue in our initial assessment [PD-006, Annex B].
- 9.1.2. The issues considered in this chapter include the effects on agricultural land, soil quality, farming operations, public rights of way and the effects on land with potential for development. The impacts on tourism are considered separately as part of the Chapter 15 (Socio-Economic).
- 9.1.3. The chapter is organised as follows:
- Policy considerations;
 - Applicant's approach;
 - Issues arising during the Examination; and
 - Conclusions.

9.2. POLICY CONSIDERATIONS

- 9.2.1. Section 5.10 of EN-1 sets out policies relevant to land use considerations. Those of particular relevance to the Proposed Development are set out below.
- 9.2.2. EN-1 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). It highlights the Government's policy 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).
- 9.2.3. It states that the Environmental Statement (ES) should identify existing and proposed land uses near the project together with 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 (paragraph 5.10.5).
- 9.2.4. In considering the impact on maintaining coastal recreation sites and features, EN-1 states that the decision-maker should expect applicants to have taken advantage of opportunities to maintain and enhance access to the coast (paragraph 5.10.16).
- 9.2.5. EN-1 goes on to state that applicants 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) 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 seeks to minimise impacts on soil quality taking into account any mitigation measures proposed (paragraph 5.10.8).

- 9.2.6. The decision-maker should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification and should give little weight to the loss of poorer quality agricultural land (grades 3b, 4 and 5) except in areas where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy (paragraph 5.10.15).
- 9.2.7. In terms of mitigation, EN-1 requires that effects on existing uses are minimised by the application of good design principles, including the layout of the project (paragraph 5.10.19). It recognises that rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. Applicants should take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case consideration should be given to what appropriate mitigation requirements might be attached to any grant of development consent (paragraph 5.10.24).

9.3. APPLICANT'S APPROACH

- 9.3.1. The Applicant's Environmental Impact Assessment of land use and recreation impacts is set out in Volume 3, Chapter 6 of the ES [APP-078]. It draws upon information contained within the following technical reports:
- Agricultural Land Classification Published Data [APP-156];
 - Soil Survey Results [APP-157]; and
 - Agricultural Land Classification and Farm Holding Figures [APP-158].
- 9.3.2. Pre-application consultation has taken place between the Applicant and key organisations including Norfolk County Council and local authorities. The Applicant has collated baseline conditions through a detailed desktop review of existing studies and datasets to identify the known soil types and patterns, agricultural land quality, farm holdings, designated sites and recreational resources including public rights of way (PRoW).
- 9.3.3. The ES assesses the impact on agricultural land quality based on Agricultural Land Classification. This places land into one of five grades, with Grade 1 being the best and Grade 5 the worst, according to the degree to which its physical characteristics impose long term limitations on its agricultural use. Grade 1 has no or very minor limitations to agricultural use, whereas Grade 5 land exhibits very severe limitations. The soils with the onshore cable corridor study area vary from between Grades 2 and 4.
- 9.3.4. The ES reports that construction of the onshore cable corridor will temporarily impact upon 44 farm holdings. Construction works have the potential to cause temporary disruption to farm management, including changes to farm accesses within individual fields and along local roads,

as well as temporary effects on field drainage and irrigation systems. Following construction, the Applicant proposes that soil restoration would enable the land to be returned to its former agricultural use. However, there would be permanent loss of land arising predominantly from three large arable based farm holdings due to the construction of the High Voltage Alternating Current (HVAC) booster station (if required) and the High Voltage Direct Current (HVDC) convertor/ HVAC substation.

9.3.5. The Applicant has identified a variety of recreation resources within the study area. The shingle beach at Weybourne can be accessed by visitors from a beach side car park. The rivers Wensum and Yare are used by anglers as well as for other water-based activities. A camping site located to the west of Weybourne and Kelling Heath Holiday Park are located within the study area. Other recreation resources identified as being potentially affected include Kelling Heath Site of Special Scientific Interest (SSSI) and Booton Common SSSI, Baconsthorpe Castle, Salle Park, North Norfolk Railway and the Muckleburgh Military Collection. The study area also contains the Peddars Way and Norfolk Coast Path National Trail which would be crossed by the cable corridor, along with several PRoW, cycle routes and other informal paths.

9.3.6. The ES includes a number of designed-in measures to reduce the potential for land use and recreation impacts. These measures were included in the originally submitted Outline Code of Construction Practice (CoCP) [APP-179] and Outline Construction Traffic Management Plan [APP-176] and have been further developed during the Examination. The measures include the following:

- Soil management strategy;
- Farming framework measures;
- Construction method statements;
- PRoW management plan;
- Outline communications plan; and
- Highway/traffic management measures.

9.3.7. A summary of the potential land use and recreation effects is set out in Table 6.39 of the ES. The main findings of the assessment are as follows:

- the loss of the best and most versatile agricultural land from construction would be of moderate adverse significance;
- the effect of construction on farm holdings would be of minor adverse significance;
- the effects of construction on the recreational use of the coast would be of negligible significance;
- the effects of construction on recreational resources would be of minor adverse significance;
- the effects of construction on the Peddars Way and Norfolk Coastal Path would be of moderate adverse significance whilst the effects on other local Public Rights of Way (PRoW) and linear routes would be of minor significance;
- during operation there would be moderate adverse effects on the best and most versatile agricultural land and minor adverse effects on farm holdings;

- during decommissioning there would be minor adverse effects on both the best and most versatile agricultural land and farm holdings;
- the cumulative effects on agricultural land would be of moderate adverse significance and on farm holdings would be of minor adverse significance.
- the cumulative effects on access land, recreational resources, PRow and other linear routes would be of minor adverse significance.

9.4. ISSUES ARISING DURING THE EXAMINATION

Local Impact Reports

- 9.4.1. In its Local Impact Report (LIR) [REP1-062] North Norfolk District Council (NNDC) states that all ducting should be completed in a single phase in order to reduce potential adverse impacts on soil quality from multiple occurrences of soil stripping, storage and reinstatement. It also considers the Applicant's proposed management measures to be too vague (for example regarding soil management) and requests clarification on how the PRow Management Plan would be secured.
- 9.4.2. In its LIR [REP1-061], Norfolk County Council (NCC) states that issues need to be resolved in relation to the proposed temporary re-routing of the North Norfolk Coastal Path. Neither South Norfolk Council (SNC) nor Broadland Council raise any issues regarding land use and recreation impacts in their respective LIRs.

Farming operations and agricultural land

- 9.4.3. Written and oral representations were made throughout the Examination by Land Interest Group (LIG). LIG, advised by the National Farmers Union, acted on behalf of most of the agricultural landowners and occupiers potentially affected by the Proposed Development. Relevant Representations [eg RR-067] and subsequent Written Representations [eg REP1-066] set out a number of concerns relating to agricultural operations:
- advantages of using HVDC rather than HVAC transmission technology in reducing the impact on land operations and farm businesses;
 - laying cables in ducts would greatly reduce the time period for construction and the impacts on farm businesses;
 - cumulative impacts;
 - impacts of link boxes on farming operations and insufficient information about link boxes;
 - lack of detail regarding field drainage;
 - limited detail on the treatment and reinstatement of soil during and after construction, including soil aftercare;
 - effects on irrigation, including the need for alternative water supply provision during construction and permanent water supply provision by the end of construction;
 - increased surface water run-off from the haul road during construction may lead to flooding;
 - control of dust during construction; and

- increased certainty required on construction access routes and how farm accesses would be maintained for agricultural operations.

- 9.4.4. We have considered matters regarding the Applicant's proposed use of either HVDC or HVAC transmission technology and issues concerning phasing and ducting in Chapter 5 of this report. Our assessment in this chapter is based on the Applicant's approach in the ES assuming the maximum design scenario considered for the assessment of potential impacts on land use and recreation. This includes the HVAC transmission option (resulting in the need for a greater number of cable trenches) and the maximum length of construction period.
- 9.4.5. At ISH4, LIG made additional oral representations on its land use concerns. In its post hearing submission [REP3-109] it stated that its main issue is the length of time the construction would take if carried out over two phases and the disruption and severance that would be caused to agricultural businesses as a result. LIG also highlighted the importance of the reinstatement as soon as possible of both the sub and top soil in order to reduce agricultural impacts. LIG considers that soils should be reinstated progressively, as cables are laid, rather than waiting until the whole cable route is in place. LIG went on to state that wording on soil reinstatement and aftercare required agreement of a binding soil management document which should also cover matters of field drainage and water supplies.
- 9.4.6. In response to the concerns raised by LIG, the Applicant has further developed its proposed mitigation and management measures in order to seek to reduce the impact of construction works on agricultural land and operations.
- 9.4.7. Further to representations made by Interested Parties, including from LIG [eg REP1-066, REP3-104 and REP3-105], we asked for clarification on the use and impact of link boxes (Q1.9.8 and Q2.9.1) [PD-008, PD-012] and joint bays (Q1.9.9). In response [REP1-122 and REP4-012], the Applicant confirmed that joint bays would be completely buried. The land above would be reinstated with no implications for agricultural operations. Manhole covers would be required for link boxes which would disrupt certain agricultural operations such as ploughing. Therefore, the Applicant has committed to placing marker posts where link boxes would be located. The location of link boxes and joint bays would not be known until the detailed design stage. In total, the maximum aggregate area of agricultural land required for link boxes would be 0.4 hectares. The Communication Plan Framework within the Outline CoCP requires that landowners are informed of the locations of link boxes and joint bays prior to the works taking place on the relevant parcel of land.
- 9.4.8. The Applicant has developed a detailed Soil Management Strategy which is included with the final Outline CoCP [REP9-063]. Whilst this includes several provisions seeking to address the concerns of LIG, it does not include a commitment to progressive soil reinstatement. LIG confirms [REP6-078] that it agrees that the wording in the Soil Management Strategy covers how soils would be treated during and post construction, but we note that this agreement does not appear address LIG's

preference for progressive reinstatement. The final version of the Applicant's Statement of Reasons [REP9-011] lists soil management as an outstanding matter with LIG, although the Applicant maintains that the soil management measures in the Outline CoCP are sufficient. At the first Compulsory Acquisition Hearing [EV-023] the Applicant argued that the cable could only be properly tested when complete and, in the event of a fault being found after reinstatement, it would be necessary to go back and dig up the affected area [REP6-012]. The Applicant therefore considers that it would be uneconomic and inefficient to replace topsoil which has been stored correctly until such testing has taken place.

- 9.4.9. We acknowledge the advantages of progressive soil reinstatement in minimising both any deterioration that may occur to soil during storage and the aftercare required to return it its former condition. We note, however, that the Soil Management Strategy in the Outline CoCP includes soil storage and aftercare measures which, notwithstanding the timing of reinstatement, are agreed with LIG. There is also opportunity for the strategy to be developed during the detailed design process with the final document requiring approval as part of the detailed CoCP(s). Overall, we are generally satisfied that the Applicant has proposed reasonable measures to deal with soil management during and after the construction process.
- 9.4.10. The final Outline CoCP also includes the following measures which have been developed following the representations of and discussions with LIG:
- Communication Plan Framework;
 - field drainage provisions;
 - details of roles and responsibilities of the Agricultural Liaison Officer;
 - a biosecurity protocol;
 - placement of marker posts where link boxes are located;
 - maintenance of farm accesses where reasonably practicable;
 - maintenance and reinstatement of water supplies; and
 - provision of irrigation plans.
- 9.4.11. In its final representation [REP9-081], LIG expresses an additional concern over the different scenarios for cable construction at the crossing with Norfolk Vanguard. LIG is concerned to ensure that the cables closest to ground level would still be below a minimum depth of 1.2m. LIG would like to see parameters set out and linked to the CoCP such that construction would have the least impact on the land. As this representation was submitted very close to the end of the Examination, the Applicant has not had an opportunity to comment. However, in a previous submission [REP6-013] the Applicant explains that at the crossing point the first project would be likely to install cables with open cut and the second by way of horizontal directional drilling. The maximum design parameters for the onshore cable installation states that the burial depth target would be 1.2m. We are satisfied that the cable depth would be able to achieve a depth of 1.2 in this location.
- 9.4.12. Concerns, including access and biosecurity issues, have been raised by Saltcarr Farms Limited [RR-104] regarding the implications for its pig

breeding unit and solar farm located adjacent to the main construction compound at Oulton airfield. The Applicant's response [REP1-131] states that provisions regarding access to the pig breeding unit would be incorporated into the agreement with the landowner and that access to the solar farm would be maintained. As referred to above, we note that the Applicant has committed to the maintenance of farm accesses where reasonably practicable in the Outline CoCP. Regarding biosecurity, the Applicant states that a biosecurity protocol is included in the Outline CoCP and site-specific biosecurity measures would be included in the detailed CoCP to be approved under Requirement 17 of the draft DCO.

- 9.4.13. The construction of the HVAC booster station and the HVDC convertor/ HVAC substation would result in the permanent loss of best and most versatile agricultural land, being approximately 23 hectares in total of Grade 2 and 3 land. There would be an additional small permanent loss at link box locations. The Applicant, in response to our Q1.9.6, explained how it has sought to minimise the impacts on the best and most versatile agricultural land [REP1-122]. The starting point is that, due to the geographic locations of the Agreement for Lease and the National Grid connection, the onshore cable corridor would of necessity be routed through agricultural areas.
- 9.4.14. We note from the Applicant's response to Q1.9.6 [PD-008] that the Proposed Development would not impact on any Grade 1 agricultural land and that the best and most versatile land has been avoided where possible, taking account of a number of conflicting constraints in the onshore design process. We also note the measures included in the Outline CoCP such as the Soil Management Strategy. This would serve to minimise adverse effects on agricultural land from construction of the cable corridor. Whilst the HVAC booster station and HVDC convertor/ HVAC substation would result in the permanent loss of Grade 2 and 3 land, overall we are satisfied that the Applicant has reasonably sought to minimise the loss of areas of the best and most versatile agricultural land.
- 9.4.15. Although the permanent works at the HVAC booster station and HVDC convertor/ HVAC substation would affect three farm holdings, the proportion of land taken from each of the farm holdings is unlikely to significantly affect its long-term operation.
- 9.4.16. There is no SoCG between the Applicant and LIG, nor any final representation from LIG confirming the matters it is agreement or disagreement with. However, our understanding is that most of the detailed matters of disagreement between the Applicant and LIG have been resolved, including through the additions outlined above to the Outline CoCP. The main matters of disagreement appear to be LIGs concerns regarding soil reinstatement and construction over two phases leading to greater impacts on farm businesses.
- 9.4.17. There is general agreement between the Applicant and the respective Councils regarding the agricultural impacts of the Proposed Development. The only exception being NNDC's preference that ducting for all phases

should be carried out at the beginning of the works. We discuss phasing and ducting in Chapter 5 where we conclude that (if the construction were to be phased) in the absence of a final investment decision for the second phase, pre-ducting phase 2 would result in an unacceptable risk of constraining the effectiveness of the NSIP as a whole.

- 9.4.18. We consider that the onshore construction and permanent works would inevitably result in disturbance to farming operations. However, we are generally satisfied that the measures incorporated in the Outline CoCP would substantially mitigate the operational impacts on farm holdings.
- 9.4.19. We agree with the conclusions of the ES that the Proposed Development would result in moderate adverse effects on agricultural land, including the potential cumulative impacts together with other planned developments. However, we are satisfied that the Applicant has reasonably minimised the impacts on the best and most versatile areas of agricultural land as required by EN-1.

Public rights of way

- 9.4.20. In addition to NCC's LIR, several representations (eg RR-101 from the Norfolk Coast Partnership) refer to the need to minimise disruption for users of PRow. In response, the Applicant's measures to safeguard PRow users have evolved during the Examination.
- 9.4.21. In NCC's SoCG with the Applicant [REP9-027], all matters regarding PRow are agreed. The Outline CoCP [REP9-063] requires a PRow Management Plan to be prepared (in consultation with NCC) for approval by the relevant planning authority. In response to our Q2.9.3 [PD-012], the Applicant has provided a set of principles for the management of impacts from construction works on the Norfolk Coast Path and Marriott's Way. This is included within the Framework of PRow Management Measures [REP4 068]. The Outline CoCP also requires a communication plan to be developed to ensure that local authorities, parish councils, residents and visitors are kept informed of when and where works will be taking place that may affect any PRow. The Applicant would also liaise in advance with PRow Officers regarding short term temporary diversions of PRow.
- 9.4.22. In the event of a temporary closure of a section of the Norfolk Coast Path, due to the use of an open cut method at the landfall, a local diversion would need to be agreed as part of the PRow Management Plan. An outline of the likely diversion route is included with the Framework of PRow Management Measures. In its final SoCG with the Applicant [REP9-027], NCC states that it considers that site-specific management measures relating to the temporary diversion of the Norfolk Coast Path could be resolved post consent.
- 9.4.23. The measures proposed in the Outline CoCP include a condition survey of the Norfolk Coast Path prior to the commencement of open cut landfall works and reinstatement to at least the same condition as pre-construction. The suggested route would require users to divert inland from the beach. However, we consider that this would be a relatively

small interruption and the effect on the overall experience of walking the coast path would be limited.

- 9.4.24. Whilst NNDC, in its SoCG with the Applicant [REP9-021], considers that project phasing should be optimised to minimise the duration of construction impacts, it does not object to the Applicant's approach to mitigating impacts on PRow and has agreed the measures set out in the Outline CoCP.
- 9.4.25. We consider that satisfactory mitigation measures are in place within the Outline CoCP to address adverse impacts on the PRow that would be potentially affected by the Proposed Development. Although the construction works at the landfall may result in the temporary closure of the Norfolk Coast Path, the Applicant has demonstrated, in agreement with NCC, that suitable diversion and management measures can be put in place. We agree with the Applicant's assessment that, with the implementation of proposed mitigation measures, the effects of construction on the Norfolk Coastal Path would be at worse of moderate adverse significance whilst the effects on other PRow and linear routes would be of minor significance.

Other recreational uses

- 9.4.26. A representation was submitted on behalf of Kelling Estate LLP [REP1-048] regarding disruption to game shooting caused by the construction of the onshore cable corridor. Concern is expressed about harm to the reputation of the shoot which financial compensation would not address. In response, the Applicant states that it is unable to be specific on the time of year and exact duration of the construction works, however it expects that cable construction works would take three months in any particular location for each phase. We consider that it is difficult to quantify the damage to reputation of the sporting enterprise that might result. However, given the short construction time period, albeit over two phases, whilst some harm to reputation may result, we do not consider this to be such as to weight significantly against the Order being made.
- 9.4.27. The construction works at the landfall would result in the need for temporary closure of part of the shingle beach at Weybourne. This would result in some disruption for users of the beach for the temporary period(s) of construction, particularly should open cut construction methods be used leading to a larger area of disturbance. The works would take place for a maximum of two and a half years although it would not be necessary for the beach to be closed for all of this time. When complete the use of the beach would return to normal. The beach as a whole covers a wide area and extensive areas would remain open for recreational use on either side during the construction phase(s). The beach side car park would also remain open. We are therefore satisfied that the adverse effects on the recreational use of the beach would only be limited.

Potential residential development sites

- 9.4.28. Representations were received from several Interested Parties [including RR-051, RR-067 and RR-147] regarding the implications of the proposed onshore cable corridor route upon potential future housing development sites. All these sites are located in the area of SNC. Our Q1.9.1 [PD-008] asked the Applicant and SNC to provide details of potential future housing sites including the stage they have reached in the planning process.
- 9.4.29. SNC's response to Q1.9.1 [REP1-231] states that the sites have no status in planning terms as they have been submitted under the call for sites and the initial Regulation 18 stage of the Greater Norwich Local Plan, which is the first stage of the Local Plan process. The sites have been subject to a high level desktop assessment in the Housing and Economic Land Availability Assessment. SNC states that sites identified as potentially suitable in this assessment still need to be subject to a full site assessment before a draft Regulation 18 plan is consulted on in autumn 2019.
- 9.4.30. In response to Q1.9.1 the Applicant [REP1-122] notes that the site referred to in RR-051 is not identified in the emerging local plan and that the site referred to in RR-147, where planning permission has been granted, is not located within the proposed onshore cable corridor. The Applicant does not propose any mitigation regarding the two sites referred in RR-067 because, although they have been identified in the call for sites, the emerging plan currently has no status in planning policy terms.
- 9.4.31. EN-1 requires that applicants should assess any effects of precluding a new development or use proposed in the development plan. In this case, no sites with planning permission are located within the cable corridor whilst sites without planning permission are not sufficiently advanced in the planning process to be an important consideration in this Examination. We are therefore satisfied that the Proposed Development would not unreasonably preclude future housing development.

9.5. CONCLUSIONS

- 9.5.1. The Applicant has engaged with relevant parties regarding land use and recreation impacts throughout the Examination leading to the development of mitigation and management measures which have been included in the Outline CoCP. This would be secured by Requirement 17 of the recommended DCO, with the final detailed CoCPs being subject to the approval of the relevant local planning authority.
- 9.5.2. We consider that satisfactory mitigation measures are proposed in the Outline CoCP to minimise the effects from the construction of the cable corridor on farming operations. Furthermore, whilst there would be a moderate adverse effect on the best and most versatile agricultural land during construction and operation as identified in the ES, we are satisfied that the Applicant has reasonably minimised the impacts on such land.

- 9.5.3. The permanent works at the HVAC booster station and HVDC convertor/HVAC substation would affect three farm holdings. However, the proportion of land taken from each of the farm holdings is unlikely to significantly affect its long term operation.
- 9.5.4. We are satisfied that suitable measures would be secured in the Outline CoCP to safeguard the uses of PRoW and other access routes, including the Norfolk Coast Path.
- 9.5.5. We have considered all other potential impacts of the Proposed Development upon existing uses of land, including the recreational use of the beach at Weybourne. We are satisfied that no other issues would arise that would result in any significant adverse land use and recreation impacts. Furthermore, whilst representations have been made regarding the impacts upon potential residential development sites, these proposals are either located outside of the cable corridor or are not sufficiently advanced to carry significant weight in this Examination.
- 9.5.6. Overall, we are satisfied that the findings of the ES are reasonable and that necessary mitigation measures could be secured through the recommended DCO. The land use and recreation impacts would satisfactorily accord with EN-1 and do not weigh significantly against the Order being made.

10. TRANSPORT AND HIGHWAY SAFETY

10.1. INTRODUCTION

- 10.1.1. This chapter reports on the effects of the Proposed Development on transport and highway safety taking into consideration the tests set out in the Overarching National Policy Statement for Energy (EN-1). Transport and Highway Safety is identified as a principal issue in our initial assessment [PD-006, Annex B].
- 10.1.2. Effects from traffic movements on living conditions of residents (including noise, vibration and air quality) are covered separately in Chapter 11, vibration effects on listed buildings are covered in Chapter 13 and socio-economic effects (including tourism) are considered in Chapter 15.
- 10.1.3. This chapter is organised as follows:
- Policy considerations;
 - Applicant's approach;
 - Issues arising during the Examination; and
 - Conclusions.

10.2. POLICY CONSIDERATIONS

- 10.2.1. EN-1 recognises that the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure (paragraph 5.13.1). The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development as set out elsewhere in EN-1 (paragraph 5.13.2).
- 10.2.2. EN-1 goes on to state that the decision-maker should ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, requirements should be considered to mitigate adverse impacts on transport networks arising from the development (paragraph 5.13.6).
- 10.2.3. With regard to mitigation, EN-1 advises that requirements may be attached to a consent where there is likely to be substantial HGV traffic that:
- control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;
 - make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid overspill parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and
 - ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force (paragraph 5.13.11).

10.3. APPLICANT'S APPROACH

- 10.3.1. Volume 3, Chapter 7 of the Environmental Statement (ES) [APP-079] presents the results of the Applicant's Environmental Impact Assessment of the potential impacts on traffic and transport during the construction, operation and decommissioning phases. Several supporting technical reports have also been submitted as part of the ES. These comprise:
- Transport Assessment [APP-159];
 - Description of Network Links and Sensitivity [APP-160];
 - Baseline Traffic Flows [APP-161];
 - Personal Injury Accident Locations [APP-162];
 - Public Transport Networks [APP-163];
 - Construction Vehicle Trip Generation Assumptions [APP-164];
 - Traffic Flows with Construction Traffic [APP-165]; and
 - Traffic and Transport Figures [APP-166].
- 10.3.2. Pre-application consultation on transport and highway safety matters was carried out by the Applicant with relevant consultees. This included consultation regarding the baseline for the assessment with Norfolk County Council (NCC) which is the local highway authority for the study area.
- 10.3.3. The methodology used in the ES is based on the Guidelines for the Environmental Assessment of Road Traffic (Institute of Environmental Management and Assessment 1993). The significance of effects has been assessed by considering the interaction between the magnitude of the impact and the sensitivity of the receptor in the vicinity of transport corridors. The following matters have been considered:
- driver delay;
 - severance of routes;
 - pedestrian delay;
 - pedestrian amenity;
 - accidents and road safety; and
 - hazardous, dangerous and abnormal loads.
- 10.3.4. The ES makes an estimate of the likely use of key strategic road access routes to and from the study area with the majority of HGVs predicted to use the A11 and A47(west). It divides the highway network within the study area into a series of links that would serve the 21 sections of the onshore cable route. Table 7.11 of the ES identifies each cable corridor section and provide details of the local access routes to each section.
- 10.3.5. The ES recognises that the wider distribution of HGVs during the construction phase is dependent upon the procurement and location of materials at the time of construction. To account for variances in the procurement and movement of material throughout the construction phase, the ES has assumed that approximately double the proportion of HGVs would originate from the key road links outside of the study area. This effectively doubles the number of HGV movements on each link and through each junction. Although this would not happen in practice, the

Applicant has sought to produce a robust assessment that allows for day to day variances when individual links and junctions are considered.

- 10.3.6. The ES predicts proposed traffic generation on the basis of a worst-case scenario where five adjacent cable sections are constructed at the same time. This would concentrate the construction vehicle movements onto the same road links at the same time. A range of four scenarios have been created that concentrate the construction traffic flows at different parts of the study area. To ensure a robust assessment, the maximum construction traffic flow for the four scenarios on each link and junction has been assumed as the peak construction traffic flow that could be generated.
- 10.3.7. The key parameters for the assessment are also based on maximum design scenarios that have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios including the widest cable trench option comprising 6 cables, a 30-month cable corridor construction period and the construction of a High Voltage Alternating Current (HVAC) booster station at Little Barningham.
- 10.3.8. The ES also takes account of the estimated traffic generation from other relevant projects and plans in its assessment of cumulative effects.
- 10.3.9. The ES identifies several designed-in mitigation and management measures seeking to minimise, as far as possible, impacts associated with construction traffic. These are set out in Table 7.17 of the ES and include the following:
- the identification of suitable HGV routes;
 - traffic management measures;
 - agreement of abnormal load routes and timings with relevant authorities;
 - avoidance of tourist routes for HGV movements where possible during peak holiday season;
 - restrictions of HGV operating hours along sections of highway that provide access to schools; and
 - appropriate parking provision for construction workers.
- 10.3.10. The principles of these measures are included in the originally submitted Outline Construction Traffic Management Plan (CTMP) [APP-176] and would be developed further for approval as part of the detailed CTMP(s) that would be secured by Requirement 18 of the Development Consent Order (DCO). The measures have been developed by the Applicant during the Examination and will be discussed below.
- 10.3.11. The impacts arising from the operation of the onshore elements have been scoped out of the assessment due to the very low and infrequent nature of the predicted vehicle movement during operation. Impacts arising from decommissioning of the onshore cable corridor have also been scoped out as the cables would remain in place after decommissioning.

- 10.3.12. The ES concludes that during construction there would be minor adverse effects on pedestrian amenity. The effects during construction on driver delay, severance, pedestrian delay, accidents and road safety and hazardous, dangerous and abnormal indivisible loads have been assessed as being negligible. Traffic generated during operation would be much lower than during construction and would be insignificant. During decommissioning, the ES concludes that vehicle movements would not result in effects of any greater significance during construction. A summary of the overall findings of the assessment are presented in Table 7.27 of the ES.

10.4. ISSUES ARISING DURING THE EXAMINATION

Local Impact Reports (LIR)

- 10.4.1. Norfolk County Council's (NCC) Local Impact Report (LIR) [REP1-061] confirmed that proposed HGV routes have been identified and acceptable restrictions have been offered to avoid adverse impacts on sensitive receptors. It highlights two main issues of concern where holding objections were raised:
- an objection on highway safety grounds regarding the HVAC booster station and HVDC convertor/HVAC substation until clarification is received in relation to acceptable visibility splays; and
 - an objection on highway safety grounds to the proposed main construction compound at Oulton airfield. NCC stated that the Applicant should find a different site for the main construction compound. If it pursued with Oulton airfield, then a scheme of permanent off-site highway improvement works comprising carriageway widening would be required (along The Street from the access to the compound to the B1149). NCC also considered that the Applicant should demonstrate that such a scheme is capable of overcoming the highway issues raised in the previous appeal decision for development at Oulton airfield.
- 10.4.2. NCC also drew attention to the need for the Applicant to ensure that the proposed cable route does not fetter future plans for the strategic highway network to the west of Norwich (including the proposed dualling of the A47(T)). A further issue was raised regarding the need for temporary vehicular access points to be removed following construction unless otherwise agreed.
- 10.4.3. The LIRs of North Norfolk District Council (NNDC) [REP1-062], Broadland District Council (BDC) [REP1-053] and South Norfolk Council (SNC) [REP1-100] generally defer to NCC for traffic and transport matters. However, BDC's LIR raised concerns regarding the vehicular access to and from the main construction compound at Oulton airfield and impacts of construction traffic at Cawston. Other matters raised by BDC regarding living conditions and the vibration effects of construction traffic on heritage assets are discussed in Chapters 11 and 13 respectively.
- 10.4.4. NNDC drew attention in its LIR to the district containing many small and narrow country roads with restricted widths and limited opportunities for

larger vehicles to pass each other. It noted that traffic levels are heightened through tourism in the summer months, especially near coastal locations, meaning that the timing of any construction works and managing HGV traffic would be critical to minimising adverse highway impacts. NNDC also welcomed the need to agree a CoCP and CTMP through DCO requirements.

General

- 10.4.5. Several representations have been made regarding the potential impacts of construction traffic at various locations in connection with the onshore infrastructure works [eg RR-018, RR-033, RR-110 and RR-125]. Additional representations relating specifically to the proposed main construction compound at Oulton and the B1145 through Cawston are considered separately later in this chapter.
- 10.4.6. At ISH4 [EV-015] the Applicant committed to a reduction in the depth of the haul road (providing vehicle access along the cable corridor off the public highway) from 1m to 0.5m. This would result in an overall reduction of approximately 30% in the number of HGV movements on the network during construction. The revised HGV movement figures are presented in the Applicant's HGV Haul Road Reduction Report [REP4-028]. The commitment to the revised haul road depth is contained within the Outline CTMP [REP9-048].
- 10.4.7. The Applicant also explained at ISH4 that the information in the original ES has been supplemented through the submission of additional baseline flows and assessments for 15 links not initially included in the assessment [REP5-009]. This does not change the conclusion of the ES that there would be no significant effects during the construction phase. All matters concerning baseline information and the methodology used to assess traffic and transport impacts are agreed by NCC in its Statement of Common Ground with the Applicant [REP9-027]. We are satisfied that the baseline information and the methodology used for the assessment of transport and highway safety effects are reasonable.
- 10.4.8. During the Examination the mitigation and management measures included within the Outline CTMP submitted with the application [APP-176] were developed following discussions with and representations received from Interested Parties along with our written [PD-008 and PD-012] and oral questions [EV-015 and EV-029]. The Outline CTMP [REP9-048] submitted at the end of the Examination would form the basis of the detailed CTMP(s) to be approved prior to the commencement of onshore works.
- 10.4.9. The Outline CTMP establishes the principles that would be implemented by the principal contractors to minimise adverse impacts associated with the transport of the materials, plant and staff required for onshore construction. It includes measures regarding:
- management of HGV movements;
 - management of construction workforce movement;
 - site accesses (design, management and mitigation);

- highway crossings;
- planned intervention schemes (Oulton, Taverham Road, Cawston);
- management of highway safety;
- implementation and monitoring;
- interaction with the A47 improvement scheme; and
- interaction with Norfolk Vanguard.

10.4.10. We consider the Outline CTMP further below in our discussion of further specific construction related issues arising during the Examination.

10.4.11. We are satisfied that the traffic and transport impacts during operation would be negligible given the low traffic generation that would occur. We also agree with the Applicant that effects during onshore decommissioning could be satisfactorily mitigated by an onshore decommissioning plant that would be approved through Requirement 23 of the DCO.

Main construction compound at Oulton Street

10.4.12. In addition to the concerns raised in the LIRs of NCC and BDC, Oulton Parish Council (OPC) and other Interested Parties have made several written and oral representations [e.g. RR-034 and REP8-017] regarding the location of the main construction compound at Oulton airfield. These include concerns regarding the traffic and highway impacts of the compound including from the associated vehicular access for HGVs and other construction vehicles along The Street. Their concerns are exacerbated by the potential cumulative impacts from additional construction traffic in connection with the proposed Norfolk Vanguard development also using The Street. Oral representations were heard regarding these matters at ISH4 [EV-015], ISH9 [EV-029], OFH1 [EV-011] and OFH3 [EV-033].

10.4.13. The main construction compound is proposed to be in active use for up to 30 months during the eight year construction period. In response to representations received from Interested Parties and our written questions (Q1.11.8, Q1.11.9 and Q1.11.10) [PD-008], the Applicant submitted a Main Construction Compound Briefing Note [REP1-176]. This includes details of the nature of use of the compound and includes confirmation that there would be a maximum of 118 two-way HGV movements (i.e. all arrivals plus all departures) and 130 staff vehicle movements per day. It also includes an Access Strategy Safety Review.

10.4.14. The maximum HGV movements referred to above would include the transportation of large cable drums via low loader vehicles to and from the compound. These would be classified as abnormal loads. Whilst standard HGV movements at the compound would only occur during core working hours, the abnormal movements could occur outside of the core working hours and would require transportation under formalised escort conditions. The Outline CTMP [REP9-048] requires that the timing, routing and parameters (weight, length and width) of abnormal load movements would need the prior agreement of the highway authority. The Outline CTMP would also prohibit abnormal load movements from the

main construction compound to the onshore cable corridor between 23:00 and 07:00.

- 10.4.15. Further to discussion and our request at ISH9 [EV-029], the Applicant has submitted a Cumulative Link Impact Assessment Relating to Traffic in Oulton and Cawston [REP7-048]. For Oulton this concludes that, without mitigation, effects of moderate adverse significance would result on The Street between the B1149 and the Oulton airfield entrance. These effects would result from the impact of abnormal loads of which there would be a maximum of 2242 two-way movements arising from the Proposed Development during the 30 month period of use of the main construction compound. However, with proposed mitigation in place it predicts that the effects would be reduced to negligible adverse.
- 10.4.16. The Applicant has engaged with NCC, BDC and OPC regarding the use of The Street for construction traffic. Several mitigation measures, including highway intervention works for The Street, have evolved during the Examination and are these are included in the Outline CTMP [REP9-048]. Detailed design would need to be approved as part of the final CTMP secured by the DCO. The proposed highway intervention and other mitigation works include the following measures (the first two being permanent works with the remainder being temporary):
- improvements to The Street/B1149 junction;
 - regrading of the hump adjacent to Old Railway Gatehouse;
 - provision of passing places for HGV traffic along The Street;
 - lowering of the speed limit from 60mph to 30mph; and
 - prohibit construction vehicles from approaching or leaving the compound through Oulton Street village.
- 10.4.17. In addition, the Outline CTMP includes a daily maximum construction traffic threshold on The Street for the Proposed Development on its own (a total of 248 daily traffic movements with a limit of 118 HGV movements) and a cumulative maximum threshold for both the Proposed Development and Norfolk Vanguard (a total of 424 daily traffic movements with limit of 214 HGV movements).
- 10.4.18. During the Examination there was consideration of several different vehicular access options, including proposals by OPC for a new dedicated access route to the compound from either the B1149 or The Street near to its junction with the B1149 [REP1-046, REP2-027 and REP3-083]. Following feedback from NCC and landowners, and taking account of the all relevant environmental considerations, the Applicant considers that that Option 1 (comprising highway works to The Street) is the most suitable option utilising the existing vehicular access to Oulton airfield.
- 10.4.19. Taking into account the potential cumulative traffic flows, NCC has confirmed in its SoCG with the Applicant [REP9-027] that this is an acceptable and workable solution. BDC has also agreed with this conclusion in its SoCG [REP10-022]. However, by the end of the Examination OPC still maintained its concern regarding the uncertainty of traffic and highways impacts of the main construction compound on The Street and the general highway network.

- 10.4.20. We acknowledge the previous 2014 appeal decision³², where a proposal for an anaerobic digestion renewable energy facility at Oulton airfield was dismissed, including for highway safety reasons. Whilst there are similarities in terms of a substantial increase in HGV movements, the highway improvement works proposed by the Applicant appear to be more comprehensive than those for the previous scheme. In addition, the Applicant's highway intervention proposals for The Street have been developed following a Stage 1 Road Safety Audit. The current proposal also relates to temporary construction vehicle movements (for a maximum of 30 months) in comparison to the permanent vehicle movements of the appeal proposal.
- 10.4.21. In conclusion, we recognise the substantial increase in HGV and other construction traffic (including abnormal loads) using The Street in order to gain access to and from the main construction compound. We also note that potential cumulative increase in vehicle movements in association with Norfolk Vanguard. Whilst there would inevitably be some disruption and inconvenience for highway users, we are satisfied that the Applicant's proposed highway intervention scheme and associated mitigation measures are sufficient to ensure that no significant adverse traffic or highway impacts would result.

Cawston (B1145)

- 10.4.22. During the Examination numerous representations [eg: RR-124, REP7-087 and REP7-113] were received (including several representations from Cawston Parish Council (CPC)) expressing concerns at the highway impacts of HGV and other vehicle movements passing through the village of Cawston on the B1145. These concerns include the cumulative impacts in conjunction with Norfolk Vanguard, pedestrian safety, the suitability of HGV access route where it passes through the village and damage to the highway including bridges.
- 10.4.23. The highway link through Cawston would connect the main construction compound in Oulton Street with three different sections of the onshore cable corridor. The Proposed Development would result in a maximum of 370 daily two-way vehicle movements through Cawston, of which a maximum of 127 would be HGVs. The maximum cumulative two-way vehicle movements also taking account of Norfolk Vanguard would be 668 of which up to 271 would be HGVs. The issue of cumulative traffic impacts and related mitigation measures at Cawston was discussed at ISH9 [EV-029].
- 10.4.24. Following our request at ISH9, the Applicant has submitted a Cumulative Link Impact Assessment Relating to Traffic in Oulton and Cawston [REP7-048]. For Cawston this concludes that, without mitigation, effects of no worse than minor adverse significance would result. However, with mitigation in place it predicts that the effects would be reduced to negligible adverse.

³² APP/K2610/A/14/2212257

- 10.4.25. In consultation with NCC, BDC and CPC the Applicant has developed a highway intervention plan for Cawston, the latest version of which is contained within the Outline CTMP [REP9-048]. In its Statement of Case [REP10-045], the Applicant acknowledges that the scheme requires further development to respond to findings of a Road Safety Audit undertaken in March 2019 and to seek to further address concerns raised by Cawston residents (as raised in oral and written representations during the Examination).
- 10.4.26. The Outline CTMP makes provision for the access strategy for sections 8, 9 and 10 of the cable corridor to be developed, in consultation with NCC and CPC, before inclusion in the final CTMP. This would require approval by BDC as the relevant planning authority pursuant to Requirement 18 of the DCO.
- 10.4.27. The mitigation measures for Cawston within the Outline CTMP include the following:
- restriction on HGV movements past Cawston Primary School between 07:30 – 9:00 and 15:00 – 16:00;
 - implementation of a 20mph speed limit through the village;
 - footway enhancements within the village centre;
 - relocation of existing bus stops;
 - definition of on street parking bays to formalise parking arrangements at identified locations;
 - road resurfacing within the village centre; and
 - highway maintenance following video condition surveys or visual inspections.
- 10.4.28. Additionally, in order to seek to minimise construction traffic movements through Cawston, it is proposed that the final CTMP would include a construction programme specific to cable sections 8, 9 and 10 (to be accessed via either the B1145 or Heydon Road). This would include details of how the programme has been optimised to enable the prioritisation of traffic movements along Heydon Road. Heydon Road is located to the north of Cawston and is substantially less constrained by sensitive receptors than the B1145 passing through Cawston. Representation have been made by local residents suggesting that Heydon Road should be used as an alternative to the B1145.
- 10.4.29. No figures have been provided of how this would reduce traffic movements on a day to day basis. However, we recognise that the maximisation of use of Heydon Lane, up to the maximum thresholds identified in the ES, would reduce reliance on the use of the B1145 through Cawston and help to reduce highway impacts in the village. The detailed CTMP would also include details of the estimated construction traffic flow variations for cable sections 8, 9 and 10, identifying the level and duration of any peak traffic flows.
- 10.4.30. In its written representations at the end of the examination [REP9-086 and REP10-019] NCC indicated that the highway mitigation measures for Cawston are technically workable subject to receipt of a satisfactory road safety audit. In its final representation, NCC states that there are several

matters requiring resolution in the final highway intervention scheme. These include amendments to the footway improvements, details of signage and road markings and the re-location of bus stops.

- 10.4.31. NCC goes on to state that it believes a suitable access strategy can be produced that mitigates impact but the scheme needs several changes, albeit they will be amendments rather than a complete re-think. NCC recognises the Applicant's commitment to continued engagement which would be necessary prior to the submission for approval of the final Cawston highway intervention plan. NCC also supports the Applicant's commitment to develop an access strategy making greater use of an alternative route along Heydon Road.
- 10.4.32. We acknowledge the substantial increase in construction traffic, including HGV movements, that would result from the Proposed Development. This would be further increased by the potential cumulative impact in association with Norfolk Vanguard. Whilst the increase in traffic, particularly HGV movements, would inevitably have implications for local highway conditions in Cawston during construction, the Applicant has sought to minimise these, including through the proposed mitigation measures and highway intervention plan. These measures would be further developed in liaison with NCC, BDC and CPC.
- 10.4.33. We note that the worst case scenario is based on construction vehicle movements for both the Proposed Development and Norfolk Vanguard peaking at the same time. In the event of this happening, it appears to us that this would be likely to occur for a significantly shorter time period than the 30 month cable construction period. In this regard, the Outline CTMP includes a commitment for the Proposed Development and Norfolk Vanguard to actively engage and manage cumulative traffic demand to ensure that each scheme's peak traffic does not overlap
- 10.4.34. We consider the proposed prioritisation of the use of Heydon Road to be an important form of mitigation for Cawston. With continued liaison between the Applicant, NCC and CPC as set out in the Outline CTMP, we are satisfied that a final set of mitigation proposals can be agreed within the detailed CTMP.
- 10.4.35. Overall, we acknowledge that the mitigation proposals for Cawston were not fully resolved by the end of the Examination. Nevertheless, we consider that the mitigation proposals are sufficiently developed for us to conclude that there is a good prospect that the outstanding matters would be resolved. We attach significant weight to NCC's comments in this regard. On that basis we conclude that appropriate measures would be secured through the detailed CTMP to avoid significant traffic and highway impacts.

Temporary and Permanent access points

- 10.4.36. NCC is satisfied that, during construction, safety at the temporary accesses would be controlled and managed through the final CTMP. Traffic management measures including signage and temporary speed limits would be required as set out in the Outline CTMP [REP9-048].

NCC's SoCG with the Applicant also confirms that the proposal to remove the temporary construction accesses between phases and at the end of the overall construction phases (unless otherwise agreed) is appropriate.

- 10.4.37. The Applicant has provided further details of the permanent vehicular access points to the HVAC booster station and the HVDC convertor/ HVAC substation, including the provision of appropriate visibility splays. The updated access drawings are included in the Outline CTMP. NCC confirms [REP9-086] that this information resolves the objections set out in its LIR [REP1-061].
- 10.4.38. The detailed design of both permanent and temporary accesses to the highway, and the alteration of existing accesses would require prior approval by the local highway authority (NCC) under Requirement 11 of the recommended DCO. We are satisfied that reasonable measures are in place to prevent any significant adverse highway impacts occurring at the temporary and permanent access points.

Key road junctions and road improvement schemes

- 10.4.39. NCC [REP9-086] and Highways England's (HE) SoCG with the Applicant [REP7-015] confirm that the Applicant's proposed highway intervention scheme at the A47/ Taverham Road junction, included in the Outline CTMP, would provide acceptable mitigation for potential impacts at this junction. NCC and HE confirm that matters relating to impacts on other road junctions during construction, including the A140/B1113, have also been satisfactorily resolved.
- 10.4.40. HE confirms in its SoCG with the Applicant [REP7-015] that all relevant matters are agreed. These matters include the interaction with road improvements schemes, including the A47 dualling scheme where appropriate enabling and site specific measures would be included in the final CTMP in liaison with HE. The measures required would be influenced by the timing of the works as it is not yet known if the cable corridor would be delivered before, during or after the A47 dualling works.
- 10.4.41. HE also agrees in its SoCG that the impact of construction vehicle movements on existing junctions (including the A47/ A1074 Longwater junction, A47/ A140 and B1113/ A140 junctions) can be satisfactorily managed through site specific measures to be included in the final CTMP. HE states that such measures might include working hours restrictions on construction sites in the vicinity of junctions and the provision of queue length detectors on A47 slip roads which would in turn be used to warn drivers approaching the junctions. The need for such measures would be informed by sensitivity testing based on the number of anticipated construction vehicle movements through relevant junctions.
- 10.4.42. We are satisfied that subject to appropriate measures to be contained with the final CTMP, which would be secured by Requirement 18 of the recommended DCO, the Proposed Development would not be likely to result in significant adverse impacts upon the operation of road junctions or jeopardise the implementation of planned road improvement schemes.

Cumulative traffic impacts

- 10.4.43. Several representations have been made regarding the potential cumulative traffic impacts that could arise from the construction of both the Proposed Development and Norfolk Vanguard. Cawston and Oulton Street have already been discussed above.
- 10.4.44. Additional cumulative link impact assessments [REP6-039 and REP7-048] were submitted during the Examination by the Applicant. These assessments follow a review of the highway links where a cumulative impacts could occur taking account of Norfolk Vanguard. The assessments conclude that no significant cumulative traffic effects are expected, following the implementation of traffic intervention plans at Cawston, Oulton and the A47/Taverham junction as discussed in more detail above. The Outline CTMP also includes a cumulative traffic flow threshold for the B1149 Edgefield to Heydon link. This could not be exceeded without the approval of the local highway authority.
- 10.4.45. In terms of the strategic road network, HE confirms in its SoCG [REP7-015] that it considers the Applicant's cumulative effect assessment to be appropriate, with measures to manage construction traffic to be secured through the detailed CTMP(s).
- 10.4.46. The detailed CTMP(s) would provide specific HGV routing, to be agreed with NCC as the local highway authority. The Outline CTMP also includes a commitment to continued engagement between the Applicant, NCC and Norfolk Vanguard to manage cumulative construction traffic. For example, on a given road the two projects may commit to programme works such that each scheme's peak traffic does not overlap with the other. It is proposed that regular programmed sharing of information would ensure that the final CTMP(s) accurately reflect the expected construction traffic demand of both projects. NCC states in its SoCG with the Applicant [REP9-027] that it does not foresee any matters of disagreement within the Outline CTMP.
- 10.4.47. The cumulative increase in construction traffic taking account of Norfolk Vanguard in addition to the Proposed Development would result in substantial increases in traffic, including HGV movements, in several locations. However, we consider that the Applicant has taken reasonable steps, in liaison with NCC and HE, to appropriately mitigate and manage the cumulative traffic and highway effects. Whilst some localised issues may arise at sensitive locations, overall we are satisfied that the cumulative effects would not result in significant adverse effects.

10.5. CONCLUSIONS

- 10.5.1. The Applicant has considered the transport and traffic impacts of the Proposed Development in consultation with key organisations including NCC and HE. We are satisfied that the baseline, methodology and assessments in the ES, as supplemented by information providing during the Examination, are generally sound.
- 10.5.2. During the Examination, substantial progress has been made on the development of construction traffic management and mitigation measures which are included in the Outline CTMP. Further development of these measures would take place, in consultation with key organisations, before the final CTMP(s) are submitted for approval prior to the commencement of the construction phase. We acknowledge that by this stage further details would be known regarding the procurement of materials, enabling more clarity to be available on traffic movements for each highway link within the study area.
- 10.5.3. We have given significant weight to the positions of NCC (as the local highway authority) and HE, as set out in the SoCGs [REP9-027 and REP7-015], both of which are generally in agreement the approach taken by the Applicant in assessing construction traffic impacts and the measures proposed to mitigate such impacts.
- 10.5.4. We acknowledge, however, that outstanding concerns remain from residents and Parish Councils regarding construction traffic impacts in specific locations. These concerns include the impacts arising from the use of the main construction compound at Oulton airfield and the use of the B1145 through the village of Cawston, including the cumulative impacts with Norfolk Vanguard. The maximum number of HGV movements in such locations would be substantial and there is potential for some localised highways impacts.
- 10.5.5. The mitigation measures proposed in these locations would minimise the impacts, although we note that the further refinement of the Cawston highway intervention scheme is proposed in liaison with the relevant interested parties. We welcome this further opportunity in order to ensure that the best possible mitigation can be provided. The final highway intervention schemes and other traffic mitigation measures would be secured in the final CTMPs through Requirement 18 of the recommended DCO.
- 10.5.6. Overall, we consider there are likely to be limited temporary adverse highway impacts during construction, particularly from potential cumulative impacts with Norfolk Vanguard in certain locations. However, we are satisfied that reasonable mitigation measures can be secured through the recommended DCO to reduce the impacts to acceptable levels.
- 10.5.7. The traffic and transport impacts would satisfactorily accord with EN-1. We conclude that transport and traffic matters do not weigh significantly against the Order being made.

11. LIVING CONDITIONS FOR LOCAL RESIDENTS

11.1. INTRODUCTION

11.1.1. This chapter reports on the effects of the Proposed Development on living conditions for local residents, including effects on human health, taking into consideration the tests set out in the Overarching National Policy Statement for Energy (EN-1). Living conditions for local residents was identified as a principal issue in our initial assessment [PD-006, Annex B]. It includes noise and other impacts during construction and operation, including cumulative impacts from traffic during construction.

11.1.2. The chapter is organised as follows:

- Policy considerations;
- Applicant's approach;
- Issues arising during the Examination; and
- Conclusions.

11.2. POLICY CONSIDERATIONS

11.2.1. The Overarching National Policy Statement for Energy (EN-1) includes several sections on generic impacts relevant to living conditions for local residents. The main policy considerations relevant to the Proposed Development are set out below.

Air quality and emissions

11.2.2. EN-1 recognises that the construction, operation and decommissioning phases of infrastructure development can involve emissions to air which could lead to adverse impacts on health (paragraph 5.2.1).

11.2.3. It states that air quality considerations should be given substantial weight where a project would lead to a deterioration in air quality in an area or would lead to a new area where air quality breaches national air quality limits. It goes on to say that 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 (paragraph 5.2.9). In all cases account must be taken of any relevant statutory air quality limits (paragraph 5.2.10).

11.2.4. Decision-makers should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. It advises that a construction management plan may help to codify mitigation (paragraph 5.2.11).

11.2.5. The UK Marine Policy Statement states that adverse effects can result from activities and developments in the marine and coastal areas, including vehicle emissions as a result of increased coastal activity and dust from construction. It also recognises that generation of energy from

renewable sources has an overall beneficial effect on air quality, as compared with fossil fuels (paragraph 2.6.2.1).

Noise and vibration

- 11.2.6. EN-1 recognises that excessive noise can have wide ranging impacts on the quality of human life and health (for example owing to annoyance and sleep disturbance). It advises that the Government's policy on noise is set out in the Noise Policy Statement for England, promoting good health and good quality of life through effective noise management. It goes on to state that similar considerations apply to vibration, which can also cause damage to buildings (paragraph 5.11.1).
- 11.2.7. EN-1 lists the factors that will determine the likely noise impact (paragraph 5.11.3). In respect of residential living conditions these include:
- the inherent operational noise from the proposed development and its characteristics; and
 - the proximity of the proposed development to noise sensitive premises.
- 11.2.8. EN-1 states that where impacts are likely to arise, the applicant should include the following in its noise assessment (paragraph 5.11.4):
- a description of the noise generating aspects of the proposal, including identification of any distinctive tonal, impulsive or low frequency characteristics;
 - identification of noise sensitive premises that may be affected;
 - the characteristics of the existing noise environment;
 - a prediction of how the noise environment will change with the proposed development in the shorter term during the construction period and in the longer term during operation;
 - at particular times of the day, evening and night as appropriate,
 - an assessment of the effect of the predicted changes in the noise environment on any noise sensitive premises; and
 - measures to be employed in mitigating noise.
- 11.2.9. The noise impact of ancillary activities such as increased road movements should also be considered (paragraph 5.11.5).
- 11.2.10. EN-1 goes on to require that a project should demonstrate good design through selection of the quietest cost-effective plant available, containment of noise within buildings wherever possible, optimisation of plant layout to minimise noise emissions and, wherever possible, the use of landscaping, bunds, or noise barriers to reduce noise transmission (paragraph 5.11.8).
- 11.2.11. EN-1 also states that development consent should not be granted unless a proposal meets the following aims (paragraph 5.11.9):
- avoid significant adverse impacts on health and quality of life through noise;

- mitigate and minimise other adverse impacts on health and quality of life from noise; and
- where possible, contribute to improvements to health and quality of life through the effective management and control of noise.

11.2.12. The decision-maker should consider including measurable requirements within a development consent order, or specifying the mitigation measures to be put in place, to ensure that noise levels do not exceed any specified limits (paragraph 5.11.10). Mitigation measures may include engineering, lay-out and administrative measures (paragraph 5.11.12). In certain situations, and only when all other forms of noise mitigation have been exhausted, it may be appropriate for the decision maker to require noise mitigation through improved sound insulation to dwellings (paragraph 5.11.13).

Dust, odour and light

11.2.13. EN-1 states that some impact on amenity for local communities is likely to be unavoidable. The aim should be to keep the impacts to a minimum, and at a level that is acceptable (paragraph 5.6.3). The decision-maker should satisfy itself that an assessment of the potential for effects to have a detrimental impact on amenity has been carried out and that all reasonable steps have been taken, and will be taken, to minimise any such detrimental impacts (paragraph 5.6.7).

11.2.14. EN-1 also advises that where it believes it appropriate, the decision-maker may consider attaching requirements to the development consent in order to secure mitigation measures (paragraph 5.6.9). A construction management plan may help codify mitigation (paragraph 5.6.10).

Electric and magnetic fields

11.2.15. The National Policy Statement for Electricity Networks Infrastructure (EN-5) recognises that electric and magnetic fields (EMF) can have both direct and indirect effects on human health. It states that although putting cables underground eliminates the electric field, they still produce magnetic fields, which are highest directly above the cable (paragraph 2.10.2).

11.2.16. EN-5 advises that the balance of scientific evidence over several decades of research has not proved a causal link between EMFs and cancer or any other disease (paragraph 2.10.6). It goes on to state that Government policy is that exposure of the public should comply with the International Commission on Non-Ionizing Radiation Protection 1998 guidelines in terms of the EU recommendation (paragraph 2.10.9). EN-5 states that the reference levels are such that compliance with them will ensure that the basic restrictions are not reached or exceeded (paragraph 2.10.3).

Health

11.2.17. EN-1 states that, 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 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. However, it states that the decision-maker will want to take account of health concerns when setting requirements relating to a range of impacts such as noise (paragraph 4.13.5).

11.3. APPLICANT'S APPROACH

Noise and vibration

- 11.3.1. Chapter 8 of Volume 3 of the Environmental Statement [APP-080] sets out the Applicant's assessment of noise and vibration impacts during construction, operation and decommissioning. It is supported by a several technical reports comprising Baseline Noise Survey [APP-167], Construction Noise Model Output [APP-168], Operation Noise Model Input [APP-169] and Operation Noise Model Output [APP-170].
- 11.3.2. For the construction and decommissioning phases, the Applicant's noise and vibration study area considers sensitive receptors within approximately 1km of the proposed onshore infrastructure, including storage areas, compounds and accesses. For the operation phase the study area considers sensitive receptors within approximately 1km of the onshore High Voltage Direct Current (HVDC) convertor/ High Voltage Alternating Current (HVAC) substation and HVAC booster station.
- 11.3.3. Noise information has been collated from site surveys to establish the baseline sound levels at locations representative of the noise sensitive receptors potentially most affected by the HVDC convertor/ HVAC substation and HVAC booster station. The assessment in the ES is based on the maximum design scenario selected as having the potential to result in the greatest effects on receptors. The maximum duration over which construction of the onshore cable corridor could occur would be 5.5 years incorporating two phases and assuming a three year gap between phases. There would be a typical active cable corridor construction duration of three months in any particular location.
- 11.3.4. The ES also assesses potential noise impacts from construction traffic movements arising from the proposed development, along with the cumulative impacts in association with other schemes.
- 11.3.5. The ES recognises that the Proposed Development would generate noise during construction which has the potential to disturb noise sensitive receptors such as dwelling houses. A number of designed-in mitigation measures are proposed including the following:
- best practicable means, for example the use of quieter alternative methods, plant and equipment where reasonably practicable, and the use of screens and acoustic barriers;
 - construction noise management measures for specific activities to be agreed with the relevant local planning authority;
 - mitigation to be developed during the detailed design of the HVDC convertor/ HVAC substation to achieve a noise rating level of 34dB L_A,Tr at any residential property;

- a Noise Management Plan for the operation phase to be agreed with the relevant local planning authority.

11.3.6. An Outline Code of Construction Practice (CoCP) [APP-179] was submitted with the application providing details of measures to mitigate noise and vibration effects during construction. This would be secured by Requirement 17 in the draft Development Consent Order (DCO) [APP-027]. This would require the submission of a detailed CoCP (which must accord with the Outline CoCP) to be approved by the relevant planning authority.

11.3.7. The main conclusions of Applicant's noise and vibration assessment are as follows:

- Taking account of the implementation of mitigation measures, the noise and vibration effects from construction (including from construction traffic) would range from negligible to minor adverse significance (not significant in EIA terms).
- In terms of operation, with the proposed mitigation measures in place, the noise and vibration effects of the onshore HVDC convertor/ HVAC substation and HVAC booster station are assessed as being of minor adverse significance.
- During decommissioning, the cables would be left in place, therefore the only effects would be from the decommissioning of the HVDC convertor/ HVAC substation and HVAC booster station which are assessed by the Applicant as being of negligible to minor adverse significance.
- The potential cumulative effects are predicted as being of negligible to minor adverse significance.

Air quality

11.3.8. Volume 3, Chapter 9 of the ES [APP-081] assesses the potential impacts of the Proposed Development on air quality during the construction and decommissioning phases. It recognises the two potential sources of air quality effects as being exhaust emissions and dust.

11.3.9. Impacts from operation of the Proposed Development have been scoped out of the ES due to the small amount of vehicular movements that would be generated. Eutrophication impacts have been scoped out during construction, operation and decommissioning as the emissions of NO_x and ammonia from the traffic generated are not expected to be significant. There are no Air Quality Management Areas within the air quality study areas of the Proposed Development.

11.3.10. The two study areas comprise a 350m buffer (construction dust) around the onshore elements and a 500m buffer (traffic emissions) around the main road network to be used in construction. The traffic emissions study area also includes roads where it has been predicted that there would be 100 or more daily HGV movements.

11.3.11. Section 9.10 of the ES lists several designed-in measures to reduce the potential for air quality impacts that would be implemented through the

Outline CoCP [APP-179]. The final measures would be approved by the relevant local planning authority as part of the detailed CoCP(s) requiring approval through Requirement 17 of the draft DCO [APP-027].

- 11.3.12. The ES concludes that, provided there has been successful implementation of the proposed mitigation measures within the Outline CoCP, the effects on air quality would not be significant in EIA terms. This includes an assessment of the cumulative impacts including Norfolk Vanguard.

Electric and magnetic fields

- 11.3.13. The Applicant's onshore assessment of EMFs during operation is set out in Volume 4, Annex 3.3 of the ES [APP-087].
- 11.3.14. The ES concludes that, based on the maximum field strengths, using worse case assumptions where required, the levels of EMFs from the Proposed Development would be well below the guideline public exposure reference levels set to protect human health.

11.4. ISSUES ARISING DURING THE EXAMINATION

Local impact reports

- 11.4.1. In its Local Impact Report (LIR) [REP1-062] North Norfolk District Council (NNDC) raised concerns regarding the potential for noise effects from the operation of the onshore HVAC booster station. In particular, the potential for tonal and hum effects.
- 11.4.2. Broadland District Council's (BDC) LIR [REP1-053] raised concerns regarding the impacts of construction traffic. Firstly, upon the living conditions of the occupiers of a residential property (The Old Railway Gatehouse) located adjacent to The Street on the main access route to and from the main construction compound at Oulton airfield. Secondly, upon the living conditions of the occupiers of residential properties on the B1145 through the village of Cawston. BDC also highlights the potential cumulative impacts in both cases taking account of the Proposed Development and Norfolk Vanguard.
- 11.4.3. In its LIR, South Norfolk Council (SNC) [REP1-100] did not raise concerns regarding specific impacts. However, it drew attention to several general matters including hours of operation, standby generators and emissions where it considered further discussion was needed.

General construction issues

- 11.4.4. No significant concerns were raised during the Examination regarding the methodology used in the Applicant's assessment of construction impacts on residential living conditions. By the end of the Examination most matters concerning the impact of construction on residential living conditions were agreed between the Applicant and local planning authorities.

- 11.4.5. There are a number of residential properties that would be located close to the onshore cable corridor. Cable construction works are expected typically to take three months per phase in any location and therefore we consider the impacts from the onshore cable construction to be short term. Mitigation and management measures in the final Outline CoCP [REP9-063] have been developed during the Examination. We are satisfied that the measures within the Outline CoCP would satisfactorily safeguard the living conditions of the occupiers of residents living close to the cable corridor.
- 11.4.6. Representations have also been received [eg RR-001 and RR-052] regarding the impacts on residential living conditions from the construction of the HVDC convertor/ HVAC substation near Swardeston. The maximum construction period for this element of the onshore works would be three years, potentially over two phases. We are satisfied that, with the implementation of the noise and air quality mitigation and management measures contained within the Outline CoCP [REP9-063], no significant adverse impacts would arise. There are no residential properties within the immediate vicinity of the site of the proposed onshore HVAC booster station and we are satisfied that no significant adverse impacts would result from its construction upon residential living conditions.
- 11.4.7. South Norfolk Council (SNC) has expressed concern [eg REP4-020] at the proposed construction working hours included in the Outline CoCP. The core working hours proposed are 07:00 – 18:00 on Monday to Friday and 07:00 – 13:00 on Saturday. We asked written questions (Q1.12.6 and Q2.12.6) [PD-008 and PD-012] regarding the core working hours and this matter was discussed at ISH4 [EV-015]. Taking account of factors including the proximity of the construction works to residential properties, NCC considers that the core working hours start time of 07:00 on Mondays to Saturdays should be put back until 08:00. Other Interested Parties also shared SNC's concern, including Corpusty and Saxthorpe Parish Council and Edgefield Parish Council [REP3-111].
- 11.4.8. In response to these concerns, the Applicant [REP10-045] draws attention to other nationally significant infrastructure projects which have the same core working hours and points out that a construction start time of 07:00 provides a mechanism for some of the construction work force and vehicle movements to travel outside the standard peak hours. With specific reference to the locality of the HVDC convertor/ HVAC substation, it notes the background ambient noise generated by the A47 and draws attention to the conclusion of the ES that no significant noise or vibration effects would occur.
- 11.4.9. We consider that there would be some minor benefits from a later commencement time of 08:00 for residential living conditions at properties near to the construction site. However, we note the short term construction periods of three months for the sections of the cable corridor, albeit over two phases. The construction period would be longer (a maximum of three years) at the HVDC convertor/ HVAC substation. However, the background noise levels from the A47 are such that

delaying the start time would not significantly alter the noise climate at the nearest residential properties.

- 11.4.10. We also note that SNC otherwise agrees the Applicant's construction noise assessment conclusions and we do not consider that significant adverse noise impacts would result from construction activities at each site. Furthermore, we are mindful that shortening the daily working hours would be likely to lengthen the overall construction periods. We conclude that the working hours in the Outline CoCP are reasonable.
- 11.4.11. The impacts on living conditions from construction traffic at Oulton airfield and Cawston are discussed below. Representations have also been received [eg REP1-012 and REP1-097] regarding the impact of construction traffic at other locations near to the cable corridor. We acknowledge the substantial increases in HGV movements that would occur during the construction period at several locations near residential properties. In Chapter 10 we note that the Applicant has made a commitment to a reduction in the depth of the haul road, resulting in an overall reduction of approximately 30% in the number of HGV movements during construction.
- 11.4.12. Furthermore, the Outline Construction Traffic Management Plan (CTMP) [REP9-048] includes maximum traffic thresholds for each road link. Abnormal road movements outside core hours would require agreement with the relevant local planning authority. With regard to cumulative impacts, the Outline CTMP includes a commitment to programme works with Norfolk Vanguard to ensure that the peak traffic generation from each scheme would not overlap. The relevant local planning authorities have not raised objections in relation to construction traffic impacts on living conditions. We are satisfied that, with the measures in the Outline CTMP, no significant impacts would result.

Main construction compound at Oulton airfield

- 11.4.13. In addition to the concerns of BDC in its LIR referred to above, several representations have been received from Oulton Parish Council (OPC) [eg RR-034, REP1-046 and REP7-080] and other Interested Parties (IPs) [eg RR-041, RR-046, RR-064 and RR-074] raising objections to the impact of the main construction compound at Oulton airfield on the living conditions of local residents. The issues raised include the noise and vibration impacts from construction traffic movements (most particularly on Old Railway Gatehouse), cumulative impacts taking account of Norfolk Vanguard, along with noise and light pollution effects from operation of the compound itself. Relevant matters were also discussed at ISH9 and oral representations were made at Open Floor Hearing (OFH) 1 [EV-011] and OFH 3 [EV-033].
- 11.4.14. The main construction compound is proposed to be in active use for up to 30 months during the eight year construction period. In response to the concerns raised, the Applicant submitted a Main Construction Compound Briefing Note [REP1-176]. This includes details of the nature of use of the compound and includes confirmation that there would be a maximum of 118 two-way HGV movements (i.e. all arrivals plus all departures,

including abnormal loads) and 130 staff vehicle movements per day. The main construction compound would operate as a central base for onshore construction works and would house the central offices, welfare facilities and stores, as well as acting as a staging post and providing secure storage for equipment and materials. The hours of operation would accord with the core working hours for the project (Monday to Friday: 07:00 to 18:00, Saturday 07:00 to 13:00).

- 11.4.15. The Applicant continued informal discussions with BDC and OPC during the Examination to seek to resolve the issues raised. The Outline CTMP has been developed during the Examination and the final version incorporates several mitigation and management measures relating specifically to the main construction compound [REP9-048]. In relation to the protection of living conditions, these measures include the following:
- prohibition of all construction traffic movements from the Proposed Development through the village centre of Oulton Street;
 - regrading of the existing hump adjacent to Old Railway Gatehouse and lowering of the speed limit from 60mph to 30mph along The Street;
 - provision of acoustic glazing and an acoustic barrier at Old Railway Gatehouse;
 - no abnormal load movements from the main construction compound to the main onshore cable corridor between 23:00 and 07:00;
 - measures requiring agreement with the local planning authority Environmental Health Officer for abnormal load movements to the main construction compound outside of core hours;
 - monitoring of noise levels at Old Railway Gatehouse with provision for additional traffic management measures if necessary; and
 - limits on the maximum number of construction traffic movements (including HGV movements) arising from the Proposed Development cumulatively with Norfolk Vanguard.
- 11.4.16. The Outline CTMP [REP9-048] also includes a commitment for the Proposed Development and Norfolk Vanguard to actively engage and manage cumulative traffic demand to ensure that each scheme's peak traffic does not overlap with the other.
- 11.4.17. The final version of the Outline CoCP [REP9-063] includes measures relevant to safeguarding impacts on residential living conditions around Oulton airfield. These measures include:
- the design and positioning of external lighting to minimise light spillage and pollution with further details to be provided for approval as part of the final CoCP secured by Requirement 17 of the draft DCO [REP10-041]; and
 - the minimisation of noise impacts from generators including approval by Environmental Health Officers if they are proposed to be run continuously.
- 11.4.18. In response to concerns raised by Interested Parties, the Applicant submitted a Construction Traffic Noise and Vibration Assessment at the Old Railway Gatehouse [REP6-037]. Further clarification regarding Old

Railway Gatehouse was provided within a Construction Traffic Noise Assessment Clarification Note [REP7-044] including matters in relation to the movement of abnormal loads outside of core working hours and World Health Organisation noise levels. These submissions conclude that, with the proposed mitigation measures in place, the residual noise and vibration impacts would be minor, which is not significant in EIA terms. This includes the cumulative construction scenario with Norfolk Vanguard which also proposes the use of The Street for construction traffic movements.

- 11.4.19. BDC's final position regarding living conditions at Oulton airfield is set out in its SoCG with the Applicant (REP10-022]. It confirms that the principle of the mitigation measures in respect of Old Railway Gatehouse (contained in the Outline CTMP) are acceptable. Furthermore, it confirms that sufficient measures are included within the Outline CoCP regarding the operation of the main construction compound.
- 11.4.20. Whilst BDC has agreed that no significant noise and vibration impacts would result, this position is not shared by OPC [REP8-017] and the occupiers of Old Railway Gatehouse [REP10-003]. We consider that there would inevitably be some adverse impacts on the residential living conditions at Old Railway Gatehouse during construction which would be exacerbated in the event of the construction works overlapping with those of Norfolk Vanguard.
- 11.4.21. However, we have given significant weight to the agreed position between BDC and the Applicant regarding noise and vibration impacts. We consider that the Applicant has proposed reasonable measures to minimise the adverse impacts that would be likely to arise during the use of the main construction compound. We consider that the measures contained in the Outline CoCP would minimise to an acceptable level all other impacts (including noise and light) from the use of Oulton airfield.
- 11.4.22. We have taken into account the previous appeal decision, where a scheme for an anaerobic digestion renewable energy facility at Oulton Airfield was dismissed, including due to the impacts of traffic noise on the living conditions of the occupiers of Old Railway Gatehouse. However, we consider that the measures outlined above, including the regrading of the hump outside of the property, would satisfactorily minimise noise impacts in this case.

Cawston

- 11.4.23. Numerous representations from local residents have been received regarding the impacts on residential living conditions of construction traffic using the B1145 through the village of Cawston [eg REP7-115, REP8-018 and REP10-002]. These include several representations from Cawston Parish Council throughout the examination [eg REP1-004 and REP7-086]. The concerns of local residents regarding the impacts of traffic were also extensively voiced at OFH3 [EV-033] and discussion of cumulative traffic impacts and related mitigation took place at ISH9 [EV-029]. We visited Cawston as part of our accompanied site visit

[EV-029a], where we observed numerous residential properties facing immediately onto the B1145.

- 11.4.24. Further to the concerns raised during the Examination, the Applicant has submitted relevant baseline information for Cawston and an assessment of the potential noise and vibration impacts from construction traffic movements [REP7-046]. This concludes that no significant noise and vibration impacts would result, including from the cumulative impacts with Norfolk Vanguard.
- 11.4.25. Further to liaison with the applicant for Norfolk Vanguard, the Outline CTMP [REP9-048] includes a maximum construction traffic cap under the cumulative scenario of 668 total movements of which 271 could be HGV movements. The Outline CTMP also makes provision for the monitoring of noise levels in Cawston for the duration of the cumulative impact in order to ensure the effectiveness of the mitigation proposed. This is intended to ensure that noise levels do not reach a level which would be considered to be a significant effect. If there were to be an exceedance, additional traffic management measures would need to be agreed with NCC and BDC.
- 11.4.26. Furthermore, as set out in Chapter 10, the Outline CTMP includes a commitment to prioritise the routing of construction traffic movements on an alternative route via Heydon Road for cable sections 8, 9 and 10, up to the maximum levels in the ES applicable for the use of this link. Whilst day to day construction traffic movement figures have not been provided, we consider it is unlikely that the peak traffic flows would occur for an extended period because they would be associated with specific elements of construction. Consequently, this measure would be effective in reducing overall impacts in Cawston.
- 11.4.27. With regards to cumulative impacts, as set out in Chapter 10, we note that the worst case scenario is based on construction vehicle movements for both the Proposed Development and Norfolk Vanguard peaking at the same time. In the event of this happening, it appears to us that this would be likely to occur for a significantly shorter time period than the 30 month cable construction period. In this regard, the Outline CTMP includes a commitment for the Proposed Development and Norfolk Vanguard to actively engage and manage cumulative traffic demand to ensure that each scheme's peak traffic does not overlap.
- 11.4.28. In its SoCG with the Applicant [REP10-022], BDC states that, based on the proposed mitigation measures, it is satisfied that it is unlikely that any significant effects would occur in relation to noise and vibration in Cawston.
- 11.4.29. Notwithstanding the final position of BDC, local residents and OPC remain concerned regarding the impacts of construction traffic on living conditions of the residents of Cawston. We acknowledge these concerns noting the substantial increase in traffic, including HGV movements, that would result through the centre of the village. The potential for impacts

would also be exacerbated should the construction works for the Proposed Development overlap with those for Norfolk Vanguard.

- 11.4.30. However, we consider that the measures proposed by the Applicant in the Outline CTMP would reasonably mitigate and minimise the temporary construction traffic impacts upon the living conditions of residents in Cawston. In coming to this conclusion, we have also given weight to the agreement between the Applicant and BDC on the resulting noise and vibration impacts.

Noise impacts during operation

- 11.4.31. As referred to above, NNDC raised concerns in its LIR regarding the potential for frequency and hum effects from the onshore HVAC booster station. At ISH4 [REP3-006] the Applicant committed to the submission of a Noise Management Plan for the HVAC booster station for the approval of the Council.
- 11.4.32. The details required to be submitted for approval through Requirement 21 would include details of noise and attenuation and mitigation measures (including any noise limits) along with a scheme for monitoring attenuation and mitigation measures. Subject to this requirement, NNDC has confirmed in its SoCG with the Applicant [REP9-021] that this matter has been agreed and that no significant noise impacts would result from the operation of the HVAC booster station.
- 11.4.33. SNC has also confirmed in its SoCG with the Applicant [REP7-013] that no significant effects on residential living conditions would result from the operation of the HVDC convertor/HVAC substation.
- 11.4.34. We are satisfied that appropriate measures are in place to prevent any significant noise impacts on residential living conditions during the operation phase of Proposed Development.

Air quality

- 11.4.35. In their final SoCGs with the Applicant, NNDC [REP9-021], BDC [REP10-022] and SNC [REP7-013] have all confirmed their agreement with the Applicant's assessment of air quality impacts, including cumulative impacts. These Councils have also agreed the list of proposed air quality measures included within the Outline CoCP.
- 11.4.36. At OFH3 [EV-033] OPC expressed concern regarding the impacts of air quality from construction traffic movements to and from the main construction compound along The Street. The Applicant has responded [REP10-044] stating that, whilst The Street was not one of the links specifically included in its modelling within the ES [APP-081], the results from the modelling of all the other links show the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations in the first year of construction would be below the Air Quality Strategy objectives. The Applicant states it is confident that the same conclusion could be applied to The Street and therefore the impact would be negligible. We note that The Street is not within an Air Quality Management Area and that it would be subject to the agreed

air quality management measures set out in the Outline CoCP. We are satisfied with the mitigation that has been proposed.

11.4.37. A representation was also made at OFH3 [REP10-064] regarding air quality and public health impacts and the model parameters used in the Applicant's assessment. We note that the Applicant's assessment of air quality impacts was carried out in accordance with Defra's Local Air Quality Management Technical Guidance TG16 and has been agreed by the relevant local authorities. Public Health England has also raised no objections to the Proposed Development [RR-011]. Consequently, we accept the outputs of the modelling that has been carried out.

11.4.38. Overall, taking account of the proposed mitigation measures we are satisfied that no significant adverse effects would result upon air quality during construction, operation and decommissioning of the Proposed Development, including cumulative impacts.

Electric and magnetic fields

11.4.39. Written and oral representations have been made expressing concerns regarding the impacts of EMFs on human health from the cable corridor, particularly where it would cross the proposed Norfolk Vanguard cable corridor near Reepham [eg RR-017, REP1-087, EV-011 and REP10-011].

11.4.40. In response to concerns raised during the Examination regarding the crossing with Norfolk Vanguard, the Applicant has submitted further information prepared by National Grid and jointly commissioned with Norfolk Vanguard [REP1-173]. This assessment is based on a worst case scenario for two crossing points, comprising one where both transmission systems use HVAC technology and the other where both use HVDC technology. It also assumes a minimum burial depth, the most acute crossing angle (45 degrees) and the most highly loaded circuits located on top.

11.4.41. Recognising the multiple possibilities for crossing points, the assessment explains that if both cable routes cross using the same transmission technology (ie HVAC and HVAC or HVDC and HVDC,) the fields can combine to add or subtract from one another. However, it states that if different technologies are used (ie HVAC and HVDC), the magnetic fields would not interact with each other and therefore the installation of HVAC and HVDC cables can be considered separately. The assessment concludes that under the worst case scenario the combined EMF levels from the operation of both projects would continue to be below the guideline levels.

11.4.42. At OFH3 [EV-033] a further representation was made by Mr Pearce regarding EMFs including concern regarding the potential effects from differing transmission technologies and the crossing angle. This was followed by a submission at Deadline 10 [REP10-054] regarding the relationship between HVAC and HVDC fields. Nevertheless, from all the evidence provided, including the Applicant's worst case scenario assessment outlined above, we are satisfied that there would be

compliance with the relevant guidelines and therefore no adverse effects would result upon human health.

Human Rights

- 11.4.43. During the Examination representations have been made arguing that there would be a breach of Article 8 of the European Convention on Human Rights (ECHR). Article 8(1) states that everyone has the right to respect for his private, family life and his home. We have found that the onshore construction would result in some adverse impacts, particularly from construction vehicles, upon the living conditions of local residents in Cawston and near Oulton airfield. However, we consider that the mitigation and management measures proposed by the Applicant and secured within the Order are a reasonable and proportionate response and would serve to minimise the impacts arising to acceptable levels. We therefore do not consider that the making of the Order would amount to an interference with the rights afforded under Article 8(1) of the ECHR.

11.5. CONCLUSIONS

- 11.5.1. The onshore construction phase(s) of the Proposed Development would have the greatest potential for impacts on the living conditions of local residents. In terms of the construction at the cable corridor sites along with the HVDC convertor/HVAC substation and HVAC booster station sites, we are satisfied that the measures developed within the Outline CoCP would satisfactorily mitigate and minimise adverse impacts on health and quality of life from noise and other impacts.
- 11.5.2. Particular concerns have been raised during the Examination regarding impacts on residential living conditions from construction traffic movements, including HGVs. Given the substantial traffic flows that would be necessary for construction, we consider that there would inevitably be some adverse impacts experienced by local residents. However, mitigation measures to reduce such impacts have been developed during the Examination in consultation with the relevant local planning authorities, particularly in relation to Cawston and the main construction compound at Oulton airfield. We consider that such measures are a reasonable and proportionate response to the issues raised and would satisfactorily reduce the noise and disturbance for local residents to acceptable levels for the temporary construction work periods.
- 11.5.3. We are also satisfied that, subject to the proposed mitigation measures secured in the DCO, no significant impacts upon the living conditions of local residents would result from the operation phase of the Proposed Development. In addition, we have concluded that no adverse health impacts would result from EMFs, including at the potential cable corridor crossing point with Norfolk Vanguard.
- 11.5.4. Overall, we find the Proposed Development would satisfactorily accord with relevant aims of EN-1, EN-5 and the UK Marine Policy Statement. We conclude that matters relating to the living conditions of local

residents, including effects on human health, do not weigh significantly against the Order being made.

12. LANDSCAPE AND VISUAL IMPACTS

12.1. INTRODUCTION

- 12.1.1. This chapter considers the landscape and visual impacts of the Proposed Development. Landscape and visual impacts are identified as a principal issue in our initial assessment [PD-006, Annex B].
- 12.1.2. Issues considered include the following:
- landscape and visual impacts of the onshore High Voltage Alternating Current (HVAC) booster station, High Voltage Direct Current (HVDC) convertor/ HVAC substation and onshore cable corridor;
 - seascape considerations; and
 - impacts on protected landscapes.
- 12.1.3. The chapter is organised as follows:
- Policy considerations;
 - Applicant's approach;
 - Issues arising during the Examination; and
 - Conclusions.
- 12.1.4. Matters regarding the historic environment are considered separately in Chapter 13.

12.2. POLICY CONSIDERATIONS

- 12.2.1. Section 5.9 of EN-1 sets out national policy with regard to landscape and visual effects. It states that the Applicant's assessment should include the effects during construction and the effects of the completed development and its operation on landscape components and landscape character (paragraph 5.9.6). It explains that the assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity, including light pollution effects (paragraph 5.9.7).
- 12.2.2. EN-1 goes on to state that landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. It recognises that virtually all nationally significant energy infrastructure projects will have effects on the landscape. Having regard to the siting, operational and other relevant constraints the aim should be to minimise the harm to the landscape, providing reasonable mitigation where possible and appropriate (paragraph 5.9.8).
- 12.2.3. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the decision-maker in deciding on applications for development consent in designated areas such as Areas of Outstanding Natural Beauty (AONB) (paragraph 5.9.9). Development consent may be granted in these areas in exceptional circumstances where it has been demonstrated that it is in the public interest.

Consideration of such applications should include an assessment of the following:

- the need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy;
- the cost of, and scope for, developing elsewhere outside of the designated area or meeting the need for it in some other way, taking account of the policy on alternatives; and
- any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated (5.9.10).

- 12.2.4. Referring to developments outside of nationally designated areas, EN-1 states that development plan policies based on landscape character assessment should be paid particular attention, though local landscape designations should not be used in themselves to refuse consent (paragraph 5.9.14).
- 12.2.5. It advises that the decision-maker should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits of the project (paragraph 5.9.15). In reaching a judgment the decision-maker should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a reasonable timescale (paragraph 5.9.16). The decision maker should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation (paragraph 5.9.17).
- 12.2.6. With regard to visual impacts, EN-1 states that the decision-maker will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project (paragraph 5.9.18).
- 12.2.7. Turning to mitigation, EN-1 states that adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within a site, design including colours and materials, and landscaping schemes, depending on the size and type of the project. Materials and designs of buildings should always be given careful consideration (paragraph 5.9.22). It goes on to say that it may be appropriate to undertake landscaping off site including, for example, filling in gaps in existing tree and hedge lines to mitigate the impact when seen from a more distant viewpoint (paragraph 5.9.23).
- 12.2.8. Further relevant policies are contained within the National Policy Statement for Renewable Energy Infrastructure (EN-3). It states that where an offshore windfarm project will be visible from the shore a seascape and visual impact assessment should be undertaken which is proportionate to the scale of the potential impacts. Impacts on seascape should be addressed in addition to the landscape and visual effects discussed in EN-1 (paragraph 2.6.202).

- 12.2.9. The National Policy Statement for Electricity Networks Infrastructure (EN-5) recognises that new substations and other above ground infrastructure that form connection, switching and voltage transformation points can give rise to landscape and visual impacts (paragraph 2.8.2).
- 12.2.10. The UK Marine Policy Statement states that, in considering the impact of development on seascape, the decision maker should take into account existing character and quality, how highly is valued and its capacity to accommodate change (paragraph 2.6.5.3). Policy SOC3 of the East Inshore and East Offshore Marine Plans seeks, in order of preference, to avoid, minimise and mitigate against adverse impacts on the terrestrial and marine character of an area. Where it is not possible to minimise or mitigate the adverse impacts, Applicant's should demonstrate the case for proceeding with the proposal.
- 12.2.11. Policy 4.6 of the South Norfolk Development Management Policies Document 2015 seeks to protect the openness of the Norwich Southern Bypass Landscape Protection Zone and to avoid undermining the rural character of undeveloped approaches to Norwich and specific Key Views. It states that development which would significantly harm the protection zone or the landscape setting of the Norwich urban area will not be permitted.

12.3. APPLICANT'S APPROACH

Landscape and visual resources

- 12.3.1. Volume 3, Chapter 4 [APP-076] of the Environmental Statement (ES) presents the Applicant's assessment of the potential impacts upon landscape and visual resources landward of Mean Low Water Springs. This is supported by the following technical reports and information:
- Landscape and Visual Impact Assessment Methodology [APP-142];
 - Extracts from National Landscape Character Area Descriptions [APP-143];
 - Extracts from Local Landscape Character Descriptions [APP-144];
 - Qualities of Natural Beauty of the Norfolk Coast Area of Outstanding Natural Beauty (AONB) [APP-145];
 - Photograph Panels, Wirelines and Photomontages [APP-146]; and
 - Residential Visual Amenity [APP-147].
- 12.3.2. An assessment of the landscape and visual impacts of the HVAC booster station (to be located approximately 35km from the Norfolk coast) has also been submitted [APP-148]. In addition, Volume 2, Chapter 10 [APP-070] of the ES presents an assessment of the offshore components of the Proposed Development on offshore receptors.
- 12.3.3. Prior to the submission of the application, consultation on landscape and visual matters was undertaken with relevant organisations, including the three local authorities for the area affected by the Proposed Development. Matters discussed included methodology and viewpoint locations.

- 12.3.4. The ES identifies the following elements of the Proposed Development as being likely to have an impact on landscape and visual receptors:
- the onshore cable corridor (including the landfall and the main construction compound);
 - the onshore HVAC booster station;
 - the onshore HVDC convertor/ HVAC substation; and
 - the offshore HVAC booster station.
- 12.3.5. The landscape and visual resources study area includes a 5km buffer around the onshore HVAC booster station and HVDC convertor/ HVAC substation and 1km buffer around the other onshore elements. Baseline information was collated from a series of desk based and field surveys seeking to create an accurate picture of baseline conditions, from which the assessment of impacts and effects was made.
- 12.3.6. The onshore cable corridor study area is located within the following designated landscapes or areas of landscape protected by policy:
- Norfolk Coast AONB;
 - North Norfolk Heritage Coast;
 - Setting of Sheringham Park (North Norfolk District Local Plan (NNDLP) Policy EN2);
 - River Valleys (South Norfolk Local Plan (SNLP) Policy DM4.5); and
 - Norwich Southern Bypass Landscape Protection Zone (SNLP Policy DM4.6).
- 12.3.7. The onshore HVDC convertor/ HVAC substation study area is located within the following designated landscapes or areas of landscape protected by policy:
- Broads National Park;
 - River Valleys (SNLP Policy DM4.5); and
 - Norwich Southern Bypass Landscape Protection Zone (SNLP Policy DM4.6).
- 12.3.8. There are no designated landscapes or areas protected by policy located within the study area for the onshore HVAC booster station. The onshore cable corridor and its associated elements would also be located within several local landscape character assessment areas.
- 12.3.9. A number of visual receptors including settlements, roads, long distance walking routes, public rights of way along with accessible and recreational landscape lie within the study areas. The methods used to assess the potential impacts on these receptors and the significance of effects have had regard to national standards and guidance.
- 12.3.10. The Applicant explains that detailed designs of the HVDC convertor/ HVAC substation and HVAC booster station have not yet been undertaken and that there are a variety of technical details which remain uncertain. For example, the use of either HVDC or HVAC transmission which would determine the size, layout and shape of the HVDC convertor/ HVAC substation, and the need for the HVAC booster station itself. As a result

of the uncertainty the maximum design parameters have been established to incorporate all possible design options and scenarios.

- 12.3.11. The proposed maximum design scenarios have been identified as having the potential to result in the greatest effect on landscape character and visual receptors. These include:
- an onshore HVAC booster station incorporating buildings/equipment up to 12.5m in height (up to 17.5m with lightning protection); and
 - an onshore HVDC convertor/ HVAC substation incorporating buildings/equipment up to 25m in height (up to 30m with lightning protection).
- 12.3.12. The ES includes wirelines, from key viewpoints, of the proposed onshore HVDC convertor/ HVAC substation and HVAC booster station [APP-146]. These are based on the maximum design parameters and have informed the Applicant's landscape and visual impacts assessment. This document also includes photomontages based on an indicative design and layout [APP-058] of these elements of the Proposed Development.
- 12.3.13. Requirement 7 of the draft Development Consent Order (DCO) [APP-027] as originally submitted with the application requires the detailed design of the HVDC convertor/ HVAC substation and HVAC booster station to be submitted for the approval of the relevant local planning authority.
- 12.3.14. A number of designed-in measures are proposed within the ES seeking to reduce the potential for landscape and visual impacts. These include:
- avoidance of as many landscape features as possible (eg woodland);
 - onshore export cables buried underground;
 - an Outline Landscape Management Plan [APP-181] seeking to minimise the removal of existing vegetation and promote mitigation planting; and
 - replacement hedgerow planting along the cable corridor.
- 12.3.15. The main impacts arising from the Applicant's assessment of landscape and visual effects are as follows (Table 4.17 of the ES sets out a full summary of potential environmental effects, mitigation and monitoring):
- during construction the temporary effects of the onshore cable corridor on landscape character (including the North Norfolk AONB) would range from minor adverse to negligible;
 - during construction, the temporary effects of the onshore cable corridor on visual receptors would range from moderate adverse to negligible;
 - during operation, the effects of the onshore HVAC booster station on landscape character would be major adverse within the site itself. Overall effects on the two landscape character areas affected would be minor adverse;
 - during operation, the visual effects of the onshore HVAC booster station would range from minor adverse to neutral;
 - during operation, the impacts of the onshore HVDC convertor/ HVAC substation on landscape character would be major-moderate adverse

within the site itself. Overall effects on the two local landscape character areas would be negligible;

- during operation, the visual effects of the HVDC convertor/HVAC substation would range from major-moderate adverse to neutral; and
- the offshore HVAC booster station would be located sufficiently distant from the shore that it would not cause any significant landscape or visual effects on land based receptors.

Seascape and visual resources

12.3.16. The seascape and visual resources assessment [APP-070] describes the existing and historic character of the seascape and views gained by people within and around the proposed array and offshore cable corridor. It is supported by the following documents:

- Seascape and Visual Resources Technical Report [APP-116];
- Seascape and Visual Resources Wirelines [APP-117]; and
- Seascape and Visual Resources Cumulative Wirelines [APP-118].

12.3.17. It provides an assessment of the changes to the character of the seascape and views as a result of the construction, operation and maintenance of the Proposed Development. It recognises that there are a relatively small number of visual receptors within the seascape due to the location of the array area approximately 121km from the nearest coastline. The majority of people would be at their place of work or travelling for leisure purposes on vessels as well as people going to work on oil or gas platforms.

12.3.18. The seascape and visual resources assessment notes that wind farm development gives rise to a spectrum of responses from individuals and organisations who perceive its effects ranging from strongly adverse to strongly beneficial. The assessment, however, is based on the scenario of an individual who may perceive the turbine array as a negative addition.

12.3.19. The assessment concludes that during construction and decommissioning, temporary effects of negligible to moderate adverse significance would result upon the present seascape character, Historic Seascape Characterisation and views gained by people at sea. During operation the long terms changes to the same receptors would be of negligible to moderate adverse significance. Cumulative impacts would be of negligible to moderate adverse significance. It also concludes that there would be no potential for significant transboundary effects upon the interests of other European Economic Area states.

12.4. ISSUES ARISING DURING THE EXAMINATION

Local Impact Reports

12.4.1. North Norfolk District Council's (NNDC) Local Impact Report (LIR) [REP1-062] states that two new studies (revised Landscape Character Assessment and a new Landscape Sensitivity Assessment) should be taken into account in the baseline for the ES. It expects to adopt both documents as Supplementary Planning Documents in Spring/Summer 2019.

- 12.4.2. NNDC considers that the potential landscape and visual effects have been fully assessed. However, it states that, in respect of mitigation, positive effects would be dependent upon an appropriate maintenance regime by landowners once hedgerows have matured. NNDC also states that it would welcome input into species selection for new and replacement planting. Furthermore, it considers that management measures should include replacement of failed planting for a period of 10 years following planting (rather than 5 as proposed by the Applicant). Clarification is also sought on who would be undertaking the management of all planting.
- 12.4.3. Overall, NNDC concludes that there are potential negative effects on landscape and visual resources but with clarification on several matters raised these negative effects should be capable of appropriate mitigation.
- 12.4.4. Broadland District Council raises no landscape or visual impact issues in its LIR [REP1-053].
- 12.4.5. In its LIR [REP1-100] South Norfolk Council (SNC) states that the key landscape and visual impacts would result from the laying of the underground cables in respect of the removal/ loss of hedgerows and trees and the impact of the HVDC convertor/ HVAC substation on the landscape character and visual amenities of the area. It notes that the substation is located within the B1 Tas Tributary Farmland Landscape Character Area. The Council generally concurs with the findings of the ES.
- 12.4.6. SNC goes on to state that the assessment work is limited to some degree by the fact that the final form of the substation is not known at this stage. It says that it is clear that the full visual mitigation from planting will not be possible, especially if the structures are the maximum heights modelled. The Council considers that any reduction in the potential height parameters would be invaluable in mitigating the predicted adverse effects and that the HVAC option with its lower height would be the best option.
- 12.4.7. Regarding hedgerows and trees, SNC states that no assessment has been made of the importance of each hedge as defined by the criteria in the Hedgerows Regulations, other than species composition and condition. It seeks clarity on when replanting may not be possible or when the importance of a hedgerow cannot be safeguarded. It also notes that there is no assessment of the existing hedgerow that crosses the site of the proposed substation. Further concerns raised by NNDC are the limited assessment of existing trees and the lack of provision for tree replanting along the cable corridor.
- 12.4.8. With particular regard to the substation, SNC states that whilst the creation of woodland offers an opportunity to reduce the visual and aural impact of the A47 on the rural ambience of the area, it could also reduce the openness of the Norwich Southern Bypass Landscape Protection Zone contrary to policy DM4.6 of the South Norfolk Local Plan Development Management Policies.

General matters regarding landscaping, hedgerows and trees

- 12.4.9. As set out in its final SoCG with the Applicant, SNC remains concerned that the Applicant has provided insufficient information relating to important hedgerows and veteran trees [REP7-013]. We note that, further to concerns raised regarding the impacts of construction on hedgerows and trees, the Applicant has submitted documents containing details of historic hedges [REP1-152], important hedgerows [REP1-155] and trees (including veteran trees) [REP2-016].
- 12.4.10. The Applicant has also made additional commitments within the Outline Landscape Plan (LP) [REP9-060]. Firstly, to carry out pre-commencement surveys of all hedgerows and trees which are currently identified to be removed. Secondly, to replace trees proposed to be removed in the area temporarily impacted by the onshore cable corridor. Where the surveys identify veteran trees to be removed, the Applicant will aim to protect these either through the micro-siting of the cable trenches or using alternative construction methodology such as horizontal directional drilling. Where retention is not possible, the Applicant has committed to justifying the removal as part of the detailed LP. The outcomes of the surveys would also inform the detailed site-specific protection measures to be developed within the detailed Ecological Management Plan which would be secured through Requirement 10 of the recommended DCO.
- 12.4.11. At Deadline 6, SNC, NNDC and BDC jointly submitted a draft reworded Outline LP [REP6-081]. Within the same submissions, they also proposed additional drafting for Requirement 8 of the DCO regarding the provision of landscaping, incorporating a list of specific landscaping matters needing to be addressed through the requirement. Many of the proposed changes have been incorporated into the Outline LP along with the additional wording for Requirement 8.
- 12.4.12. Drawing these matters together, we are satisfied that the information provided as part of the application and during the Examination is sufficient for the consideration of the application. Further detailed matters, as set out above, would be secured in the DCO.
- 12.4.13. Disagreement remains at the end of the Examination regarding the management period for new planting. NNDC states that a ten year (rather than the Applicant's proposed five year) period is required. At ISH 4 and ISH 6, NNDC provided evidence to justify a ten year period [REP3-103 and REP6-080]. In summary NNDC considers that the particular local climatic and soil conditions in North Norfolk would impede the establishment and growth rate of planting. It therefore argues that a ten year aftercare and replacement period would provide for greater formal protection for new landscaping. It also draws attention to other development schemes in North Norfolk which have been subject to a ten year landscaping management period.
- 12.4.14. In response, the Applicant [REP4-012 and REP7-007] argues that, taking account of likely growth rates, a period of five years would give sufficient time for planting to establish. It states that the site of the HVAC booster station (in North Norfolk) is not in an exposed location and draws

attention to other DCO developments in Norfolk which have been subject to a five year landscaping maintenance period. The Applicant has also added wording to the Outline LP committing to replace woodland planting that dies within the first five years or when it is agreed that the woodland has effectively established.

- 12.4.15. We consider that effective landscape planting and its management would be an especially important part of the Applicant's proposed mitigation of landscape and visual impacts. This is particularly the case taking account of the size, location and potential unmitigated impacts of the HVDC convertor/ HVAC substation and HVAC booster station, and the route of the onshore cable corridor passing through the Norfolk Coast AONB. We have given substantial weight to the evidence provided by NNDC regarding the constraints on the establishment and growth rates of new planting in North Norfolk. We do not consider that the Applicant's additional wording in the Outline LP regarding woodland planting would provide the clarity or precision required to ensure that all new landscaping would be effectively maintained. We therefore find in this case, that there is sound justification for a ten year landscaping management period, which for consistency we consider should be applied across the entirety of the onshore works.
- 12.4.16. NNDC also propose a start time for the management period of all new and replacement planting to be set at the first generation of power. The Applicant considers it appropriate to start the management period following the completion of planting within each local authority area. It has included a measure in the Outline LP to link the notification that planting is complete with the commencement of the management period. We agree with the Applicant on this matter and consider that it is important for the management period to begin as soon as possible after planting.

Onshore cable corridor

- 12.4.17. Matters regarding the impact of the onshore cable corridor on the North Norfolk AONB are considered separately below.
- 12.4.18. We concur with the Applicant's assessment conclusions that, whilst there would be adverse landscape and visual impacts arising from the construction of the onshore cable corridor, these short term impacts would not be significant. The overall active construction period for the entire cable corridor would be 30 months with the work in each phase expected to progress with a typical active construction works duration of three months in any particular location.
- 12.4.19. In addition to the proposed landscape mitigation outlined above, we have also taken into consideration the Applicant's commitments to use horizontal directional drilling (HDD) to avoid the loss of key landscape features such as areas of woodland and historic hedges.
- 12.4.20. The export cables would be underground. Following replacement planting, which would be secured through the LP and Requirement 8, we

consider that any landscape and visual impacts during operation would be negligible.

HVDC convertor / HVAC substation

- 12.4.21. In addition to representations from SNC, several representations were made regarding the visual and landscape impacts of the HVDC convertor/HVAC substation near Swardeston [eg RR-021, RR-049 and REP1-184]. Discussion of these issues also took place at ISH4 [EV-015].
- 12.4.22. Further to our question regarding design at ISH4, the Applicant submitted details of the design objectives and principles for both the HVDC convertor/ HVAC substation and the HVAC booster station [REP4-026]. The design principles include matters regarding exterior design and appearance, materials, outdoor equipment and external lighting. Requirement 7 of the Applicant's final draft DCO [REP10-041] includes revised wording to require that the final design details submitted for approval must be substantially in accordance with the design objectives and principles.
- 12.4.23. With regard to landscape character effects, we agree with the Applicant's assessment that the HVDC convertor/ HVAC substation would have a significant adverse effect within the site itself with parts of existing arable fields proposed to be replaced by a substantially sized structure (or structures) and ancillary equipment. We also agree that the landscape character impacts would diminish further away from the site. We note that SNC concurs with this assessment of landscape impact.
- 12.4.24. Turning to its visual impacts, with a maximum height of 25m, the HVDC convertor/HVAC substation would be a structure of substantial bulk and massing. The Applicant has provided outline details of landscaping, including woodland planting and the strengthening of existing hedgerows, that would help to reduce its visual impacts. However, we consider that the proposed planting would not reach a sufficient height to satisfactorily integrate the structure into the landscape.
- 12.4.25. From more distant viewpoints the visual impact would be less pronounced as it would be seen in the context of pylons, overhead wires, the A47 and other development to the north of the site. However, from closer viewpoints, such as viewpoint SS9 [APP-146] and public rights of way (PRoW) to the south of the site the, the visual impact would be substantial. We consider that the ES underestimates the longer term visual impacts. In our view, even when the proposed landscaping has matured after 15 years, we consider that the visual impacts would remain significantly adverse for users of the PRoW and local roads, particularly those to the south of the site.
- 12.4.26. Mulbarton Parish Council [REP8-016] share the view of SNC that the HVDC convertor/ HVAC substation would be contrary to policy DM4.6 of the South Norfolk Local Plan Development Management Policies. We note that the impact upon the undeveloped approach of the B1113 would be moderated by the existing visual context which includes pylons, overhead lines and the A47. Nevertheless, we consider that both the proposed

structure itself and the proposed woodland planting would decrease the openness of the Norwich Southern Bypass Landscape Protection Zone, contrary to policy DM4.6 of the South Norfolk Local Plan Development Management Policies.

- 12.4.27. We have also considered the effect on the residential visual amenity of the occupiers of residential properties in the vicinity of the HVDC convertor/ HVAC substation. The proposed structure(s) would be visible from the windows and gardens of several properties. However, taking account of the substantial separation distance from the site to the residential properties, we do not consider that the visual impact would be such as to result in any significant overbearing or oppressive effects upon the occupiers. In coming to this view, we have not taken account of the Applicant's proposed optional mitigation of tree planting to provide screening from properties to the southwest and southeast of the site.

HVAC booster station

- 12.4.28. Concerns regarding the visual impact of the HVAC booster station have been raised by several Interested Parties [eg RR-026, RR-050, RR-097 and REP1-097]. Matters raised include the lack of specific details at this stage, night time views and potential light pollution.
- 12.4.29. As set out above, the Applicant has provided a set of design principles that would need to be followed in the detailed design of this element of the onshore works. These include matters relating to external lighting which is an important consideration given the rural location with little existing external lighting. The final design details would need to be submitted for the approval of the local planning authority.
- 12.4.30. We agree with the Applicant's assessment that the impacts of the HVAC booster station on landscape character would be major adverse within the site but that they would rapidly reduce outside the site. The overall effects on the two local landscape character areas would be no greater than minor adverse.
- 12.4.31. With regards to visual impacts, the HVAC booster station would be set down from surrounding ground levels and from several viewpoints it would be seen against a backdrop of woodland. The proposed landscaping scheme, including new tree planting and the strengthening of existing hedgerows, would also serve to reduce its visual impacts. We concur with the Applicant's assessment that it would result in no worse than minor adverse visual effects.

Norfolk Coast Area of Outstanding Natural Beauty

- 12.4.32. The Norfolk Coast AONB covers an extensive area of the north Norfolk coast extending inland from the shore for typically around 6km, but up to 12km in some areas. The proposed onshore cable corridor would pass through the central part of the AONB for a length of approximately 7km.
- 12.4.33. In its relevant representation [RR-097] Natural England (NE) set out its concerns regarding the impact of the proposed cable corridor on the

special qualities of the Norfolk Coast AONB. It considers that there is insufficient information to determine the impact. NE draws attention to a key characteristic of the landscape character type "*Coastal Towns and Villages*" which is one of small fields, hedgerows and woodland providing an enclosed structure for the intimately scaled rural landscape.

- 12.4.34. NE goes on to state that it would expect to see a detailed analysis of the impacts on key landscape elements within the AONB that contribute to biodiversity and landscape character, such as hedgerows, woodland and other semi-natural habitats. Furthermore, it states that the ES does not include information about where there will be long term/persistent loss of key landscape features, such as veteran trees and important hedgerows and that no details are provided of the steps taken to minimise the loss.
- 12.4.35. Concerns regarding the impact upon the AONB have also been raised by other parties including the Norfolk Coast Partnership [RR-101] drawing attention to the visual effects and disruption of construction and operation, the potential impact of the offshore HVAC booster station and light pollution.
- 12.4.36. In response, the Applicant submitted Impacts on the Qualities of Natural Beauty of the Norfolk Coast AONB [REP1-167]. This includes information about the seven Qualities of Natural Beauty of the AONB as defined in the AONB Management Plan Strategy 2014-19 prepared by the Norfolk Coast Partnership, followed by the Applicant's assessment of the impacts upon each of the qualities. It concludes that, whilst there would be temporary changes to the particular qualities of the AONB, these would revert back to their previous state following completion of construction works. The submission also clarifies how the Applicant has sought to minimise impacts on trees and hedgerows through the use of HDD.
- 12.4.37. In response, NE states [REP3-079] that it still has concerns regarding the construction phase, particularly the two phase scenario, the construction impacts of which would be medium term at best rather than short term. NE considers that there would be an opportunity to provide landscape enhancement such as the strengthening of existing landscape features. It states this would compensate for significant effects on the AONB during the construction period.
- 12.4.38. The Applicant responded to these concerns [REP4-011], drawing attention to the relatively small extent of hedgerows and trees that would be removed in relation to retained vegetation and suggesting that replacement planting would grow over time, lessening effects year on year. The Applicant argues that, if construction were phased, the majority of phase 1 planting would be retained and protected during phase 2 construction. The construction works for the phases would only overlap in the temporary working area. Given the measures to minimise effects on hedgerows and trees and to provide enhancements that would strengthen existing hedgerows, the Applicant considers that no further compensatory measures are required. The Applicant also states that the proposed planting measures would provide a long term net gain in relation to hedgerows by replacing species-poor or defunct hedgerows

with species-rich hedgerows. The seven sections of hedgerows to be removed within the AONB have all been assessed by the Applicant as being either species-poor or defunct.

- 12.4.39. NE's final position on AONB impacts is set out in its Statement of Common Ground with the Applicant [REP9-022]. NE does not consider its original concerns have been addressed, stating that there is still no acknowledgement of the statutory purpose of the AONB and the impacts that would occur during the installation of the cables. Whilst NE acknowledges that the proposed landscaping should restore the features over time, in its view there would still be impacts from a two phase construction programme.
- 12.4.40. The offshore HVAC booster station would be located a significant distance offshore (a minimum of 35km) and as such we are satisfied that it would not appear as unduly obtrusive or result in any harm when viewed from land within the AONB. In response to our Q1.7.3 [PD-008] the Applicant confirmed the position regarding the requirement for navigation and aviation lights on this structure [REP1-122]. We are satisfied that any lights would be seen as a very small feature in conjunction with other offshore lighting including shipping and offshore windfarms and therefore such lighting would not result in any significantly adverse landscape or visual effects, including upon the AONB.

AONB conclusions

- 12.4.41. We have given substantial weight to conserving and enhancing landscape and scenic beauty in the AONB. During construction, we consider that there would be limited short term adverse effects on the landscape quality and natural beauty of the AONB including from the removal of seven sections of hedges and the visual disruption of construction activities. The important hedges and trees, including areas of woodland, would be safeguarded through the use of HDD. We also consider that the maximum construction duration for the onshore cable corridor would be for a short term period of 30 months. Following construction, we are satisfied that the Applicant's landscaping measures set out in the Outline LP [REP9-060] would restore the affected landscape and also provide for some enhancement of existing hedgerows.
- 12.4.42. Turning to the policy tests in EN-1, we consider that the measures proposed by the Applicant would satisfactorily mitigate detrimental effects on the landscape and environment. The effects on recreational activities within the AONB would also be satisfactorily mitigated as set out in Chapter 9 of our report. In Chapter 4, we conclude that the Proposed Development is of a scale which would make a very significant contribution to the UK supply of renewable energy and have attached substantial weight to the contribution it would make towards meeting the national need demonstrated by EN-1.
- 12.4.43. In terms of the local economy, in Chapter 15 we have identified that the adverse socio-economic effects on tourism would not be significant. We have also concluded in Chapter 15 that moderate weight can be given to

employment and gross value added benefits, some of which may be relevant to the local economy.

- 12.4.44. Regarding alternatives, in Chapter 5 we report that information about alternative sites has been provided in accordance with EN-1. The Applicant has sought to follow an iterative process of refining route options, giving clear reasons for the decisions that have been made. In considering the landfall options, the Applicant has sought to minimise effects on sensitive areas. Having selected the proposed landfall location, taking account of landscape designations alongside other constraints, it is inevitable that the onshore cable route would need to pass through the AONB. We are satisfied that the alternatives have been considered as required by EN-1.
- 12.4.45. Given the limited harm we have found in relation to the natural beauty of the landscape and countryside within the AONB, we conclude that there are exceptional circumstances where it would be in the public interest for development consent to be granted within the AONB.

Seascape and visual resources

- 12.4.46. In its SoCG with the Applicant, Historic England confirms it has no outstanding issues regarding historic seascape matters. We have not received representations from other parties regarding seascape and visual resource matters.
- 12.4.47. We concur with the findings in the ES including that there would be, at worse, moderate impacts (including cumulative impacts) during construction, operation and decommissioning experienced by a variety of visual receptors. We are also satisfied that there would be no potential for significant transboundary effects upon the interests of other European Economic Area states.

12.5. CONCLUSIONS

- 12.5.1. The onshore export cables would be buried underground and would not themselves result in any long term landscape or visual harm. Whilst there would be some limited visual and landscape impacts resulting from construction, including the removal of some existing hedgerows, such impacts would be temporary. We are satisfied that the Applicant has reasonably sought to minimise the impacts, including through the avoidance of key landscape features by utilising HDD. Furthermore, the landscaping proposals, including replacement hedgerow planting, would satisfactorily reverse the adverse impacts arising from construction within a reasonable timescale.
- 12.5.2. Part of the cable corridor is located within the Norfolk Coast AONB, leading to limited short term adverse impacts from construction. However, we consider that the Applicant's mitigation measures would minimise the impacts and result in no longer term impacts upon the landscape and scenic beauty of the AONB. We consider that there is an exceptional case for development within the AONB.

- 12.5.3. The most significant impacts would result from the onshore HVDC convertor/ HVAC substation and HVAC booster station, both of which would be located within predominantly rural settings. Whilst the detailed design of these elements is not currently known, they would both be substantially sized structures leading to some adverse landscape and visual impacts. The impacts of the HVDC convertor/ HVAC substation, which would be up to 25m in height, would be particularly pronounced. In both cases, the Applicant has provided illustrative landscaping proposals which would reduce effects upon landscape character and visual impacts. In the case of the HVDC convertor/ HVAC substation, the structure(s) and woodland planting would decrease the openness of the Norwich Southern Bypass Landscape Protection Zone.
- 12.5.4. The detailed design of the buildings/ structures and the detailed landscaping proposals would be subject to the approval of the relevant local planning authority.
- 12.5.5. Overall, we consider that the Applicant's approach to minimise harm to the landscape, including the proposed mitigation, is reasonable and proportionate. We are satisfied that the adverse impacts on the landscape would not be so damaging to offset the benefits of the Proposed Development.
- 12.5.6. We conclude that the Proposed Development would satisfactorily accord with relevant aims of EN-1, EN-3, EN-5 the UK Marine Policy Statement and the East Inshore and East Offshore Marine Plans. There would be conflict with Policy 4.6 of the South Norfolk Development Management Policies Document. However, given that the Proposed Development is a Nationally Significant Infrastructure Project, we attach greater weight to our finding of accordance with EN-1, EN-3 and EN-5. Overall, we conclude that matters relating to landscape and visual impacts do not weigh significantly against the Order being made.

13. HISTORIC ENVIRONMENT

13.1. INTRODUCTION

13.1.1. This chapter considers the effect of the Proposed Development in relation to offshore archaeology, onshore archaeology and the effects on heritage assets. The effect upon the historic environment was identified as one of the principal issues in the Examination in our Rule 6 letter [PD-006].

13.1.2. This chapter is organised as follows:

- Policy considerations;
- Applicant's approach;
- Issues arising during the Examination; and
- Conclusions.

13.2. POLICY CONSIDERATIONS

13.2.1. The Overarching National Policy Statement for Energy (EN-1) recognises that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts upon the historic environment (paragraph 5.8.1). It requires 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 (paragraph 5.8.11).

13.2.2. In considering the impact on any heritage assets, the decision-maker should take account of the particular nature of the significance of heritage assets and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between conservation of that significance and proposals for development (paragraph 5.8.12).

13.2.3. Account should be taken of the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. Consideration of design should include scale, height, massing, alignment, materials and use (paragraph 5.8.13).

13.2.4. EN-1 goes on to state that 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. 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 grade I and II* listed buildings, should be wholly exceptional (paragraph 5.8.14).

13.2.5. 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 (paragraph 5.8.15).

- 13.2.6. When considering applications affecting the setting of a designated heritage asset, EN-1 states that the decision-maker should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. Where applications do not do this, the decision-maker should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the heritage asset, the greater the benefits that will be needed to justify approval (paragraph 5.8.18).
- 13.2.7. EN-1 also requires that the decision-maker should consider impacts on non-designated heritage assets, even though those assets are of lesser value than designated heritage assets (paragraph 5.8.6).
- 13.2.8. Where there is a high probability that a development site may include undiscovered heritage assets with archaeological interest, EN-1 states that requirements should be considered to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction (paragraph 5.8.22).
- 13.2.9. The National Policy Statement for Renewable Energy Infrastructure (EN-1) recognises that heritage assets can be affected by offshore wind farm development from the direct effect of the physical siting of the development or from indirect changes to the physical marine environment caused by the proposed infrastructure itself or its construction (paragraph 2.6.139). It goes on to state that the decision-maker should be satisfied that offshore wind farms and associated infrastructure have been sensitively designed taking into account known heritage assets and their status, for example features designated as protected wrecks (paragraph 2.6.144).
- 13.2.10. EN-3 states that the avoidance of important heritage assets, including archaeological sites and historic wrecks, is the most effective form of protection (paragraph 2.6.145). Where requested by applicants, the decision-maker should consider granting consent that allows for micrositing to be undertaken within a specified tolerance. This would allow changes to be made to the precise location of infrastructure during the construction period to account for unforeseen circumstances such as the discovery of marine archaeological remains (paragraph 2.6.146).
- 13.2.11. The UK Marine Policy Statement recognises that heritage assets should be conserved in a manner appropriate and proportionate to their significance (paragraph 2.6.6.3). It includes similar policies to those within EN-1 and EN-3.
- 13.2.12. Policy SOC2 of the East Inshore and East Offshore Marine Plans requires that proposals that may affect heritage assets should demonstrate, in order of preference:

- that they will not compromise or harm elements which contribute to the significance of the heritage asset;
- how, if there is compromise or harm to a heritage asset, this will be minimised;
- how, where compromise or harm to a heritage asset cannot be minimised it will be mitigated against; or
- the public benefits for proceeding with the proposal if it is not possible to minimise or mitigate compromise or harm to the heritage asset.

13.3. APPLICANT'S APPROACH

13.3.1. The Applicant's assessment of onshore historic environment matters (landward of Mean High Water Springs) is contained within Volume 3, Chapter 5 (Historic Environment) of the Environmental Statement (ES) [APP-077]. This chapter is supported by the following technical reports:

- Desk Based Assessment [APP-149];
- Fieldwalking Report [APP-150];
- Site Gazetteer [APP-151];
- Screening Assessment Onshore HVDC Converter/ HVAC Substation [APP-152];
- Screening Assessment Onshore HVAC Booster Station [APP-153];
- Onshore Geophysical Survey Report [APP-154]; and
- Historic Environment Visualisations [APP-155].

13.3.2. Offshore historic environment matters (seaward of Mean High Water Springs) are assessed within Volume 2, Chapter 9 (Marine Archaeology) of the ES [APP-069]. Associated baseline information is contained with the Marine Archaeological Technical Report [APP-114].

Onshore historic environment

13.3.3. The Applicant sets out the existing baseline within the ES. This has been formed from desk studies, consultation with relevant parties and site-specific surveys. There are no designated sites located within the footprint of the onshore elements of the Proposed Development. Within the defined historic environment study area there are 9 scheduled monuments, 159 listed buildings, 4 registered parks and gardens and 6 conservation areas.

13.3.4. A number of designed-in measures are proposed to reduce the potential for impacts on the historic environment. These include cables being buried underground, a programme of advance archaeological investigation works, the restoration of hedges and landscape planting schemes around the High Voltage Alternating Current (HVAC) booster station and the High Voltage Direct Current (HVDC) converter/ HVAC substation. In addition, detailed measures for identified potential archaeological sites are proposed including trenching and the monitoring of soil stripping during construction. The Applicant has also sought to ensure that the onshore cable route avoids recorded undesignated archaeological assets and designated heritage assets.

- 13.3.5. The ES goes on to present the environmental effects on the historic environment arising from the Proposed Development, based on the information gathered, analysis and assessments undertaken. The assessments of effects are based on the maximum design scenario, including the maximum proposed building heights of the onshore booster station, which would only be required if HVAC is selected, and onshore HVDC convertor, which would be higher than an HVAC substation.
- 13.3.6. At this stage, no details are known of the design of the proposed HVDC convertor/ HVAC substation and HVAC booster station. Instead, maximum design parameters have been proposed as set out in Table 3.63 of Chapter 3: Project Description of the ES [APP-058]. The draft Development Consent Order (DCO) [APP-027] as submitted with the application includes a requirement for the detailed design of the onshore substations to be submitted for approval prior to commencement of each respective element of the works. The draft DCO also includes a requirement for a written scheme of onshore archaeological investigation to be submitted and approved before works commence.
- 13.3.7. The main conclusions of the Applicant's onshore historic environment assessment are set out below:
- Construction works at landfall and along the cable corridor (including storage areas, compounds and accesses) have the potential to result in effects ranging from negligible to minor adverse significance on the setting of heritage assets.
 - Construction works at the HVAC booster station and HVDC convertor/ HVAC substation have the potential to result in effects ranging from negligible to moderate adverse significance on the setting of heritage assets. The moderate adverse effects would be at the Roman town Venta Icenorum (a Scheduled Monument), Gowthorpe Manor House, Mangreen Hall and Church of St Edmund, all arising from the HVDC convertor/ HVAC substation.
 - Construction works have the potential to result in permanent loss of or damage to buried archaeological remains. With the implementation of a chance find procedure, the effect on these assets would be of minor adverse significance.
 - During both construction and operation, the overall adverse effect on the historic landscape would be of minor significance.
 - During operation the effects of the HVAC booster station and HVDC convertor/ HVAC substation upon nearby heritage assets would be of moderate adverse significance (similar to those outlined for construction).
 - During decommissioning the effects upon heritage assets would be negligible to minor adverse, whilst effects upon the overall historic landscape would be negligible.
 - Cumulative effects upon buried archaeological remains and the setting of heritage assets would be of minor to moderate adverse significance.

Offshore historic environment

- 13.3.8. The ES baseline takes account of a detailed literature search and recent survey data. The baseline study has identified extensive remains comprising largely buried remains of palaeolandscapes, wrecks and possible aviation losses.
- 13.3.9. Several designed-in measures are proposed. These include the identification and implementation of Archaeological Exclusion Zones around the sites identified as having high and medium archaeological potential.
- 13.3.10. Construction and decommissioning activities are stated to have the potential to result in a range of impacts on marine archaeology. These include the removal or disturbance of sediments resulting in a potential effect on near surface prehistoric land surfaces and deeply buried prehistoric land surfaces. They also include potential effects on shipwrecks, aircraft wrecks and a variety of heritage assets. With designed-in measures these potential impacts have all been assessed as being of minor adverse significance.
- 13.3.11. Both draft Deemed Marine Licences (DML) within the draft DCO as submitted with the application [APP-027] include conditions for offshore written schemes of investigation to be submitted to the Marine Management Organisation (MMO) six months prior to the commencement of works on each activity. These are required to be in accordance with the Outline Written Scheme of Investigation (WSI) [APP-115] which was also submitted with the application. The Outline WSI is intended to identify archaeologically sensitive remains encountered during the development, to avoid them wherever possible and enable recording of any directly affected remains.
- 13.3.12. Operation and maintenance activities have also been assessed to lead to effects of minor adverse significance. The cumulative impacts have been considered taking account of other planned nearby wind farm projects, oil and gas operations, cables and pipelines and applications for aggregate extraction. A cumulative effect of minor adverse significance has been predicted.

13.4. ISSUES ARISING DURING THE EXAMINATION

Local Impact Reports

- 13.4.1. South Norfolk Council's (SNC) Local Impact Report (LIR) [REP1-100] states that the ES has underestimated the impact of the proposed HVDC convertor/ HVAC substation on the setting of the Grade II listed Keswick Hall and its historic parkland. SNC argues that the impacts would be moderate adverse due to the creation of a large, bulky and alien feature within the setting of these heritage assets. It considers that this would lead to less than substantial harm (in the context of the National Planning Policy Framework) and would be contrary to policy DM4.10 of the South Norfolk Local Plan Development Management Policies Document (October 2015). SNC goes on to state that some of the degree

of harm could be mitigated through having a building with a lower height, further tree planting and a recessive building colour. SNC considers that a HVDC convertor would result in a significantly higher building, a greater degree of harm and fewer possibilities of mitigation than a HVAC substation.

13.4.2. The LIR of Broadland District Council (BDC) [REP1-053] states that consideration needs to be given to the impacts on heritage assets (Blickling Conservation Area and several listed buildings in the village of Oulton) arising from traffic movements to/ from the proposed main construction compound at the former Oulton airfield. It also raises concerns regarding proposed heavy goods vehicle movements and increases in traffic through the village of Cawston, leading to impacts upon the Conservation Area and several listed buildings.

13.4.3. Norfolk County Council's (NCC) LIR [REP1-061] suggests that further investigative works should be secured by a requirement.

13.4.4. North Norfolk District Council does not raise any historic environment issues in its LIR [REP1-062].

HVDC convertor / HVAC substation

13.4.5. In its Written Representation [REP1-107] Historic England (Hist E) sets out concerns regarding the impact of the proposed HVDC convertor/ HVAC substation on the rural landscape setting of the Grade II* listed buildings at Mangreen Hall and Gowthorpe Manor. In addition, Hist E argued that it would result in some harm to the Grade II* historic landscape at Intwood Hall. Its final Statement of Common Ground with the Applicant [REP9-026] confirms that Hist E agrees with the Applicant's assessment conclusions relating to the onshore historic environment.

13.4.6. There is disagreement between SNC and the Applicant concerning the impact upon the setting of both the Grade II listed Keswick Hall and its undesignated historic parkland. The HVDC option, assessed as part of the maximum design scenario in the ES, would potentially result in a substantially sized building (or buildings) with a maximum height of 25m. At this stage a detailed design has not been provided. Detailed design matters and landscaping would be submitted for the approval of the local planning authority under the requirements of the DCO.

13.4.7. Whilst we note SNC's submission that the HVAC transmission scenario would be preferable to the HVDCs scenario given the differences in maximum height (15m compared to 25m), we have assessed the impact based on the proposed maximum design scenario (HVDC). Chapter 5 of our report considers in detail the Applicant's approach regarding HVAC and HVDC transmissions systems and we have come to the view that the Applicant is justified in proposing both alternatives within the design envelope.

13.4.8. We asked several written questions (Q1.8.3 - Q1.8.7) [PD-008] regarding the potential impacts upon the setting of nearby heritage assets from the proposed HVDC convertor/ HVAC substation. Discussion

of the heritage impacts of the HVDC convertor/ HVAC substation, including design and mitigation measures, also took place at ISH4 [EV-009]. Our accompanied site visit on 28 January 2019 [EV-017] was also helpful in our assessment of the potential impacts upon the settings of heritage assets.

- 13.4.9. In response to the concerns of SNC and our Q1.8.5, the Applicant provided further details of its assessment of the effects upon the setting of Keswick Hall and its historic parkland [REP1-122]. The Applicant's final position is also set out in Annex B of its SoCG with SNC [REP7-013]. The Applicant considers that the setting of Keswick Hall is limited in extent, being formed by the parkland, and is severed by the A47 road. The Applicant goes on to argue that the parkland and its setting are seriously compromised by modern development within it. The parkland itself is considered to be of low significance. The Applicant submits that, given its comparative degradation and separation from the surrounding landscape, the parkland is mainly useful for providing a setting to Keswick Hall.
- 13.4.10. We observed that the setting of Keswick Hall and its parkland has already been affected by existing development including the extensions to the original building and the A47. We agree with the Applicant that the setting of Keswick Hall itself primarily comprises the adjacent parkland. Whilst the proposed buildings and structures would be partly visible within the countryside setting beyond the A47, they would be partially screened by existing trees. Although the structures would be large, the separation distance and intervening screening would be such that they would have only a small effect on the overall countryside setting of Keswick Hall and its parkland. We therefore consider that minor adverse harm would result upon the setting and significance of both Keswick Hall and its historic parkland. We agree with both the Applicant and SNC that this harm would be less than substantial (in the context of section 16 of the National Planning Policy Framework).
- 13.4.11. The substantial size and massing of the proposed HVDC convertor/ HVAC substation would also adversely impact on the rural countryside setting of other nearby heritage assets. We agree with the Applicant's conclusions that moderate adverse effects would result on the settings of Roman town Venta Icenorum, Gowthorpe Manor House, Mangreen Hall and Church of St Edmund. We also agree with the Applicant's conclusions that the other impacts upon the significance of heritage assets from the HVDC convertor/ HVAC substation would be no worse than minor, including the setting of several Conservation Area's and listed buildings. In the respective SoCGs both SNC [REP7-013] and Hist E [REP9-026] have confirmed their agreement with the Applicant's assessment regarding the impacts on the settings of these assets.
- 13.4.12. In all cases where harm to the setting of heritage assets would result, we consider the harm to the significance of each designated asset to be less than substantial. No interested party has argued that the resulting harm from the HVDC convertor/ HVAC substation would be greater than this. We go on to consider the harm against the public benefits of the

proposal, in addition to the harm to non-designated heritage assets, later in this chapter.

- 13.4.13. Mulbarton Parish Council (MPC) argues that the Applicant has not adequately justified its site selection for the HVDC convertor/ HVAC substation [REP8-016]. MPC states that the Applicant has not discharged the requirement in paragraph 5.8.14 of EN-1 to provide a clear and convincing justification for harm to designated heritage assets. We discuss alternatives and site selection for the HVDC convertor/ HVAC substation in Chapter 5. We consider that the Applicant has carried out a reasonable site selection process and has provided information about the choices it has made as required by EN-1. We have considered the test in paragraph 5.8.14 of the EN-1 on the basis of the application before us. For reasons set out in the conclusions to this report, we consider that there is clear and convincing justification for the harm that we have identified in relation to the significance of designated heritage assets.

Main construction compound at Oulton airfield

- 13.4.14. The National Trust (NT) raises concerns [REP1-074] regarding the heritage impacts of the proposed main construction compound at Oulton airfield. It states that the compound would cause harm to the airfield as an undesignated heritage asset and would erode the ability to appreciate the contribution of the airfield to the historic environment, including its link with the nearby Grade I listed Blickling Hall which provided accommodation and facilities for the RAF during World War Two. NT also considers that it would neither preserve nor enhance the character of the Blickling Conservation Area.
- 13.4.15. In response to our Q1.8.8 and Q1.8.9 [PD-008] the Applicant, BDC and NT provided further assessment relating to the heritage significance of Oulton airfield and the impacts of the proposals upon the setting and significance of the Blickling Conservation Area. The Applicant responded as part of its Main Construction Compound Briefing Note [REP1-176], arguing that much of the airfield's heritage value has already been lost in the removal of a large portion of the runways and repurposing of the site for agriculture.
- 13.4.16. The airfield was one of 16 airfields in Norfolk used by the RAF during World War Two. It contains remaining parts of three intersecting runways and a perimeter track along with several associated buildings. NT [REP1-079] states that it provides sufficient tangible evidence to appreciate the scale and ingenuity of RAF wartime airfields and the operations undertaken from them. We are satisfied that the proposed use of the airfield would not result in intrusive works that would significantly alter the form or fabric of the remaining runways and tracks. The construction compound would also only be in active use for a temporary period of 30 months
- 13.4.17. Therefore, whilst agreeing that the airfield has the status of an undesignated heritage asset, we do not consider that its proposed temporary use as a construction compound would compromise the ability to experience the asset and it would not result in harm to its historic

significance. We also note the historic relationship of the airfield with Blickling Hall but, for the reasons set out above, do not consider this to be significantly eroded by the proposed construction compound.

- 13.4.18. In the final SoCG [REP10-022], BDC has agreed with the Applicant that no significant adverse effects would result upon the setting of the Blickling Conservation Area, noting that the detail on the use and layout of the compound, including fencing and lighting, would need to be approved through the detailed Code of Construction Practice. Taking account of the temporary period of proposed use, the absence of physically intrusive works and the limited public visibility of the airfield from the Conservation Area we do not consider that any adverse impacts would result upon its setting or significance.

Cawston

- 13.4.19. Concerns have been raised [eg REP1-004 and REP10-017] regarding the impacts of vibration from heavy goods vehicle (HGV) movements on listed properties within the village of Cawston. Several oral representations on this matter were made at Open Floor Hearing 3 [EV-033].
- 13.4.20. BDC originally objected to impacts on the Cawston Conservation Area and on listed buildings in Cawston in its LIR. However, in its SoCG with the Applicant [REP10-022], BDC states that, based on the mitigation measures now proposed, it is satisfied that no significant effects on the historic environment would occur.
- 13.4.21. During the Examination, the Applicant submitted a Construction Traffic Noise and Vibration Assessment for Cawston Village [REP7-046]. This reports on vibration assessments carried out for a sample of four properties adjacent to the B1145 within the village. It concludes that the increase in vibration levels, for both the Proposed Development alone and the cumulative scenario including the Norfolk Vanguard proposal, would result in vibration levels which are far less than would generate cosmetic or structural damage to properties adjacent to the road.
- 13.4.22. We acknowledge that four properties assessed for vibration impacts represents only a small sample of all properties. However, taking account of their spread within the village, they appear to be reasonably representative of properties that might be affected within the village and no objection has been raised to their selection by BDC. From the results provided, which have been agreed by BDC, we are satisfied that the vibration levels would be unlikely to result in structural damage to listed buildings within the village. Furthermore, we do not consider that the increase in HGV movements during construction period would be of such significance as to result in any adverse effects on the character or appearance of the Cawston Conservation Area or the special interest of listed buildings within the village.

Effects of the onshore cable corridor on the setting of other heritage assets

- 13.4.23. There are several locations where the cable route and/or adjacent storage works area would be in the vicinity of designated heritage assets. For example, the cable route would be located 342m from Baconsthorpe Castle (a Scheduled Monument). Salle Park (a Grade II Registered Park) would be 16m from the closest storage area. The cable corridor would also be close to several listed buildings such as the Grade II* listed Church of St Michael the Archangel.
- 13.4.24. However, as the cables would be buried underground, and taking account of the Applicant's proposals for replacement hedges and hedge banks, we do not consider that any long term adverse effects would result on the significance of any designated heritage assets. The construction and decommissioning stages would be of a limited duration with typical active construction works of three months at any particular location. We are satisfied that the overall impacts from the onshore cable corridor would be no more than minor adverse as assessed in the ES.

Onshore archaeology

- 13.4.25. As noted above, at the start of the examination NCC was of the view that onshore archaeological issues needed to be resolved involving further investigative works. NCC considered that these matters could be addressed through a requirement attached to the DCO. In its Written Representation [REP1-107] Hist E expressed concern that a written scheme of investigation had not been submitted with the application. The National Trust [RR-056] stated that the results of any archaeological work for the land near its coastal land ownership should be appropriately recorded and made publicly available. The Norfolk Coast Partnership [RR-101] has also draw attention to the archaeological sensitivity of the North Norfolk Heritage Coast.
- 13.4.26. Further to such representations, the Applicant submitted an Outline Onshore WSI at Deadline 6 [REP6-044]. Following discussions between the relevant parties a revised wording of Requirement 16 has been agreed requiring the approval of a WSI prior to the commencement of works for any phase.
- 13.4.27. By the end of the Examination the SoCGs [REP9-026 and REP9-027] between the Applicant and both NCC and Hist E confirm that there is agreement on matters regarding onshore archaeology. We are satisfied with the Applicant's approach to onshore archaeological matters and agree with the conclusions of the ES that the proposed development would result in effects of no worse than minor adverse significance.

Marine archaeology

- 13.4.28. Hist E made detailed comments in its Written Representation [REP1-107] on the content of the Applicant's Offshore Outline WSI. We asked several written questions (Q1.8.15 - Q1.8.19) [PD-008] regarding this document. The Applicant has confirmed that it has committed to full coverage

surveys of the seabed where construction activity will take place and that the outputs of these surveys will be used to inform the Offshore WSI.

- 13.4.29. In its responses to our questions [REP1-122] the Applicant explains that Archaeological Exclusion Zones (AEZ) would be created as a result of unexpected discoveries made following completion of pre-construction surveys. We are satisfied that there is sufficient scope within the offshore design envelope of the Proposed Development for the final development layout to accommodate the AEZs. The Applicant has also provided clarification of the role and appointment of the Archaeological Curator whose responsibilities would include the approval of various requirements specified in the Offshore WSI, method statements for surveys and matters relating to AEZs.
- 13.4.30. The approval of the Offshore WSI by the MMO would be secured by conditions attached to the DMLs (Condition 13(2) in Schedule 11 and Condition 14(2) in Schedule 12). These conditions would also secure the identification and monitoring of AEZs. Pre-construction surveys would be secured by Condition 17 of Schedule 11 and Condition 18 of Schedule 12 whilst post-construction surveys, to include monitoring the effectiveness of the AEZs, would be secured by Condition 19 of Schedule 11 and Condition 20 of Schedule 12.
- 13.4.31. In its SoCG [REP9-026] with the Applicant, Hist E confirms its agreement on the issues relating to marine archaeology and that all matters can be subsequently dealt with through the detailed Offshore WSI.
- 13.4.32. We are satisfied that that Applicant has carried out a reasonable assessment of the impact on marine archaeology and that appropriate mitigation and avoidance of impacts can be secured through DML conditions. We agree with the conclusions of the ES that the effects on marine archaeology would be no worse than of minor adverse significance.

13.5. CONCLUSIONS

- 13.5.1. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the desirability of preserving designated heritage assets, including listed buildings and their settings, the character or appearance of conservation areas and scheduled monuments or their settings.
- 13.5.2. We consider that the information provided in the ES is sufficiently comprehensive for us to take account of the significance of the heritage assets and to understand the impacts of the proposed development on that significance.
- 13.5.3. We agree with the Applicant's assessment that the proposed HVDC convertor/ HVAC substation would result in moderate adverse impacts upon the setting of designated heritage assets in the vicinity. These are:
- Gowthorpe Manor;
 - Mangreen Hall;

- Roman town of Venta Icenorum; and
- Church of St Edmund.

- 13.5.4. We also conclude that no worse than minor adverse impacts would result upon the setting of other heritage assets in the vicinity of the HVDC convertor/ HVAC substation, including Keswick Hall and its non-designated historic parkland.
- 13.5.5. We also find that minor adverse impacts would result from the construction of the onshore cable corridor on the setting of several heritage assets located in proximity of the cable corridor. Furthermore, minor adverse impacts would result upon both onshore and marine archaeology. We note that a WSI would need to be approved post-consent for both onshore and marine archaeology.
- 13.5.6. We conclude that no harm would result from HGV and traffic movements upon the significance of listed buildings in Cawston or the Cawston Conservation Area. The proposed main construction compound at Oulton airfield would not lead to any adverse effect upon the setting of the Blickling Conservation Area. The historic significance of the airfield itself, which we agree is an undesignated heritage asset, would also be satisfactorily safeguarded.
- 13.5.7. Where we have found that harm would arise, we consider this would be less than substantial in each instance. We have not identified any instances, during construction, operation or decommissioning where the Proposed Development is likely to result in substantial harm to or loss of the significance of any heritage asset. However, EN-1 requires that the harm we have identified should be weighed against the public benefit of the development, recognising that the greater the harm the greater the justification that will be needed. We return to that balance in our overall conclusions in Chapter 18.

14. ONSHORE ECOLOGY

14.1. INTRODUCTION

- 14.1.1. This chapter considers the effects of the Proposed Development with regard to the natural environment landward of Mean High Water Springs (MHWS). This was identified as one of the principal issues in the examination through a Rule 6 letter [PD-006]. The potential impacts and policy considerations relating to Natura 2000³³ (N2K) sites will be considered in Chapter 17 of this report which should be read in conjunction with this chapter.

14.2. POLICY CONSIDERATIONS

- 14.2.1. The Overarching National Policy Statement for Energy (EN-1), taken together with the National Policy Statement for Renewable Energy Infrastructure (EN-3), provides the primary basis for decision making on applications for nationally significant renewable energy infrastructure. However, only the first of these is directly relevant to the assessment of effects in relation to onshore ecological matters. On this basis and bearing in mind the facts of the case, the EN-1 policy tests for onshore ecology are as follows:

- assess the likely significant effects, including any significant residual effects taking account of proposed mitigation measures and whether the effects and any associated mitigation have been identified for the different project stages (paragraph 4.2.4);
- assess how the effects of the development would combine and interact with the effects of other development including proposals for which consent is being sought as well as for proposals that have either been consented or built (paragraph 4.2.5);
- consider whether the development would be consistent with the Government's biodiversity strategy Working with the Grain of Nature within the context of the challenge of climate change (paragraph 5.3.6);
- consider whether significant harm to biodiversity and geological conservation interests has been avoided, including through mitigation and consideration of reasonable alternatives (paragraph 5.3.7);
- give appropriate weight to designated sites of international, national and local importance as well as protected species (paragraph 5.3.8);
- refuse consent where 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);
- give due consideration to the ability of sites of local importance to deliver national biodiversity targets and community-based benefits (paragraph 5.3.13);

³³ Natura 2000 is a network of nature protection areas in the territory of the European Union. It is made up of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated respectively under the Habitats Directive and Birds Directive.

- refuse consent when there would be a loss or deterioration of ancient woodland unless the benefits, including need for the development, outweigh the harm that would be caused (paragraph 5.3.14);
- assess whether potential harm to veteran trees has been minimised or, where loss is unavoidable, whether this loss has been justified (paragraph 5.3.14);
- ensure that species and habitats of principal importance for the purpose of conserving biodiversity (section 41³⁴ species and habitats) are protected from any adverse effects through the use of requirements or planning obligations (paragraph 5.3.17);
- refuse consent when there would be an adverse effect on section 41 habitats or species unless the benefits, including need for the development, outweigh the harm that would be caused (paragraph 5.3.17); and
- give substantial weight to any adverse effect on biodiversity features of national or regional importance (paragraph 5.3.17).

14.2.2. A number of different legislative provisions protect species on land. Certain plant and animal species, including all wild birds, are protected under the Wildlife and Countryside Act 1981 (as amended). Additionally, plants and animals of European importance are protected under the Conservation of Habitats and Species Regulations 2017 (the Regulations). Some species are common to both and have extensive protection measures. Other animals are protected under their own legislation, such as badgers under the Protection of Badgers Act 1992.

14.2.3. Varying provisions apply with the most stringent being related to European Protected Species (EPS). Regulation 9(3) of the Regulations places a duty on all public bodies who act as Competent Authorities. This requires the decision-maker to have regard to the requirements of the Regulations in the exercise of its functions.

14.2.4. Turning to the responsibilities of the applicant, EN-1 sets out a number of requirements as follows:

- an Environmental Statement (ES) that describes the aspects of the environment likely to be significantly affected by all stages of a project, including the effects on flora and fauna, and measures for avoiding or mitigating any significant adverse effects that may arise (paragraph 4.2.1);
- an ES that clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on section 41 species (paragraph 5.3.3);
- demonstrate how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests (paragraph 5.3.4); and
- incorporate appropriate mitigation measures as an integral part of the proposed development ensuring that:

³⁴ Section 41 of the Natural Environment and Rural Communities Act 2006

- construction activities are confined to the minimum required area;
- construction and operation follow best practice to minimise disturbance or damage to both species and habitats;
- all habitats are restored, where practicable, after construction works have finished; and
- take opportunities to enhance existing habitats and, where practicable, create new ones of value through site landscaping proposals (paragraph 5.3.18).

14.3. APPLICANT'S APPROACH

The Application

14.3.1. Volume 3, Chapter 3 of the ES [APP-075] addresses onshore ecology and nature conservation issues and is supported by the following ES chapters:

- Onshore Nature Conservation Sites [APP-019];
- Tree Preservation Order and Hedgerow Plan [APP-021];
- Desk Study and Phase 1 Habitat Survey [APP-129];
- Hedgerow Survey [APP-130];
- Desmoulin's Whorl Snail Survey [APP-131];
- White-Clawed Crayfish Survey [APP-132];
- Great Crested Newt Survey [APP-133];
- Reptile Survey [APP-134];
- Water Vole Survey [APP-135];
- Bat Surveys [APP-136];
- Onshore Ornithology - Wintering and Migratory Birds [APP-137];
- Onshore Ornithology - Breeding Birds [APP-138];
- Otter Sign Survey (confidential) [APP-139];
- Badger Survey (confidential) [APP-140]; and
- Hazel Dormouse, Red Squirrel and Freshwater Pearl Mussel Desk Study [APP-141].

14.3.2. The following documents superseded the original ones during the course of the Examination:

- Onshore Nature Conservation Sites [REP9-040]; and
- Tree Preservation Order and Hedgerow Plan [REP9-041].

General Approach

14.3.3. The ES identified potential ecological impacts arising from a number of activities. The impact pathways are considered either in terms of direct loss or damage to habitats or adverse effects on particular species. A range of Valued Ecological Receptors (VER) are identified in the ES which comprised sites, habitats and species of ecological or nature conservation importance that would be affected by the proposal [APP-075].

14.3.4. The baseline characterisation identifies a total of 16 statutory designated sites within 1km of the onshore elements with a further three within 2km. A total of 60 non-statutory designated sites are also located within 1km with a further 47 within 2km. A total of 14 habitats that are either listed in section 41 or in the Norfolk Local Biodiversity Action Plan are

identified as occurring either within the temporary or permanent land take areas of the onshore elements [APP-075].

- 14.3.5. The dominant land cover type within these elements is arable agriculture (75.6%) with the next most extensive being improved grassland (7.7%). All other land cover types that are classified cover an area of around 1% or less. A number of linear habitats also fall within the onshore elements which include species rich hedges with trees (314m), species rich intact hedges (2,747m) and running water (483m) [APP-075].
- 14.3.6. A combination of existing records and field surveys led to the identification of a range of species that would be either within 2km or 5km of the onshore elements. This included white clawed crayfish and other invertebrates, amphibians and reptiles, breeding birds, bats, badgers, otters and water voles. Pre-commencement surveys would be undertaken for these species prior to any clearance or construction works taking place as secured in the Outline Ecological Management Plan (EMP) [REP9-065].
- 14.3.7. Natural England (NE) agrees that sufficient primary and secondary data has been collated in the ES to appropriately characterise the baseline environment landward of MHWS and that the scope and methodology of the protected species surveys is appropriate and adequate, taking into consideration access limitations, to inform the assessment of potential significant effects [REP1-218]. This view is also shared by The Wildlife Trusts and Norfolk Wildlife Trust [REP1-227].
- 14.3.8. Turning to the potential impacts, the following activities are identified by the Applicant as causing potential harm during the construction phase:
- open cut trenching and cable installation;
 - construction of onshore infrastructure;
 - horizontal directional drilling (HDD);
 - construction of construction compounds; and
 - construction of access tracks and the haul road.
- 14.3.9. Adverse effects on species and habitats arising from routine maintenance operations and the removal of above ground infrastructure are also considered in the operational and decommissioning phases.
- 14.3.10. Some of the designed-in mitigation measures that are common to all receptor groups, which would be secured in the recommended Development Consent Order (DCO), are as follows:
- the use of existing highway network and farm tracks for site access;
 - the avoidance of designated sites, areas of woodland, ponds and other ecologically sensitive habitats in onshore corridor alignment;
 - buffer zones for nesting birds, roosting bats, active badger setts, otter holts and resting places and water vole colonies;
 - pre-construction surveys to identify potential changes in baseline conditions to be undertaken within 12 months prior to the commencement of construction works;

- an approved Code of Construction Practice in accordance with the Outline Code of Construction Practice (CoCP) [REP9-063];
- an Outline EMP [REP9-065];
- an Emergency Response and Pollution Control Plan;
- a suitably experienced professional ecologist to act as an Ecological Clerk of Works (ECoW);
- site induction and toolbox talks by an ECoW;
- dust control and vehicle speed restrictions within the working corridor; and
- a Biosecurity Protocol to minimise risk of spreading or introducing invasive non-native species, pests and diseases.

14.3.11. The above measures would be secured in the recommended DCO through the following Requirements:

- Requirement 8 – provision of landscaping;
- Requirement 10 – ecological management plan;
- Requirement 13 – surface and foul water drainage;
- Requirement 14 – contaminated and groundwater scheme;
- Requirement 17 – code of construction practice; and
- Requirement 19 – European protected species onshore.

14.3.12. Receptor-specific measures, as detailed in Table 3.19 of the ES [APP-075] and outlined in the following sections, would also be secured through the above requirements.

14.3.13. Statutory Site Receptors:

- HDD cable installation beneath designated sites with works-free buffer zones established to protect riparian habitats of key species where necessary;
- pre-construction surveys to identify sensitive habitats in the vicinity of large watercourse crossings; and
- a bentonite break out plan.

14.3.14. Non-Statutory Site Receptors:

- HDD cable installation beneath designated sites with works-free buffer zones established to protect riparian habitats of key species where necessary;
- pre-construction surveys to identify sensitive habitats in the vicinity of large watercourse crossings; and
- a bentonite break out plan.

14.3.15. Protected Species Receptors:

Bats

- a pre-felling check of mature trees to confirm the absence of roosting bats or a bat roost;
- minimise light spillage and direct light away from supporting habitats;
- replant hedgerows as soon as practicable after cable installation;
- use of temporary artificial bridges to link severed hedgerows to maintain important foraging/ commuting routes; and

- a scheme of bat habitat creation, restoration and enhancement including compensatory roosting space comprising long-lasting woodcrete bat boxes.

Reptiles

- a detailed reptile habitat clearance method statement including post construction habitat restoration and management requirements;
- progressive habitat clearance works prior to construction to deter active reptiles from utilising working areas; and
- removal of vegetation of value to hibernating reptiles undertaken outside hibernation period (November to March).

Great Crested Newts

- pre-construction survey of all ponds located up to 250m from the works area that were not previously surveyed or surveyed more than two years prior to commencement of construction works; and
- use of amphibian exclusion and drift fencing where necessary to exclude newts from works areas.

Badgers, Otters and Water Voles

- HDD cable installation beneath watercourses with works-free buffer zones established to protect riparian habitats of key species;
- pre-construction badger survey of all works areas, including a 30 to 100m buffer zone, to locate active setts and important foraging areas;
- pre-construction surveys to identify sensitive habitats in the vicinity of large watercourse crossings;
- minimise light spillage and direct light away from supporting habitats;
- pre-construction water vole survey and method statements that include measures to deter water voles from the working corridor;
- all excavations to be covered overnight or a method of escape provided for otters;
- pre-construction otter surveys to identify any new otter holts or resting places;
- restriction of construction activities around active badger setts or closure outside the badger breeding season (30 November to 1 July) in accordance with approved methods; and
- a pollution incident response and bentonite break out plan.

White-Clawed Crayfish

- HDD cable installation beneath watercourses;
- a biosecurity protocol; and
- a bentonite break out plan.

Breeding Birds

- all trees, hedgerows or scrub of potential value to nesting birds to be cleared outside of the bird breeding season (14 February to 31 August inclusive) to prevent disturbance to nesting birds;

- when not possible, vegetation will be surveyed prior to clearance and will not be removed if it contains an active nest which will be retained until the young have fully fledged and left the nest; and
- use of bird scarers during the breeding season to deter ground-nesting birds from suitable fields (>5ha) where HDD installation launch pits will be located.

14.3.16. Section 41 Habitat Receptors:

- pre-construction surveys to identify sensitive habitats in the vicinity of large watercourse crossings;
- a bentonite break out plan;
- a works-free buffer zone around retained mature trees to include root protection zones; and
- replant hedgerows as soon as practicable after cable installation.

14.3.17. Section 41 Species Receptors:

- retain any dead or decaying wood from felled trees and relocate to suitable locations as near as practicable to the source tree; and
- a bentonite break out plan.

14.4. ISSUES ARISING DURING THE EXAMINATION

Hedgerow Regulations

- 14.4.1. In their Relevant Representations, South Norfolk Council (SNC) [RR-54] and Broadland District Council (BDC) [RR-057] highlight the fact that the Applicant had not fully evaluated the impact of hedgerow removal in accordance with the Hedgerow Regulations 1997. The ES defines “important” hedgerows on ecological grounds according to the Hedgerow Survey Handbook 2007 [APP-130]. Whilst this quantifies the ecological value of potentially affected hedgerows, it does not evaluate any other attributes.
- 14.4.2. The purpose of the Hedgerow Regulations 1997 is to protect important hedgerows that cannot be substituted by replanting. A hedgerow is deemed to be important if it has been present at a location for 30 years or more and satisfies at least one of the criteria listed in Schedule 1, Part II of the Regulations. These criteria either relate to archaeology and history or wildlife and landscape.
- 14.4.3. We sought further clarification on this matter in our written questions (Q1.4.9 [PD-008]). SNC stated that it required a full assessment, as prescribed in the Hedgerow Regulations 1997 [REP1-231]. The Applicant submitted this assessment and an associated land plan at Deadline 1 [REP1-160 and REP1-155] as well as a further plan at Deadline 2 showing the location of individual trees [REP2-016]. Additionally, the wording of the Outline CoCP was altered to minimise the loss of hedgerows and individual trees [REP1-142]. Whilst this resolved the matter for BDC [REP10-022], the position of SNC remained unchanged at end of the Examination [REP7-013].

- 14.4.4. We do not find SNC's position tenable on the basis of the evidence submitted, as set out in the preceding paragraph. Given the above, we conclude that the baseline characterisation is sufficient to determine the adverse effects on hedgerows as well as the effectiveness of any mitigation. We therefore give these outstanding concerns little weight.

Outline Code of Construction Practice

- 14.4.5. NE highlights some concerns at Deadline 6 [REP6-057] in relation to the mitigation measures associated with pink-footed geese management and hydrological protection, as set out in the second version of the Outline CoCP [REP4-023].
- 14.4.6. The first matter will be addressed in Chapter 17. The second matter relates to location of HDD sediment lagoons and soil storage areas and whether adequate pollution control measures would be present. This was also the focus of two of our written questions, specifically in relation to whether the measures would be effective during intense rainfall events (Q1.4.6 and Q1.4.7 [PD-008]).
- 14.4.7. The Applicant subsequently agreed that details of specific flood control measures relating to the onshore cable corridor would be submitted to Norfolk County Council for approval as the Lead Local Flood Authority when a contractor is appointed. These measures would include a specific requirement to consider storm events, regular removal of lagoon slurry by tankers, sufficient freeboard to accommodate extreme rainfall events and ongoing consultation with NE and the Environment Agency (EA) [REP1-122].
- 14.4.8. Additionally, the Applicant states that there would be no HDD exit pits and hence no settlement lagoons within 10m of any watercourse or within any designated sites. Further measures would include site-specific hydrogeological risk assessments at sensitive crossing locations and further consultation with Natural England with regard to the site-specific crossing method statements at the River Wensum and the Blackwater Drain crossings to ensure that any adverse effects on Booton Common SSSI, Norfolk Valley Fens SAC and River Wensum SAC are avoided [REP7-007]. Despite these undertakings and an early agreement with EA that the watercourse protection measures are adequate [REP1-203], the position of NE remained unchanged at end of the Examination [REP10-045].
- 14.4.9. The final version of the Outline CoCP specifies the following measures that would be subject to approval by the relevant planning authority and statutory consultees [REP9-062]:
- a bentonite break out plan for HDD lubricant leakage (Appendix C);
 - crossing method statements for crossings at sensitive locations (Appendix B);
 - a soil management strategy to ensure adequate storage away from watercourses (Appendix G); and
 - sufficient lagoon freeboard for an extreme rainfall event and regular tanker removal of arisings (paragraph C1.4.3).

- 14.4.10. In addition, the Outline EMP provides for a 10m watercourse protection zone (paragraph 4.2.2.2) [REP9-065].
- 14.4.11. Given the above, we conclude that effective hydrological protection measures would be deployed. This would provide adequate protection to the terrestrial and aquatic environments. These measures would be secured through Requirement 17 which would require the submission of a detailed CoCP for approval by the relevant planning authority in consultation with the EA and the relevant statutory nature conservation body [REP10-041].

Ecological Networks

- 14.4.12. The Campaign for Rural England raises concerns about the potential loss of farm ponds and the disruption this might cause to an ecological network associated with the River Glaven catchment. Further concerns are also raised about the effect of the Proposed Development on white-clawed crayfish populations [RR-037].
- 14.4.13. We note the supporting evidence from the River Glaven Conservation Group that was submitted as part of the Preliminary Environmental Information Report (PEIR). This identifies the potential threats as comprising fine sediment pollution, nutrient enrichment from soil erosion and habitat fragmentation.
- 14.4.14. The relevance of this initial consultation response is reduced, however, given the subsequent changes to the onshore cable corridor route as well as the designed-in mitigation measures of the ES and the additional measures introduced during the course of the Examination. Bearing in mind the mechanisms for controlling sediment loads in watercourses, as outlined in the previous section, we are satisfied that this impact would be adequately controlled.
- 14.4.15. Turning to the fragmentation of habitats, we note that policy EN9 of the North Norfolk Local Development Framework Core Strategy 2008 requires development to minimise fragmentation of habitats and maximise opportunities for connection. We have also had regard to paragraph 170(d) of the National Planning Policy Framework 2019 which stresses the importance of coherent ecological networks. We note the reliance on paragraph 174 of the Framework [REP7-081]. However, this relates to plans rather than decision making and does not consequently apply in this instance.
- 14.4.16. Whilst generalised concerns are highlighted in relation to the Glaven catchment, these are not founded any robust, spatially explicit analysis that establishes the location of key functional linkages between specific habitat types. Consequently, there is no clear evidence that any such linkages would be compromised. Moreover, in our view any species capable of utilising farm ponds as a stepping stone between different catchments would be able to traverse hostile habitats in any event given the predominance of intensive arable agriculture within the cable corridor route. We also note that for some species, such as white-clawed crayfish,

maximising connectivity would also maximise opportunities for the spread of signal crayfish and crayfish plague.

- 14.4.17. Although there is no explicit evaluation of how the physical or functional linkages between habitat patches would be affected at different scales in the ES, the loss of habitats of recognised wildlife value has nevertheless been assessed through a combination of desk-based analysis and field survey [APP-075]. We are satisfied that this provides a broad indicator of likely fragmentation effects as it explicitly considers how the onshore cable corridor route would affect linear features, such as hedgerows, as well as key habitats that might function as stepping stones, such as farm ponds.
- 14.4.18. We are satisfied that the fragmentation and loss of habitat would be minimised and would be reversible through the measures contained in the Outline CoCP [REP9-062] and Outline EMP [REP9-065]. We also note that measures to restore farm ponds and create additional great crested newt habitat would provide proportionate improvements in connectivity and thus improve the ecological coherence of the ponds that are occupied by this species [REP10-045]. We accept that access was not possible at all potentially suitable crayfish sites but note that this would be addressed by further pre-construction surveys to mitigate impacts at watercourse crossings.
- 14.4.19. Given the above, we conclude that the level of fine sediments would be controlled in the Glaven catchment (and elsewhere) and that the extent of habitat loss and consequent fragmentation would be minimised.

14.5. CONCLUSIONS

- 14.5.1. The Applicant has carried out meaningful consultation through the Onshore Ecology Expert Working Group which comprised local planning authorities, Natural England, the Environment Agency, the Royal Society for Protection of Birds and Norfolk Wildlife Trust, as detailed in Table 3.5 of the ES [APP-075].
- 14.5.2. We are satisfied that the ES describes the aspects of the environment likely to be significantly affected by all stages of a project, including the effects on flora and fauna as well as measures for avoiding or mitigating any significant adverse effects that may arise. Some of the proposed mitigation measures have resulted from the process of engagement whilst others originate from established best practice.
- 14.5.3. The ES clearly sets out potential effects on internationally, nationally and locally designated sites of ecological or geological conservation importance as well as likely effects on section 41 species/ habitats and protected species. An Outline Landscape Management Plan has been produced which secures opportunities to conserve and enhance biodiversity [REP9-060].
- 14.5.4. The assessment has assumed a realistic worst case scenario in relation to the width of the onshore cable corridor route and the extent of permanent land take. Transboundary effects have been considered and

the screening exercise found that there was no potential for significant transboundary effects with regard to onshore ecology and nature conservation [APP-099].

- 14.5.5. Whilst there would be some impact on various species and a reduction in the extent of some habitats, this would be minimised through the designed-in measures described above. Residual impacts would be mitigated through the Outline CoCP [REP9-062] and Outline EMP [REP9-065].
- 14.5.6. In summary, we have not identified any significant conflict with EN-1, the National Planning Policy Framework when taken as a whole or Policy EN9 of North Norfolk Local Development Framework Core Strategy 2008. We are satisfied that the findings of the ES are reasonable and that necessary mitigation measures could be secured through the recommended DCO. Given the above and considering all other matters raised, we conclude that there are no onshore ecological matters of sufficient weight that would argue against the Order being made.

15. SOCIO-ECONOMIC

15.1. INTRODUCTION

- 15.1.1. This chapter considers the effects of the Proposed Development on socio-economic matters. Socio-economic impacts were identified as a principal issue in our initial assessment contained within Annex B of our letter dated 4 September 2018 [PD-006].
- 15.1.2. This chapter does not consider matters relating to the impacts on agricultural land and operations. Such matters are contained within Chapter 9 Land-use and Recreation.
- 15.1.3. This chapter is organised as follows:
- Policy considerations;
 - Applicant's approach;
 - Issues arising during the Examination; and
 - Conclusion.

15.2. POLICY CONSIDERATIONS

- 15.2.1. Section 5 of the Overarching National Policy Statement for Energy (EN-1) covers socio-economic matters. It states that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels (paragraph 5.12.1). It sets out the relevant matters that should be included in the applicant's assessment (5.12.3), these being:
- the creation of jobs and training opportunities;
 - the provision of additional local services;
 - effects on tourism;
 - the impact of workers; and
 - cumulative effects.
- 15.2.2. EN-1 also advises that applicants should describe the existing socio-economic conditions in the area surrounding the proposed development and should refer to how the development's socio-economic impacts correlate with local planning policies (5.12.4). It observes that socio-economic impacts may be linked to other impacts. For example, the visual impact of a development may also have an impact on tourism and local businesses (5.12.5).
- 15.2.3. The decision-maker should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the decision-maker considers to be relevant and important to its decision (5.12.6). It may be concluded that 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) (5.12.7).
- 15.2.4. The UK Marine Policy Statement recognises that properly planned developments in the marine area can provide environmental and social

benefits as well as drive economic development, provide opportunities for investment and generate export and tax revenues (2.5.2). It goes on to state that marine based activities can provide opportunities for employment, including in new and developing industries such as the renewable energy sector and associated offshore electricity transmission, providing wide and long term benefits for both national and local economies (2.5.3).

15.2.5. Policy EC1 of the East Inshore and East Offshore Marine Plans supports proposals that provide economic productivity benefits which are additional to Gross Value Added (GVA) currently generated by existing activities. Policy EC2 goes on to provide support for proposals that provide additional employment benefits, particularly where these have the potential to meet employment needs in localities close to the marine plan areas. Policy E3 provides general support for proposals that will help the East Marine Plan areas to contribute to offshore wind generation. Policy TR1 requires that proposals demonstrate that, during construction and operation, in order of preference:

- they will not adversely impact tourism and recreational activities;
- how, if there are adverse impacts, they will minimise them;
- how, if the adverse impacts cannot be minimised, they will be mitigated; and
- the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts.

15.2.6. Policy TR3 provides support for proposals that deliver tourism and/or recreation related benefits in communities adjacent to the East Marine Plan areas.

15.3. APPLICANT'S APPROACH

15.3.1. Volume 3, Chapter 10 of the Environmental Statement (ES) [APP-082] sets out the Applicant's assessment of socio-economic impacts of the Proposed Development upon onshore receptors during the construction, operation and decommissioning phases. It focuses firstly on employment and GVA and secondly on tourism and recreation.

15.3.2. The ES sets out the pre-application consultation carried out with relevant parties regarding socio-economic issues. The Applicant's tourism assessment in Chapter 10 of the ES also draws upon the assessments in separate chapters Landscape and Visual Resources [APP-076], Land Use and Recreation [APP-078], Traffic and Transport [APP-079], and Noise and Vibration [APP-080].

15.3.3. The selection of a port (or ports) for the construction and operation phases would be made post consent. The Applicant's assessment therefore includes three study areas for employment and GVA effects. These comprise the New Anglia and the Humber Local Enterprise Partnership (LEP) areas along with a national economic study area (UK). The study area for the assessment of tourism and recreation comprises the local authority areas crossed by the proposed onshore cable corridor

(North Norfolk District Council, Broadland District Council and South Norfolk Council).

- 15.3.4. The ES recognises that there is uncertainty over the assessment of the potential socio-economic effects arising from the Proposed Development. The reasons stated for this include uncertainty regarding the location of suppliers, the likelihood of ports in the economic study area being selected and the range of functions that ports may serve. Consequently, the ES has assessed low, medium and high impact scenarios for the construction phases as well as low and high impact scenarios for the operation phase.
- 15.3.5. For example, in relation to the construction phase, the low impact scenario is based on no UK ports being used, whilst the high impact scenario is based on more extensive use of UK ports and major components being sourced from within the UK.
- 15.3.6. The ES recognises that tourism is an important sector within the New Anglia LEP, underpinning substantial employment in the area and attracting wealth generation through tourism expenditure. In particular, it highlights that North Norfolk attracts coastal tourism. The ES states that tourism related employment accounts for the largest share of employment in North Norfolk (1 in 5 full time equivalent jobs). It also states that around 12 million visitors come to the tourism and recreation study area annually, spending more than £404 million in the local economy.
- 15.3.7. The Applicant's assessment is based on the following maximum design scenarios which have been selected as those having the potential to result in the greatest effect on an identified receptor or group. These include the following:
- open cut construction at the landfall with maximum duration for works of 5.5 years (assuming a three year gap between two phases);
 - High Voltage Alternating Current (HVAC) transmission option including up to six cable circuits and onshore booster station; and
 - construction over two phases.
- 15.3.8. The assessment of impacts during the construction phase includes the potential for impacts on visual resources, recreational resources, the local road network, and noise and vibration sensitive receptors.
- 15.3.9. The application includes designed-in measures to increase the potential for beneficial socio-economic impacts and reduce the potential for adverse impacts on tourism.

ES Summary of Impacts

- 15.3.10. The ES finds that during the construction phase there would be potential for significant beneficial impacts in the Humber LEP in relation to the following:
- employment (high impact scenario),

- GVA (medium and high impact scenario),
- access to employment for local residents (medium and high impact scenario), and
- performance of the renewable energy sector (high impact scenario).

- 15.3.11. In the New Anglia LEP, there would be potential for significant beneficial impacts in relation to access to employment for local residents under the medium impact scenario.
- 15.3.12. During the operation phase, there would be potential for both LEP areas to experience impacts of major beneficial significance in relation to employment creation and access to employment among local residents under the high impact scenario.
- 15.3.13. Potential adverse impacts in both LEP areas have been identified on the demand for housing, accommodation and local services during the construction and operation phases but these have not been assessed as significant.
- 15.3.14. Potential minor adverse impacts on tourism and associated economic value have been identified during construction, though these have not been assessed as being significant in EIA terms.
- 15.3.15. The ES anticipates that the nature of socio-economic impacts during decommissioning would be similar to those during construction, although the magnitude of impact and significance of effects are likely to be more limited. Regarding cumulative impacts, the ES finds that there could be beneficial effects across a number of receptors although it recognises that there is a great deal of uncertainty attached to such effects.

15.4. ISSUES ARISING DURING THE EXAMINATION

Local Impact Reports

- 15.4.1. The Local Impact Report (LIR) of Norfolk County Council (NCC) [REP1-061] recognises that there are potentially significant economic benefits arising from the Proposed Development in terms of local employment creation, business sectors affected by construction and operation. It states that the Applicant should ensure that the development brings real socio-economic benefits. NCC states that it is working with all energy companies and the New Anglia LEP to develop a skills strategy. It would like to see apprenticeships, work experience and internship opportunities at an appropriate stage.
- 15.4.2. NCC goes on to state that there would be economic benefits of using the port facilities at Great Yarmouth for the construction and operation phases. NCC would like to see the establishment of a Community Benefit Fund and would like the Applicant to ensure that all stakeholders/communities have the opportunity to make appropriate bids. NCC also considers that the Applicant should commit to providing compensation for adversely affected businesses and communities. It states that penalties should be imposed (through financial compensation to be paid into the Community Benefit Fund) if the project overruns.

- 15.4.3. North Norfolk District Council's (NNDC) LIR [REP1-062] states it has very significant concerns regarding the impacts on tourism and contests the Applicant's conclusion that impacts on tourism would be minor. It considers this to be particularly the case for tourism businesses in Weybourne and Kelling where there would be a significant impact from construction works. NNDC goes on to state that the Applicant's commitment to produce a Skills and Employment Plan is unlikely to benefit North Norfolk.
- 15.4.4. In its LIR [REP1-100] South Norfolk Council expresses general support for the Proposed Development recognising its contribution to the diversification of the UK energy supplies and the national and local economy. It also welcomes the economic benefits of investment and job creation.
- 15.4.5. Broadland District Council (BDC) does not raise any socio-economic matters in its LIR [REP1-053]. The Statement of Common Ground (SoCG) between the Applicant and BDC [REP10-022] confirms that all socio-economic matters are agreed.

Tourism and recreation

- 15.4.6. In addition to matters raised in the LIRs outlined above, several representations have been made regarding the impacts of onshore construction activities on tourism and recreation [eg RR-012, RR-026, RR-058, RR-125, RR-142 and REP6-066]. These include concerns regarding the impacts of construction traffic movement, beach closures and footpath closures on tourism activity, particularly at the northern end of the cable corridor near Weybourne and Kelling.
- 15.4.7. The representation from Weybourne Parish Council [REP6-066] draws attention to its economy being heavily dependent on visitors and tourism, its limited road infrastructure, the impact of beach closures and disruption from construction.
- 15.4.8. Responses from the parties relating to the effects of the construction on the tourist industry were provided in response to our written questions Q1.10.7 [PD-008], Q2.10.3 and Q2.10.4 [PD-012]. Localised effects on tourism within North Norfolk were also discussed at Issue Specific Hearing 4 [EV 009].
- 15.4.9. NNDC has provided evidence seeking to demonstrate the value of tourism to the economy in North Norfolk [REP4-134]. The Council acknowledges, however, that it is hard to quantify with any certainty the actual impacts of construction upon visitor numbers. It also recognises that there might be some positive effects, such as construction workers staying in local accommodation but notes that this could reduce overall spend in the economy for tourist attractions and spin-off businesses.
- 15.4.10. In its SoCG with the Applicant [REP9-021] NNDC confirms its position that, whilst it believes the long term impacts of the cable route on the tourism economy would be benign, it considers that there would be very significant impacts on the income of local tourism businesses in a very

attractive and popular area of the North Norfolk Coast. It says that, because of the high level of dependence of the North Norfolk economy on tourism, any impact upon that sector would have a disproportionately high impact upon the overall economy of the District. The Council maintains that the Applicant should better understand and quantify the impact and consider appropriate mitigation for adversely affected tourist facilities during construction, particularly in the immediate areas of Weybourne and Kelling.

- 15.4.11. We consider that, during construction, there is potential for some disruption to tourism in the Weybourne and Kelling areas. In particular, due to the presence of significant construction activity, including associated HGV movements, the need for beach closures and diversion of the Norfolk Coast Path during works at the landfall. Such factors could have the effect of dissuading potential visitors from visiting the area.
- 15.4.12. However, such effects would be temporary and measures to reduce disruption are included in the Outline Code of Construction Practice (CoCP) [REP9-063] and the Outline Construction Traffic Management Plan (CTMP) [REP9-048]. The detailed versions of the CoCP and CTMP would require approval through the Development Consent Order (DCO).
- 15.4.13. The construction works at the landfall near Weybourne would take place within a maximum 2.5 year period across potentially two phases. Construction works on the cable corridor itself (not including the landfall works, the onshore HVAC booster station or the High Voltage Direct Current convertor/ HVAC substation) are expected to progress across each phase with a typical active construction works duration of three months in any particular location.
- 15.4.14. The Outline CTMP states that the Applicant would engage with NCC to agree routing and HGV timing on key tourist links (such as the A149 which passes through Weybourne) during the peak holiday period (June to September). As well as containing measures seeking to manage and mitigate impacts such as noise and vibration, the Outline CoCP provides for a Public Right of Way Management Plan to be approved in the event that access along the beach at Weybourne is to be restricted or the coastal path needs to be temporarily diverted.
- 15.4.15. In response to our Q2.9.3 [PD-012], the Applicant states that, if a diversion remains in place only for the periods when open cut trenching is occurring, this would result in a closure of approximately one month on six occasions [REP4-068]. The coastal path diversion route would be approximately 600m. We are therefore satisfied that, as it would only affect users of the path for a relatively short distance, it would have only a limited effect on the experience of users.
- 15.4.16. Furthermore, we find that the actual effects of construction activity upon tourism activity and spending is difficult to quantify. EN-1 states that it may be concluded that limited weight is given to assertions of socio-economic impacts that are not supported by evidence. There is no clear evidence that the impacts on tourism in Weybourne and Kelling

would be of such magnitude that would result in a substantial decrease in tourism activity and spending or would potentially jeopardise the livelihood of local tourist dependent businesses. We also agree with the Applicant that, as the cable corridor is limited to a relatively small part of North Norfolk District as a whole, it would be likely to affect only a small proportion of its visitor economy.

- 15.4.17. NNDC goes on to state in the SoCG [REP9-021] that the Applicant needs to go further to identify mitigation and help tourism related businesses adversely affected by construction activities. This should include identifying how smaller businesses can be compensated to avoid closure. NNDC suggests that a Community Benefit Fund may need to be secured within the DCO which, it considers, would be directly related to the Proposed Development. NCC has also argued that there should be a Community Benefit Fund to compensate businesses and communities adversely affected by the construction works [REP9-027].
- 15.4.18. The Applicant's response to our Q1.10.5 [PD-008] regarding community benefits says that any Community Benefit Fund would be voluntary and not secured through the DCO. Regarding tourism impacts, given that there is no clear evidence of significant impacts on local tourism businesses, we do not consider it necessary for a Community Benefit Fund to be secured through the DCO. We have not given any weight to the Applicant's intention to implement a voluntary Community Benefit Fund because there is no planning obligation or DCO drafting before us.
- 15.4.19. We have also received representations expressing concerns regarding impacts of the onshore construction on individual businesses. For example, the effects of construction traffic on businesses such as bed and breakfast and a cafe in Cawston [eg REP7-111, REP8-012 and REP10-017) and from construction noise and disturbance on a holiday let business near the cable crossing point with Norfolk Vanguard at Reepham [REP10-055]. We acknowledge that some noise and disturbance would be likely to occur during construction, including the potential cumulative impacts with Norfolk Vanguard. However, such impacts would be temporary during construction and we conclude in Chapters 10 and 11 that the Applicant has proposed satisfactory measures to manage and mitigate them. We have therefore only given limited weight to these adverse impacts.

Employment and GVA related effects

- 15.4.20. The Applicant acknowledges that there is current uncertainty about the scale and location of economic opportunities likely to arise from the Proposed Development, meaning that specific actions cannot yet be developed. In response to our Q1.10.1 [PD-008] it confirms that the selection of ports for construction and operation would occur in parallel with the detailed design process, to be undertaken post consent [REP1-122].
- 15.4.21. In response to our Q1.10.2, asking which impact construction and operation scenarios are most likely to occur, the Applicant states that it is considered unlikely that the either the low impact construction or low

impact operation scenarios would occur. The medium and high construction scenarios could both be realised; however, this is highly dependent on the selection of the supplier and where they are located. The Applicant goes on to state that the high impact operations scenario is most likely to occur, however it should be noted that such scenarios for the Humber LEP and New Anglia LEP would be mutually exclusive. The Applicant also draws attention to the socio-economic benefits arising from its existing offshore wind farm developments [REP1-122].

- 15.4.22. Requirement 22 of the recommended DCO [REP10-041] requires the approval of a Skills and Employment Plan which would identify opportunities for individuals and businesses based in the regions of East Anglia and Humber to access employment associated with the construction, operation and maintenance of the Proposed Development. In response to our Q2.10.1 [PD-012], the Applicant has submitted an Outline Skills and Employment Plan [REP4-063] containing an outline of what is expected to be contained within the detailed plan. The outline plan sets out how the Applicant intends to work with the LEPs, local authorities and wider stakeholders to maximise local economic benefits.
- 15.4.23. In its SoCG with the Applicant [REP9-027], NCC confirms that it agrees with the Applicant's assessment on socio-economic matters and agrees to the commitment to produce a Skills and Employment Plan. NNDC's position at the end of the Examination remains that the Skills and Employment Plan is unlikely to benefit North Norfolk and seems tailored towards the ports to be used during the operation phase [REP9-021].
- 15.4.24. We agree that there is considerable uncertainty regarding the level of employment and GVA related benefits that could potentially arise from the project. Using the Applicant's high impact scenarios, it would be very likely that significant benefits could occur. For example, the use of a port or ports within the New Anglia or Humber LEP areas would be likely to provide for significant benefits.
- 15.4.25. Great Yarmouth Borough Council [RR-077] states that, should an operations and maintenance base be secured at Great Yarmouth, there would be significant potential to grow the local economy through the existing supply chain. The Humber LEP states (in response to our Q1.10.4 [PD-008]) that, in supporting the Proposed Development, it recognises the potential benefits that it would have for its LEP area [REP1-122].
- 15.4.26. Overall, we consider that the Proposed Development has the potential to provide for some substantial benefits during the construction and operation phases. However, there is currently no certainty regarding the location of ports and the procurement of goods and services. The weight we attach to the potential benefits is tempered by this uncertainty. We therefore attach only moderate weight to the employment and GVA related benefits.

15.5. CONCLUSIONS

- 15.5.1. During construction there is potential for some adverse effects, particularly through localised impacts near the landfall where tourism activity is more concentrated. These are likely to arise primarily from disturbance from the construction works at and near landfall. It is difficult to quantify the magnitude of such impacts although there is no clear evidence demonstrating that the effects would be significant. The construction impacts would be both short term and localised. The Applicant has proposed what we consider to be reasonable measures seeking to mitigate and manage the impacts.
- 15.5.2. Overall, we find that the adverse impacts on tourism and recreation would be likely to be minor and would be unlikely to result in significant harm. The Proposed Development would satisfy the relevant policy provisions of EN-1 and the East Inshore and East Offshore Marine Plans.
- 15.5.3. There is considerable uncertainty regarding the level of employment and GVA related benefits potentially arising from the proposed development. It is possible that significant positive effects would result during the construction and/or operation phases. The Skills and Employment Plan would help to deliver positive benefits. At this early stage of the design and procurement process there is no knowledge of where any economic benefits would arise. Whilst the benefits are potentially significant, the weight we attach to them is tempered by this uncertainty. We therefore attach only moderate weight to the employment and GVA related benefits. There would, however, be general accordance with the relevant policies of EN1, the UK Marine Policy Statement and the East Inshore and East Offshore Marine Plans.
- 15.5.4. We are satisfied that the findings of the ES are reasonable and that necessary mitigation measures could be secured through the recommended DCO. We conclude that the adverse socio-economic impacts on tourism would not be such as to weigh significantly against the Order being made. In addition, we attach moderate weight to the employment and GVA related benefits which weigh in favour of the Order being made.

16. OTHER MATTERS

16.1. INTRODUCTION

16.1.1. This chapter considers four other matters which EN-1 and EN-3 indicate ought to be taken into account. The chapter is organised as follows:

- Functional aspects of design;
- Climate change adaptation;
- Flood risk;
- Waste management;
- Water environment; and
- Conclusion

16.2. FUNCTIONAL ASPECTS OF DESIGN

16.2.1. EN-1 states that high quality and inclusive design goes beyond aesthetic considerations. The functionality of an object, including fitness for purpose and sustainability, is equally important. EN-1 goes on to say that energy infrastructure developments should be sustainable and, having regard to regulatory and other constraints, as attractive, durable and adaptable as they can be. The decision-maker should satisfy itself that the Applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics as far as possible³⁵.

16.2.2. This section of the report discusses functional aspects of design. Climate change adaptation is discussed in a following section of this chapter and aesthetic considerations are covered in Chapter 12.

16.2.3. In response to our question Q2.15.3 [PD-012], the Applicant states that site selection for the onshore infrastructure has sought to ensure that technical and other criteria are balanced against the objective of relating well to the receiving environment. This was done to ensure that careful site selection contributes to good design. The siting of the offshore infrastructure has been determined through an iterative process requiring both environmental and engineering input and was widely consulted upon at each stage [REP4-012].

16.2.4. The Applicant comments that, whilst the elements of the Proposed Development are fixed as far as they can be, there are technical details which remain uncertain. These include the choice of transmission system which would, in turn, affect the need for a booster station and the height of a substation. The substation has been designed to facilitate a variety of voltage levels and different electrical configurations. This flexibility ensures that the design will be fit for purpose regardless of the capacity or phasing that is ultimately selected [REP4-012].

16.2.5. In Chapter 5 we conclude that the Applicant has sought to follow an iterative process of refining route options, seeking to avoid or minimise incursions into environmentally sensitive areas. We also note that, in

³⁵ EN-1, paragraphs 4.5.1 to 4.5.3

refining the design, the Applicant has responded to stakeholder feedback. We therefore agree that the application has achieved good design, as far as it can at this stage of design development, through sensitive siting.

- 16.2.6. The proposed design envelope allows for flexibility in important elements of the design such as the selection of wind turbine generators and the choice of transmission systems. The fitness for purpose and functionality of the Proposed Development would largely be determined through detailed design decisions, including the specification of these major components of the infrastructure, that would be made post consent. Nevertheless, the ES [APP-058] has set design parameters within which there would be scope to achieve functionality and sustainability at the detailed design stage. Those parameters would be secured through the recommended Development Consent Order (DCO) and Deemed Marine Licences (DML).
- 16.2.7. We conclude that the Applicant has taken account of functionality and good design as far as is possible at this stage of design development. We find no conflict with EN-1 in this respect.

16.3. CLIMATE CHANGE ADAPTATION

- 16.3.1. EN-1 states that energy infrastructure will typically need to remain operational over many decades in the face of a changing climate. Consequently, applicants must consider the impacts of climate change and the decision-maker should be satisfied that it has taken into account the potential impacts of climate change using the latest UK Climate Projections at the time the ES was prepared. Applicants should ensure they have identified appropriate mitigation or adaptation measures³⁶.
- 16.3.2. EN-3 considers climate change in the context of offshore wind farms and states that applicants should set out how a proposal would be resilient to storms³⁷.
- 16.3.3. In response to our question Q2.15.1 [PD-012], the Applicant states that the Proposed Development would bring climate change benefits by providing a source of renewable energy [REP4-012]. The Applicant notes that the potential vulnerability of the infrastructure to climate change has been taken into account in a number of ways:
- location of the onshore High Voltage Alternating Current (HVAC) booster station and High Voltage Direct Current (HVDC) converter/ HVAC substation in areas at very low risk of surface water flooding;
 - surface water drainage would be sized to store run-off for a 1 in 100 year rainfall event including 40% climate change effect;
 - climate change has been taken into account in the technical chapters of the ES in terms of the characterisation of the baseline and future baseline scenarios;

³⁶ EN-1, paragraphs 4.8.4 and 4.8.5

³⁷ EN-3, paragraph 2.3.4

- offshore, the ES has given consideration to potential for changes to mean sea level, storm surges and the wave climate within the assessment of potential impacts; and
- at the landfall, the ES has considered historical changes such as coastal erosion and recession which will feed into the detailed engineering design, to minimise the risk of cable exposure.

- 16.3.4. Chapter 1 of the ES (Marine Processes) [APP-061] takes account of changes in mean sea level by reference to the United Kingdom Climate Projections 2009.
- 16.3.5. Our written question Q2.15.2 [PD-012] asked about resilience to storms. The Applicant's response noted that there is a large degree of uncertainty regarding the future storm and wave climate. However, notwithstanding this uncertainty, the detailed design for the offshore infrastructure would take into account the wind and wave climate, sea currents, tidal and seabed conditions. The Applicant has commissioned an extensive measurement campaign, including wind, waves, currents, tides and ground conditions which would inform the detailed design. The wind turbines would be designed to monitor and respond to extreme weather events in order to protect themselves, for example by shutting down at very high wind speeds.
- 16.3.6. The Applicant's approach to climate change adaptation was not challenged by other parties during the Examination. We consider that the application documents, together with the answers to our questions, demonstrate that the Applicant has taken account of climate change in accordance with EN-1 and EN-3.

16.4. FLOOD RISK

- 16.4.1. EN-1 states that the applicant should provide an appropriate flood risk assessment (FRA). It also states that priority should be given to the use of sustainable drainage systems (paragraph 5.7.9). Development in Flood Zone 3 should not be consented unless the sequential and exception tests have been met (paragraph 5.7.12).
- 16.4.2. The Applicant's assessment of flood risk is set out in Volume 3, Chapter 2 of the ES [APP-074]. It is supported by several other documents including Onshore Infrastructure Flood Risk Assessments [APP-124].
- 16.4.3. The Outline Code of Construction Practice (CoCP) [REP9-063] contains measures to minimise the risk of surface water flooding during construction. These include the maintenance of the existing level of flood protection during construction and the use of permeable material for the haul road. The approval of the final detailed CoCP would be secured by Requirement 17 of the DCO.
- 16.4.4. Requirement 13 would provide for the approval of surface water drainage systems for the onshore cable corridor works. Under Requirement 15, a detailed surface water scheme, based on sustainable drainage principles, would need to be submitted for approval for both the HVDC convertor/ HVAC substation and the HVAC booster station. The wording of this

requirement has been amended in the light of discussions with Norfolk County Council (NCC) which is the Local Lead Flood Authority.

- 16.4.5. The ES concludes that, with the implementation of the measures contained in the Outline CoCP and secured through DCO requirements, there would be no significant adverse flood risk impacts during the construction, operation or decommissioning stages. The ES assessments for flood risk have not been challenged by NCC, the Environment Agency or the relevant local authorities.
- 16.4.6. Although NCC raised some flood risk queries in its Local Impact Report [REP1-061], it has confirmed in its Statement of Common Ground (SoCG) with the Applicant [REP9-027] that all relevant matters are now agreed and that detailed matters would be resolved through DCO requirements.
- 16.4.7. Morton on the Hill Parish Council has raised concerns [RR-061] regarding previous instances of flooding in the vicinity of a proposed construction storage compound at Marl Hill. The Applicant has stated that the area referred to would be a storage area that would be in place for approximately one month per phase. We note that drainage measures would need to be implemented as set out in the Outline CoCP and we are satisfied that the construction works are unlikely to result in any additional flood risk issues in this location.
- 16.4.8. The above ground infrastructure would comprise the HVDC convertor/ HVAC substation and the HVAC booster station. These would be located within Flood Zone 1 and therefore do not engage the sequential or exception tests.
- 16.4.9. A small proportion of the onshore cable corridor would be located within Flood Zone 3, primarily where the cable route crosses watercourses. Given the need for the cable route to connect the landfall with the grid connection at Norwich Main substation, we are satisfied that it could not avoid crossing areas within Flood Zone 3. We are also satisfied that the Proposed Development would not increase flood risk elsewhere and that, notwithstanding this, it would provide wider sustainability benefits that would outweigh any flood risk. We consider that both the sequential and exception tests have been met.
- 16.4.10. We conclude that the Proposed Development would not result in any significant flood risk implications and would accord with the relevant provisions of EN-1.

16.5. WASTE MANAGEMENT

- 16.5.1. EN-1 states that the decision-maker should consider the extent to which the Applicant has proposed an effective system for managing waste arising from construction, operation and decommissioning. Factors to be considered include the management of waste and whether adequate steps have been taken to minimise the volume of waste arisings and the volume of waste arisings sent to disposal (except where that is the best overall environmental outcome) (paragraph 5.14.7).

- 16.5.2. EN-1 says that the Applicant should set out arrangements for managing any waste and prepare a Site Waste Management Plan (SWMP) (paragraph 5.14.6). Where necessary, EN-1 states that requirements can be used to ensure that appropriate waste management measures are applied (paragraph 5.14.8).
- 16.5.3. The Applicant has submitted a SWMP [APP-088]. This states that during operation the volume of wastes generated from the routine maintenance of the HVDC convertor/ HVAC substation and HVAC booster station would be minimal. For construction, it sets out the types of waste that would be generated, how waste would be managed, and the methods used to measure and record the quantity of waste generated.
- 16.5.4. The SWMP sets a target to reuse, recycle or recover 70% of overall construction waste generated by the Proposed Development in line with the Waste (England and Wales) Regulations and the Waste Framework Directive. It states that further targets would be set to reduce, reuse or recycle key waste materials where applicable. The performance of the SWMP would be monitored and evaluated at the end of the construction period.
- 16.5.5. The SWMP goes on to state that construction waste would be managed according to the principle of the waste hierarchy which ranks management options according to the best option for the environment. It sets out the methods that would be followed for prevention, preparing for re-use, recycling and disposal.
- 16.5.6. The final SWMP would be included as an appendix to the detailed CoCPs, which would be submitted for approval by the relevant local planning authority through Requirement 17 of the DCO.
- 16.5.7. We have not received any representations that have challenged or objected to the Applicant's waste management proposals.
- 16.5.8. We are satisfied that the approach set out by the Applicant would provide an effective system for dealing with waste arising from the Proposed Development. It would satisfactorily accord with the relevant waste management policies of EN-1.

16.6. WATER ENVIRONMENT

- 16.6.1. EN-1 states that infrastructure development can have adverse effects on the water environment, including groundwater, inland surface water, transitional waters and coastal waters. During the construction, operation and decommissioning phases, it can lead to discharges to water and cause adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants to the water environment.
- 16.6.2. EN-1 also stresses that these effects could lead to adverse impacts on public health or on protected species and habitats and result in surface waters, groundwaters or protected areas failing to meet environmental

objectives established under the Water Framework Directive (WFD)³⁸. It is therefore important that an ES establishes what water resources might be affected as well as the potential impacts on water quality and physical characteristics of the water environment. This should include any impacts on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions.

- 16.6.3. The Applicant has submitted a number of relevant documents comprising a WFD groundwater assessment [APP-123], existing groundwater abstraction licences and SPZs [APP-121], existing discharge consents and permits [APP-122], borehole logs [APP-120], Environment Agency (EA) and Internal Drainage Board watercourses and flood zones [APP-125], existing surface water abstraction licences, discharge consents and pollution incidents [APP-126], a hydrological characterisation [APP-127] and a WFD surface water assessment [APP-128].
- 16.6.4. As confirmed in its SOCG with the Applicant, the Environment Agency considers that the baseline, methodologies and conclusions of the ES are acceptable and that there are no outstanding areas of disagreement [REP1-203]. We also note that Anglian Water found that the Applicant had given due regard to groundwater and source protection [REP1-001]. Although Natural England has some unresolved concerns over the ecological impacts of settlement lagoons and soil storage, these issues have already been addressed in Chapter 14 and we have concluded that they would not weigh against the making of the Order.
- 16.6.5. We asked a number of written questions [PD-008] in relation to potential impacts of horizontal directional drilling on the principal aquifer (Q1.4.3), management of potential bentonite break outs (Q1.4.4), potential hydrogeological impacts on protected areas (Q1.4.5) and watercourse protection during extreme rainfall events (Q1.4.6). We are satisfied that the subsequent revisions to the Outline Code of Construction Practice (CoCP) [REP9-063] and Outline Ecological Management Plan (EMP) [REP9-065] would mitigate any negative impacts. These would be secured by Requirements 10 and 17 of the recommended DCO which commit the undertaker to submit a detailed CoCP and EMP for approval prior to the commencement of any works.
- 16.6.6. Given the above and considering all other matters raised, we conclude that the application documents, together with the answers to our written questions, demonstrate that the Applicant has taken account of the water environment in accordance with EN-1 and we are satisfied that there would be no adverse effects.
- 16.6.7. Having regard to the duties under Regulation 3 of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, we are satisfied that no activities associated with the Proposed Development

³⁸ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

would result in deterioration of surface water status or groundwater status. Granting development consent would be consistent with the duties under Regulation 3.

16.7. CONCLUSION

- 16.7.1. This chapter has discussed four matters which EN-1 and EN-3 indicate ought to be taken into account, namely functional aspects of design; climate change adaptation; flood risk; waste management and water quality.
- 16.7.2. We conclude that the Applicant has taken these matters into account as required by EN-1 and EN-3. Where appropriate, control mechanisms would be secured in the DCO. Granting development consent would be consistent with the duties under Regulation 3 of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.
- 16.7.3. These are not matters which weigh significantly against the Order being made.

17. HABITATS REGULATIONS ASSESSMENT

17.1. INTRODUCTION

- 17.1.1. The Secretary of State (SoS) is the Competent Authority for the purposes of the Habitats Directive³⁹, the Habitats Regulations⁴⁰ and the Offshore Habitats Regulations⁴¹ for applications submitted under the PA2008 regime.
- 17.1.2. This chapter sets out our findings and conclusions in relation to effects on European sites and is intended to assist the SoS in performing his duty under the Habitats Regulations and the Offshore Marine Regulations.
- 17.1.3. Consent for the Proposed Development may only be granted if, having assessed the potential adverse effects it could have on European sites, the Competent Authority considers it passes the relevant tests in the Habitats Regulations.
- 17.1.4. 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 his duties as the Competent Authority. We have sought evidence from the Applicant and the relevant Interested Parties (IP) including Natural England (NE)/ Joint Nature Conservation Committee (JNCC) as the Statutory Nature Conservation Bodies (SNCB), through two rounds of written questions, Rule 17 requests and three Issue Specific Hearings (ISH).
- 17.1.5. The Examining Authority (ExA) produced a Report on the Implications for European Sites (RIES) which compiled, documented and signposted information relevant to the Habitats Regulations Assessment (HRA). This included all relevant information provided in the original application and evidence that was submitted during the Examination by the Applicant and IPs up to Deadline 6 on 8 February 2019 [PD-024].
- 17.1.6. The RIES was issued to ensure that we had correctly understood the relevant factual information and the position of the various parties in relation to the effects of the Proposed Development on European sites. It was published on the Hornsea Three project page of the National Infrastructure Planning website. Consultation on the RIES took place between 21 February 2019 and 14 March 2019.
- 17.1.7. During this time the Applicant [REP7-006], NE [REP7-065] and RSPB [REP7-105] all provided comments whilst the MMO deferred to the views of NE on these matters [REP7-103]. These comments have been taken into account in the drafting of this chapter.

³⁹ *Council Directive 92/43/EEC 1992*

⁴⁰ *Conservation of Habitats and Species Regulations 2017 (SI 2017/1012)*

⁴¹ *Conservation of Offshore Marine Habitats and Species Regulations 2017 (SI 2017/1013)*

17.2. POLICY CONSIDERATIONS

- 17.2.1. The European Union and the UK have obligations for the protection of wild birds and their habitats as agreed under the Ramsar Convention, Bern Convention and Bonn Convention. These obligations, together with more general duties, are met through Directive 2009/147/EC on the conservation of wild birds (the Birds Directive). This requires the identification and classification of Special Protection Areas (SPA).
- 17.2.2. The European Union and the UK also have obligations to conserve a wider range of natural habitats and associated flora and fauna under the Bern Convention and the Convention on Biological Diversity. These obligations are met through Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (the Habitats Directive). This requires the identification and designation of Special Areas of Conservation (SAC) for habitats that are listed in Annex I and species that are listed in Annex II.
- 17.2.3. Together these sites form a pan-European network of protected areas known as the Natura 2000 (N2K) network. Among other things, the provisions require member states to secure conservation measures to ensure that the condition of these sites does not deteriorate and that there is an Appropriate Assessment of any plans or projects likely to have a significant effect on their integrity, either alone or in combination with other plans or projects.
- 17.2.4. In England and Wales, the Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) consolidates earlier legislation and transposes the obligations of Birds Directive and Habitats Directive into domestic legislation (the Habitats Regulations). Irrespective of this transposition, the Directives continue to have a direct effect in law and would prevail in the event of a conflict between their provisions and those of the Habitats Regulations until such time as they become inconsistent with any new UK legislation which is made after the UK has left the European Union.
- 17.2.5. The Conservation of Offshore Marine Habitats and Species Regulations 2017 (SI 2017/1013), commonly referred to as the Offshore Habitats Regulations, was enacted on 30 September 2017. These regulations apply to the UK offshore marine area which covers waters beyond 12nm, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area. This transposes the obligations of the Habitats and Birds Directives to European Offshore marine sites that are either wholly or partly in UK offshore waters. The provisions are broadly the same as those set out in the Habitats Regulations with adjustments for the differing regulatory and administrative context of the offshore environment.
- 17.2.6. The statutory definition of European sites and European marine sites are set out in Regulation 8 of the Habitats Regulations as follows:

- a fully designated Special Area of Conservation (SAC);
- a candidate Special Area of Conservation;
- a Site of Community Importance;
- a site containing either a priority habitat or species that is being consulted upon;
- a fully classified Special Protection Area (SPA); and
- any eligible SCI submitted to the European Union.

17.2.7. Government policy identifies additional sites that should be given the same protection⁴². These comprise:

- any potential SPA;
- any possible or proposed SAC;
- any listed or proposed Ramsar site; and
- any sites required for compensatory measures.

17.2.8. Ramsar sites comprise wetlands of international importance which are listed under the Ramsar Convention which resulted from the Convention on Wetlands of International Importance held in Ramsar, Iran in 1971. The main aim of the convention is the conservation and wise use of all wetlands as a contribution towards achieving global sustainable development goals.

17.2.9. Sites required for compensatory measures are areas that may be necessary where there is an adverse effect on integrity, no alternative solutions and imperative reasons of overriding public interest. In such cases the SoS must secure compensatory measures to ensure that the overall coherence of the N2K network is preserved. This would require the use and consequent designation of compensatory land outside the existing protected areas network. Such areas are protected until such time they are either classified or designated.

17.2.10. In most cases a European site will have more than one designation because of the differing legislative regimes and due to the fact that the majority are also designated as Sites of Special Scientific Interest (SSSI).

17.2.11. The need to have regard to the Habitats Directive is highlighted in Section 4.3 of EN-1. Articles 6(3) and 6(4) of the Habitats Directive indicate that the assessment of plans or projects should comprise five main stages:

- Screening;
- Appropriate Assessment;
- Integrity Test;
- Alternative Solutions; and
- Imperative Reasons of Overriding Public Interest

Screening

17.2.12. This test is carried out to determine whether a plan or project would have a likely significant effect on a European site either alone or in

⁴² Paragraph 176 of the National Planning Policy Framework 2019

combination with other plans or projects and should thus be subject to an Appropriate Assessment. There are two ways in which it can be triggered. The first being a finding of a likely significant effect alone and the second being a finding of a likely significant effect in combination with other plans or projects. The second trigger is only reached after it has been determined that there would be no effect alone.

- 17.2.13. Case law⁴³ has established that a likely significant effect should be interpreted as a possible significant effect whose occurrence cannot be ruled out on the basis of objective information. In practical terms a significant effect is one that would undermine the conservation objectives of a European site, based on a causal link between the plan or project and the qualifying features of a site. Case law⁴⁴ has established that such threats should be credible. Further case law⁴⁵ has also established that it is no longer permissible to take account of measures intended to avoid or reduce the harmful effects on a European site at this stage and that such measures should now be taken into account at the Appropriate Assessment stage.

Appropriate Assessment

- 17.2.14. This step is applied to plans or projects that are not related to site management which would have a likely significant effect, either alone or in combination, on its qualifying features. It should consider all aspects of a plan or project which can, by themselves or in combination with other plans or projects, affect the conservation objectives of a site that are not directly related to its management. It should take into account the conservation objectives for the site as well as the best available scientific evidence. It should consider the implications for each qualifying feature and have regard to their existing conservation status and condition. Information should be provided that is reasonably necessary to undertake this assessment.
- 17.2.15. In general terms this means that an assessment should be technically sound, based on up-to-date information and reach reasoned conclusions in a rigorous and robust manner. Case law⁴⁶ has established that conclusions should remove all reasonable scientific doubt as to the potential effect of the plan or project on the integrity of the qualifying features of a site.

⁴³ Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris, 7 September 2004, C-127/02

⁴⁴ Peter Charles Boggis and Easton Bavants Conservation v Natural England and Waveney District Council, High Court of Justice Court of Appeal case C1/2009/0041/QBACF Citation No [2009] EWCA Civ. 1061 20th October 2009

⁴⁵ People Over Wind, Peter Sweetman v Coillte Teoranta, 12 April 2018, C-323/17

⁴⁶ Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris, 7 September 2004, C-127/02

Integrity Test

- 17.2.16. Neither the Directive nor the Regulations define what is meant by the integrity of a site. However, paragraph 20 of Circular 06/2005 defines integrity as *"the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified"*. EC guidance⁴⁷ further refines this to mean *"the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated"*.
- 17.2.17. In order to avoid an adverse effect on integrity, the favourable conservation status of a habitat or species must either be maintained or not further degraded or impeded from achieving a favourable conservation status. The integrity test embodies the precautionary principle and the Competent Authority should only seek to establish that there would be no harm to a site. No reasonable scientific doubt should remain as to the absence of such effects. However, this test does not require absolute certainty⁴⁸ and decisions are often necessary on the basis of imperfect evidence.
- 17.2.18. Integrity should not merely be assessed in terms of the proportion of habitat that would be lost but rather how such a loss would affect the long term ecological structure and function of the site. The test should have regard to mitigation measures as well as any conditions or restrictions that are capable of reducing adverse effects to a de minimus level. Short-lived effects that do not lead to significant long term, adverse effects should be taken into account.

Alternative Solutions

- 17.2.19. This step is applied if an adverse effect on the integrity of a site cannot be ruled out beyond reasonable scientific doubt when there are credible reasons for believing that there would be imperative reasons of overriding public interest (IRoPI) and that compensatory measures would also be available. The test does not just relate to whether or not alternatives are present but whether there is a complete solution to the issue that the plan or project is seeking to address. In this case there is a need to increase offshore renewable energy generation in response to a Government target to reduce carbon emissions. The nature, scale, duration, timing and potential delivery by alternative operators are all within scope in such an assessment. It is for the Competent Authority to satisfy itself that there are no alternative solutions, and this should go beyond the case that is made by an Applicant.
- 17.2.20. An alternative solution must either have no effect or a reduced effect on the integrity of a European site for it to be viable. This conclusion should

⁴⁷ Commission Notice - Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC

⁴⁸ WWF-UK and RSPB vs SoS for Scotland et al. 1999. CMLR [1999] Env LR 632.

be based on ecological criteria and sound scientific judgement rather than subjective opinion. In coming to a view, the Competent Authority should consult with the relevant statutory nature conservation body. Alternative solutions should be technically, legally and financially feasible but should not be ruled out simply on the grounds that it would be more inconvenient and/or incur additional cost.

Imperative Reasons of Overriding Public Interest

- 17.2.21. This test is applied if an adverse effect on the integrity of a site cannot be ruled out and there are no viable alternative solutions to the issue that the plan or project is seeking to address. If realistic compensatory measures are not available then the plan or project cannot go ahead even if there are IROPI under the terms of Article 6 of the Habitats Directive.
- 17.2.22. If the plan or project would have an adverse effect on the integrity of a priority habitat or species, as defined under Annex 1 and Annex 2 of the Habitats Directive, then a stricter IROPI test applies and consent can only be granted for reasons relating to:
- human health, public safety, or beneficial consequences of primary importance to the environment; or
 - other imperative reasons of overriding public interest agreed by the European Commission.
- 17.2.23. The Competent Authority must be satisfied that the plan or project is required, indispensable or essential and that clear public benefits would be derived. These benefits must demonstrably outweigh the potential harm that would be caused to a site and should be long lasting rather than just short term. Plans and projects that are consistent with National Policy Statements have an inherent and substantial public interest benefit but should nevertheless still be tested.

17.3. PROJECT LOCATION

- 17.3.1. The array area is approximately 696km² and would be located approximately 121km northeast of the Norfolk coast and 160km east of the Yorkshire coast, as shown in Figure 1.1 of the Environmental Statement (ES) [APP-055]. The array area would lie to the east of Hornsea Project One and Hornsea Project Two offshore wind farms (OWF). It would have a maximum of 300 turbines together with associated infrastructure.
- 17.3.2. The offshore cable corridor would be approximately 163km in length and 1.5km wide. It would extend from the Norfolk coast, near Weybourne, in a north-easterly direction to the western and southern boundary of the array area. There would be up to six export cable circuits buried to a depth of between 1-2m [APP-058].
- 17.3.3. The onshore cable corridor would be approximately 53km in length and up to 80m wide. It would extend in a southerly direction to the Norwich Main National Grid substation situated to the south of Norwich. There

would be up to 6 onshore export cable circuits buried to a depth of approximately 1.2m in up to six trenches [APP-058].

- 17.3.4. The spatial relationship between the Order Limits of the Proposed Development and European sites is shown in Figures 3.1 and 3.2 of the Report to Inform the Appropriate Assessment (RIAA) [APP-051].

17.4. ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

- 17.4.1. The Proposed Development is not connected with or necessary to the management for nature conservation of any of the European sites considered in the Applicant's assessment [APP-051]. Consequently, the Likely Significant Effect (LSE) on relevant qualifying features now falls to be considered. A screening assessment is required to explore whether there is a risk that the conservation objectives of a site would be undermined.
- 17.4.2. NE raised concerns about the staged approach that the Applicant took in determining LSE whereby interactions that are deemed to not have a significant LSE alone were not carried forward into an in combination assessment of combined residual effects [REP1-213]. NE went on to state that it was consequently unable to confirm that a complete list of features and European sites had been captured in the RIAA [APP-052]. However, it did identify a number of qualifying features for which it had outstanding concerns at Deadline 7 which are discussed below [REP7-065].
- 17.4.3. We agree that there is a need to undertake in combination assessment for effects that are not significant alone but, when combined with other plans or projects, could add up to a significant overall effect. Bearing this in mind, we sought justification of the approach in the second round of written questions in order to establish that there would be no unaccounted in combination effects (Q2.2.34 [PD-012]). We draw the following conclusions based on the Applicant's Deadline 4 submission [REP4-081] and NE's Deadline 7 submission [REP7-065].

Greater Wash SPA and North Norfolk Coast SPA

- 17.4.4. There is no impact pathway for little tern because the maximum alongshore foraging extent of birds from colonies within the North Norfolk Coast SPA is 7km east and west with a seaward extent up to a maximum distance of 2.13km [REP3-019]. As there would be no connectivity with the export cable corridor there can be no in combination effect. This was also identified in the screening matrices provided at Deadline 1 [REP1-187].
- 17.4.5. There are two Sandwich tern breeding colonies on the north Norfolk coast at Scolt Head and Blakeney Point. The predicted usage of offshore areas indicates that there would be no connectivity with the export cable route at the Scolt Head colony and only minimal connectivity with the colony at Blakeney Point [REP3-020].

- 17.4.6. Despite low usage associated with the Blakeney colony, this species was screened in on a precautionary basis as a qualifying feature of the Greater Wash SPA and the North Norfolk Coast SPA [REP4-081]. As there would be no other relevant projects that would act in combination with the Proposed Development there can be no in combination effects, as highlighted in the RIAA [APP-051].
- 17.4.7. Common tern breed in the same colonies as Sandwich tern and the conclusions in relation to connectivity and patterns of usage are similar. That is to say, that the export cable corridor is highly unlikely to represent an important foraging area for this species with areas of higher usage being located much closer to Blakeney Point [REP3-020].
- 17.4.8. The Applicant considers that there would be no potential for LSE on the common tern feature of either the Greater Wash SPA or the North Norfolk Coast SPA and therefore concludes that there would be no potential for an in combination effect [REP4-081].
- 17.4.9. We do not agree with this conclusion because whilst it might not be an important feeding area, connectivity is nevertheless present and consequently the impact would not be de minimus. However, as there are no other projects that could act in combination with the Proposed Development, consequently there can be no in combination effects.
- 17.4.10. NE has also disputed the conclusion that there was no LSE in the screening matrices of the RIES [PD-024] for the little gull qualifying feature of the Greater Wash SPA [REP7-065]. It highlighted a potential impact pathway because this species was included in the migratory collision risk modelling [APP-109]. NE agreed at Deadline 1 [REP1-212] that the migratory front approach was appropriate in response to one of our written questions (Q1.2.61 [PD-008]).
- 17.4.11. We note that this species shows a low vulnerability to collision with wind turbines [REP4-042] and that there would be a collision risk of less than one individual per annum resulting from the Proposed Development [APP-109]. We consider that this indicates that there would be no LSE from the project alone and that it is highly unlikely that there would be any significant in combination effects.

Farne Islands SPA, Coquet Island SPA and Forth Islands SPA

- 17.4.12. We note that the array and export cable corridor would be beyond the maximum foraging distance of each of the breeding auk species associated with the Farne Islands SPA, Coquet Island SPA and Forth Islands SPA. Consequently, any in combination effects would only arise during the non-breeding season [REP4-081].
- 17.4.13. The potential displacement impacts on the guillemot, razorbill and puffin qualifying features were assessed and apportioned to the qualifying populations as a proportional contribution to the relevant Biologically Defined Minimum Population Scale of each species, as set out in Furness 2015 [REP4-036].

- 17.4.14. The assessment demonstrates that there would be no mortality effect from displacement, either alone or in combination, for any auk species associated with these sites which would exceed the 1% baseline mortality of each SPA population [REP4-081].
- 17.4.15. More generally, NE considers barrier effects (and therefore LSE) cannot be ruled out for features at Coquet Island and Farne Islands SPAs as well as potential kittiwake collision mortality for kittiwake at the Farne Islands SPA [REP7-065]. However, as these concerns are not supported by empirical evidence, we give them limited weight.
- 17.4.16. Whilst NE does not consider the Applicant's approach to identifying LSE is robust and may have led to sites not being considered, we do not share this view. This is because the criteria listed in Table 5.1 in Annex 1 of the RIAA [APP-052] are based on a pragmatic range of attributes that account for mobile species at different times of the year. Furthermore, we note the broad geographic range of potentially relevant sites that these criteria identified in Figures 5.1 and 5.2 of the same document.
- 17.4.17. We also consider that NE's position cannot be substantiated given its admission that it was unable to conduct its own screening exercise [REP1-212] and the fact that no additional sites, other than those listed in Table 3.1 of the RIES [PD-024], have been suggested by any IP.
- 17.4.18. Given the above, and in the absence of substantiated evidence to the contrary, we conclude that there would be no significant in combination effects to justify an Appropriate Assessment of potential impacts on the additional qualifying features for which NE has raised concerns.

Ornithological Baseline Characterisation

- 17.4.19. One of the issues that was a persistent source of contention throughout the Examination was the adequacy of the ornithological baseline survey data. Amongst other matters, NE contends that it is not possible to rule out potential LSE or adverse effects on integrity (AEoI) because the baseline is incomplete.
- 17.4.20. Relevant representations from NE [RR-097], RSPB [RR-113] and the MMO [RR-085] consider that an appropriate, site specific ornithological baseline has not been established. The Applicant undertook a site specific digital aerial survey (DAS) during 2016 and 2017 resulting in twenty consecutive months of data. Only one year of data were collected between December and March.
- 17.4.21. NE contends that a minimum of two years of ornithological survey data are required because of variability in the numbers of birds that can typically be present in offshore areas between different years. It illustrates this point by highlighting the fact that a kittiwake density of 2.73 birds/ km² were observed in April in the first year of the survey whilst only 0.22 birds/ km² were observed in April of the second year [APP-110].

- 17.4.22. NE points out that by not capturing any of the inter-annual variability between December and March there is a significant risk that the abundance of individuals is either under or over-estimated and consequently there is a higher level of scientific uncertainty around any of the conclusions that are reached concerning the impacts on offshore bird populations [REP1-212]. It maintains that it is unable to come to any conclusions regarding ornithological impacts that rely on these data and that it cannot consequently rule out an adverse effect on the qualifying features of European sites [REP1-211].
- 17.4.23. Taking the above example, NE points out that if only data from one year is used then predicted turbine collisions would be around 12 times higher in the first year compared to the second year for the month of April. It maintains that such inter-annual variability needs to be incorporated into the assessment to give a more accurate representation of potential risk [REP1-212].
- 17.4.24. The Applicant has sought to address this issue by incorporating information from historical boat-based survey data collected at various spatial and temporal scales across the Hornsea Zone Study Area over the period 2010 to 2013 [REP1-211]. These were based on standard survey methodologies that have previously been used as the basis for the designation of marine SPAs [REP10-045].
- 17.4.25. The Applicant highlights the fact that the above comparison was during the breeding season when inter-annual variability is typically greater than at other times of the year. The Applicant goes on to point out that the months for which there is only one year of survey data (December to March) are in the non-breeding season for all but one of the species likely to be affected by the Proposed Development (ie guillemot) [REP1-141 and REP2-005].
- 17.4.26. We note that the likely inter-annual variability for this period has been subject to sensitivity testing [REP1-141] by comparing boat-based data from the wider Hornsea zone with the subset of overlapping data that was used to inform the conclusions of the ES [APP-065] and the RIAA [APP-051]. The Applicant has concluded that the differences in inter-annual variation do not affect the impact assessment conclusions.
- 17.4.27. However, this conclusion is only valid insofar as it applies to the inter-annual variation of boat-based observations because different sampling methodologies apply to the DAS data. Consequently, this does not test the sensitivity of the impact assessment conclusions in relation to the missing DAS data.
- 17.4.28. Additionally, we note that the boat-based surveys were conducted between March 2010 and February 2013. Consequently, they do not reflect more recent patterns in the distribution and abundance of species. The different methodologies also preclude combining data from different survey platforms because there is no way of knowing whether the temporal change between months in different years is the product of the different sampling techniques or a genuine change in species abundance.

- 17.4.29. Given the above, we conclude that any impacts that are dependent on the analysis of baseline ornithological data between December and March have an increased level of uncertainty and should consequently be treated in a more precautionary manner. Our determination of potential LSE and AEoI has been carried out on this basis. As noted previously, the integrity test does not require absolute certainty⁴⁹ and decisions are often necessary on the basis of imperfect evidence.
- 17.4.30. NE and RSPB have also raised concerns with the level of survey coverage in the months when data were collected. This is in relation to the accuracy of the density estimates used in the collision risk modelling [REP1-211, REP1-212 and REP1-111]. This comprised a series of monthly strip transects that were captured using a survey aircraft that was equipped with four high definition cameras with a 2cm resolution. Each camera sampled a strip that was 125m wide and separated from the next camera by approximately 25m. This provided a combined, sampled width of 500m for each strip transect. Data from two of the four cameras was processed which represented 10% coverage of the surveyed area [APP-107].
- 17.4.31. NE contends that this level of coverage cannot be considered to be sufficient for baseline characterisation, even if it is based on a standard sampling approach, because the abundance and distribution of birds is site specific. It contends that a greater degree of precision could have been achieved if the data from all four cameras had been processed. It noted that the variability of the full and partial dataset had not been characterised despite initial assurances by the Applicant that the 10% coverage would be sufficient for achieving a coefficient of variation (CV) of 16% for bird abundance estimates [REP1-211].
- 17.4.32. The Applicant maintains that the precision obtained from DAS is sufficient to inform the assessments conducted in both the ES [APP-065] and the RIAA [APP-051]. The Applicant provided additional information during the course of the Examination in response to a question we asked in the second round of written questions (Q2.2.3 [PD-012]). This demonstrated that, whilst the CV values are highly variable, the ones obtained for this project are either similar or better than two comparative OWF projects [REP4-096]. The analysis was subsequently extended to additional OWFs and this finding remained unaltered [REP7-032].
- 17.4.33. Given the above, we conclude that the variation in observations for the months where there are two years of data is within acceptable limits and is sufficiently robust to determine potential LSE and AEoI.

Screening conclusion

- 17.4.34. Annex 1 of the RIES [PD-024] lists the European sites and features for which the Applicant identified LSE. The screening matrices in Annex 3 of the RIES summarise our understanding of the Applicant's position and

⁴⁹ WWF-UK and RSPB vs SoS for Scotland et al. 1999. CMLR [1999] Env LR 632.

that of the IPs up to Deadline 6 of the Examination. We have considered all relevant subsequent representations.

- 17.4.35. This includes NE's concerns in relation to potential impacts on Forth Island SPA [REP1-213]. However, as these concerns are not shared by Scottish Natural Heritage [AS-015], who are responsible for the site, we give them little weight.
- 17.4.36. Given the above, and in the absence of any credible evidence to the contrary, we conclude that the Applicant has correctly identified all of the relevant European sites and qualifying features in the screening exercise and has undertaken a robust assessment.
- 17.4.37. The Panel therefore recommends to the SoS that the correct potential impacts and relevant features for which there is an LSE are as presented in Table 3.1 of the RIES [PD-024].

17.5. ASSESSMENT OF ADVERSE EFFECTS ON INTEGRITY

- 17.5.1. Table 4.1 of the RIES [PD-024] sets out those sites for which the Applicant has considered a potential AEoI. The Applicant's conclusions were disputed by the IPs in relation to the following sites:

- North Norfolk Sandbanks and Saturn Reef SAC
- The Wash and North Norfolk Coast SAC
- The Southern North Sea SAC
- Coquet Island SPA
- Farne Islands SPA
- Flamborough and Filey Coast SPA
- Greater Wash SPA
- North Norfolk Coast SPA/Ramsar Site
- River Wensum SAC

Summary of potential impacts

- 17.5.2. Table 3.2 of the RIAA [APP-051] identifies a number of potential offshore impacts on principal receptor groups. Accidental pollution is common to all phases and receptors. Additional impacts are as follows with decommissioning assumed to be similar to construction impacts (C = construction and O = operation):

Benthic Habitats

- temporary habitat loss and disturbance (C+O);
- permanent habitat loss (O);
- temporary increased suspended sediments (C);
- colonisation of hard structures by invasive species (O); and
- changes in physical processes around hard structures (O).

Marine Mammals

- increased underwater noise from construction (C);
- increased underwater noise from operation (O);
- underwater noise from vessel movements (C+O);

- increased vessel collision risk (C+O);
- temporary increased suspended sediments (C); and
- decreased prey availability from food web changes (C+O).

Seabirds

- displacement from feeding and roosting areas (C+O);
- decreased prey availability from food web changes (C);
- increased mortality from turbine collision (O); and
- barrier to movement resulting in lower survivorship (O).

17.5.3. Table 3.3 of the RIAA [APP-051] identifies the following onshore impacts on the principal receptor groups. Accidental release of contaminants is common to all phases and receptors. Additional impacts are as follows:

Habitats

- temporary habitat loss from onshore substation and HVAC booster station (C);
- temporary disturbance or damage to habitats from the installation of the onshore infrastructure (C); and
- temporary disturbance or damage to habitats from operation and maintenance activities (O).

Species

- temporary habitat loss from onshore substation and HVAC booster station (C);
- temporary disturbance or harm to individuals from the installation of the onshore infrastructure (C);
- habitat fragmentation associated with cable trenching affecting otters and bats (C); and
- temporary disturbance or harm to individuals from operation and maintenance activities (O).

17.5.4. The Applicant maintains that there would be no AEoI from these impacts and has relied upon mitigation measures as set out in Tables 4.5 to 4.8 of the RIAA [APP-051]. These would be delivered through the following mechanisms:

- Outline Code of Construction Practice (CoCP) [REP9-063], as secured in Requirement 17 of the recommended DCO which commits the undertaker to submit a detailed CoCP for approval prior to the commencement of any works;
- Outline Ecological Management Plan (EMP) [REP9-065], as secured in Requirement 10 of the recommended DCO which commits the undertaker to submit a detailed EMP for approval prior to the commencement of any works;
- Outline Landscape Plan (LP) [REP9-060], as secured in Requirement 8 of the recommended DCO which commits the undertaker to submit a detailed LP for approval prior to the commencement of any works;
- In-Principle Monitoring Plan [REP9-066], as secured by conditions 17(1) of the generation assets DML and 18(1) of the transmission assets DML which commit the undertaker to developing and securing

approval of detailed monitoring plans prior to the commencement of works;

- Outline Cable Specification and Installation Plan (CSIP) [REP7-021], as secured by conditions 13(1)(h) of the generation assets DML and 14(1)(h) of the transmission assets DML which commit the undertaker to develop and secure detailed plans for site clearance and cable installation prior to the commencement of any works; and
- Site Integrity Plan (SIP) [REP4-066], as secured by conditions 13(5) of the generation assets DML and 14(5) of the transmission assets DML which commit the undertaker to developing and securing approval of a Site Integrity Plan prior to the commencement of any pile-driven works.

17.5.5. A number of post consent mitigation measures are also directly secured as follows:

- Marine Mammal Mitigation Protocol (MMMP), as secured by conditions 13(1)(g) of the generation assets Deemed Marine Licence (DML) and 14(1)(g) of the transmission assets DML which commit the undertaker to develop and secure approval of marine mammal mitigation in the event that pile-driven foundations are used;
- Offshore Project Management Plan, as secured by conditions 13(1)(d) of the generation assets DML and 14(1)(d) of the transmission assets DML which commit the undertaker to developing, among other things, a biosecurity plan, marine pollution contingency plan and a code of conduct for vessel operators prior to the commencement of any works;
- Offshore Pre-Construction Surveys, as secured by conditions 13(1)(f) of the generation assets DML and 14(1)(f) of the transmission assets DML which commit the undertaker to a number of surveys prior to the commencement of any works;
- Scour Protection Management Plan, as secured by conditions 13(1)(e) of the generation assets DML and 14(1)(e) of the transmission assets DML which commit the undertaker to developing and securing approval of a plan prior to the commencement of any works; and
- Offshore Operations and Maintenance Plan, as secured by conditions 13(1)(i) of the generation assets DML and 14(1)(i) of the transmission assets DML which commit the undertaker to developing and securing approval of a plan prior to the commencement of any works.

17.5.6. However, the conclusion that there would not be any AEoI is not shared by NE, TWT, WDC or RSPB. A range of matters relating to the determination of potential impacts on European sites have been the subject of extensive discussion during the course of the Examination. These matters (and our conclusions on them) will now be considered in greater detail in the following paragraphs.

Collision Risk Modelling

17.5.7. It is an established fact that birds can collide with wind turbine rotor blades and that vulnerability to collision related mortality varies between species (Wade et al. 2016) [REP4-042]. Collision risk modelling was consequently undertaken to estimate the annual mortality rate for

commonly occurring species and migratory species. The commonly occurring species were selected on the basis that they are vulnerable to collision risk and that regionally important populations would be coincident with the array area [APP-109]. They are as follows:

- Gannet;
- Kittiwake;
- Herring gull⁵⁰;
- Black-backed gull; and
- Lesser black-backed gull.

- 17.5.8. A suite of migratory waterbirds and seabirds were also identified on the basis of varying information that NE challenged [REP1-211]. The Applicant maintains that the selected species are consistent with other projects [REP2-004]. Despite a lack of clarity in relation to the selection criteria [APP-109], we note that NE “do not consider it very likely” that further species or sites would be identified [REP1-211]. We also note that NE is unable to suggest any additional species or sites that might be affected. Consequently, we do not find that this issue significantly undermines the collision risk impact conclusions of either the ES [APP-109] or the RIAA [APP-053].
- 17.5.9. The modelling was undertaken using the Band (2012) [REP3-021] collision risk model (CRM). Although a newer stochastic version of the model is now available, this was not the case until after submission of the Application and it is common ground that this version would not be used to assess the impacts of the Proposed Development [REP3-075].
- 17.5.10. There are two approaches to calculating collision risk in Band (2012) [REP3-021] which are commonly referred to as the “basic” model and the “extended” model. The former assumes a uniform distribution of flights through the turbine rotor blades which equates to the same collision risk across the whole of the swept area. The latter assumes a non-uniform distribution of flights through the turbine blades which equates to a variable collision risk which is skewed towards the lower quadrants of the swept area [REP3-021].
- 17.5.11. The basic and extended models have different options which are linked to the use of different flight height data. Options 2 and 3 typically use generic data from Johnston et al. (2014) [REP6-030] whereas Options 1 and 4 use data derived from site-specific surveys. Options 1 and 2 utilize the basic model and consequently assume a uniform collision risk whilst Options 3 and 4 utilize the extended model and consequently assume a more restricted collision risk.
- 17.5.12. Options 3 and 4 can reduce the number of bird rotor transits by more than 50% for some species which leads to a significant reduction in the associated collision risk estimate. However, when supported by suitably

⁵⁰ Herring gull was initially screened out but then included in a subsequent CRM analysis [REP1-189]

robust data, these options will often lead to a more biologically realistic parameterisation [REP3-021].

- 17.5.13. The Applicant views Option 1 and Option 2 as overly precautionary and used Option 3 as the basis for the determination of alone and in combination effects in the ES [APP-109] and the RIAA [APP-051]. NE does not agree with the use of Option 3 of the extended model because it is contrary to existing SNCB guidance [REP7-068]. It maintains that Option 2 of the basic model should be used for all species and this position remained unchanged throughout the Examination.
- 17.5.14. Similarly, a number of other issues relating to model parameterisation were highlighted in Relevant Representations from NE [RR-097] and RSPB [RR-113]. These relate to flight height, flight speed, avoidance rates and nocturnal activity factors. The definition of biological seasons, on the basis of different species phenology, and the apportioning of collision mortality were also raised as was the adequacy of an associated population viability analysis. These will be considered in greater detail below.
- 17.5.15. NE raised concerns over whether the RIES considered all of the CRM outputs [REP7-065]. For the avoidance of doubt, we note that the CRM was run with three different parameterisations that the Applicant considered valid. The first was in the original application [APP-109]. The second was submitted at Deadline 1 [REP1-188] and the third was submitted at Deadline 6 [REP6-042]. Two other parameterisations have also been submitted. The first was at Deadline 4 [REP4-049] and the second was at Deadline 6 [REP6-043]. Both of these have been run according to variations on the preferred SNCB parameterisation. A mixed parameterisation flowing from the considerations set out below was also submitted at Deadline 9 to inform our assessment [REP9-047].

Flight heights

- 17.5.16. The risk of collision is directly related to the size of the rotor blades and the proportion of birds flying between the top and the bottom of the rotor sweep. This is termed potential collision height (PCH). The proportion of observed birds flying at PCH within a proposed array area is one of the main data inputs for the CRM. Consequently, incomplete baseline monitoring can have a significant effect on collision risk estimates, particularly when there is significant inter-annual variation in bird density.
- 17.5.17. The proportion of birds at PCH can either be set through the use of generic flight heights and/ or observed flight heights if robust, site specific survey data are present. NE consider the baseline data to be incomplete not only because of its limited duration but also because flight height data could not be derived from the DAS [REP4-130].
- 17.5.18. The original CRM, as presented in the ES [APP-109], used boat-based survey data from Hornsea Project 1 and Hornsea Project 2 to parameterise Option 1 as well as the generic values from Johnston et al.

(2014) [REP6-030] to parameterise Option 2 and Option 3. Only boat-based data points that overlapped with the survey area for the Proposed Development and its 4km buffer were selected. These surveys recorded flight heights within 5m bands. The 35m band (32.5m – 37.5m) was then used to calculate the number of each species at PCH. This was combined with the 30m band (27.5m - 32.5m) to provide a further, more precautionary estimate of the number of individuals at PCH. The values that were derived and associated sample sizes are shown in Table 1 below.

Table 1: Number of birds at potential collision height (PCH)

Species	Sample Size	35m Band	27.5m + 35m Bands
Gannet	142	1.41	4.23
Kittiwake	510	0.78	1.76
Lesser black-backed gull	123	9.76	22.76
Great black-backed gull	177	7.34	19.21

- 17.5.19. NE questioned whether it was appropriate to use boat-based height data in conjunction with density data derived from aerial surveys [REP1-211]. This concern was based on a study by Johnston and Cook (2016) [REP6-021] which showed that different flight height distributions were associated with different survey platforms. Whilst the boat-based surveys underestimated the flight height of gulls and kittiwake at lower densities, when compared with digital aerial surveys, it is clear that the distributions converge above 20m.
- 17.5.20. Consequently, there is a high degree of similarity in flight height distribution between survey platforms for species flying at PCH. Whilst this was not the case for gannet, the difference in relative density between the different survey platforms was small and therefore unlikely to lead to substantial differences in collision risk.
- 17.5.21. Whilst the authors state that flight height distributions may not be transferable across platforms when using the extended model, this point is not further elaborated. They simply state that there would be a risk of over-estimating collision risk when flight height is derived from DAS and used in conjunction with density data from boat-based surveys. As the opposite applies and given the similarity in flight height distribution at the proposed PCH, this evidence does not provide a suitably robust

justification for the use of a single survey platform or the exclusion of the boat-based flight height observations in this particular instance.

- 17.5.22. The dispute was resolved in previous examinations by using a wider height range for kittiwake which incorporated the 35m and 30m height bands [REP2-004]. However, this approach was not accepted by NE in this instance and further concerns were raised over the sample size and boat-based observer accuracy [REP1-211]. The Applicant attempted to demonstrate that the flight heights recorded during boat-based surveys were accurate and “*representative of the flight behaviour*” of birds in the proposed array area through an aerial LiDAR survey [REP2-017]. However, in our view the restricted temporal survey effort, resulting in the measurement of just 20 gannet and 34 kittiwake, was insufficient to validate the boat-based observations.
- 17.5.23. The standing advice from the SNCBs is that it is not appropriate to use the extended model to predict collisions for either kittiwake or gannet [REP7-068]. This is because Cook et al. (2014) [REP4-037] note that there are significant differences between the observed proportion of birds at PCH and the proportion predicted to be at PCH from generic distributions of flight heights, with the latter generally lower than the former. However, this is not a justification against the use of empirical height data as it merely points to an inconsistency with an established practice for these species.
- 17.5.24. The same flight height data, ie boat based observations and generic data from Johnston et al. (2014) [REP4-130], were used in the second [REP1-188] and third [REP6-042] iterations of the CRM that were based on the Applicant’s preferred parameterisation. The generic data were also used in the first [REP4-049] and second [REP6-043] iteration of the CRM that were based on NE’s preferred parameterisation.
- 17.5.25. Given the above, we conclude that there the use of revised flight heights is sufficiently justified on the basis of the evidence that has been submitted and we favour the Applicant’s recommendation.

Flight speed

- 17.5.26. Flight speed is typically parameterised with data derived from Pennycuik (1987, 1997) [REP4-048 and REP6-029] and Alerstam et al. (2007) [REP6-033]. The first study measured the flight speed of seabirds using an ornithodolite on the Island of Foula, near Shetland. Observations were made during the breeding season between the end of June and beginning of July. Flight speeds were recorded for 18 kittiwake, 25 great black-backed gull and 32 gannet tracks. The second study measured the flight speed of seabirds using radar at five sites in southern Sweden and at various locations during two Arctic expeditions. Neither flight speeds nor sample sizes for individual species are given in this paper.
- 17.5.27. The Applicant contrasted these results with ones from a more recent study by Skov et al. (2018) [REP1-149] in a Deadline 1 submission [REP1-188]. This study measured the flight speed of seabirds using laser

range finders at Thanet Offshore Wind Farm (OWF), near Foreness Point. Observations were made each month between July 2014 and April 2016. Flight speeds were recorded for 32 gannet, 2 kittiwake, 11 lesser black-backed gull and 4 great black-backed gull tracks. The Applicant cites large sample sizes for each species in Skov et al. (2018) but it was clarified at Issue Specific Hearing (ISH) 7 [EV-024] that each track related to an individual bird which was measured multiple times. Consequently, only a limited range of individual behaviours and physiology was sampled.

- 17.5.28. The empirical observations of Skov et al. (2018) show consistently lower flight speeds across all species compared with those recommended by the SNCBs (13.3 m/ sec vs 14.9 m/ sec for gannet, 8.7 m/ sec vs 13.1 m/ sec for kittiwake and 9.8 m/ sec for the gulls). Appendix 10 of Skov et al. (2018) demonstrates that the CRM flux factor⁵¹ linearly decreases with decreasing flight speed and that the model is sensitive to changes in flight speed which is consistent with the findings of Masden (2015) [REP4-041]. The Applicant is of the opinion that Skov et al. (2018) now *"provides the best available evidence on flight speeds for collision risk modelling"* [REP1-188].
- 17.5.29. NE does not accept this to be the case because the results are based on a single site outside the breeding season [REP3-075]. The Applicant highlighted Figure 3.4 of Skov et al. (2018) which appeared to suggest consecutive monthly survey effort between July 2014 and April 2016. However, NE points out that the majority of the rangefinder track samples, from which flight speeds were derived, were actually taken outside the breeding season.
- 17.5.30. NE goes on to highlight the fact that, in any event, no gannet or kittiwake breeding colonies are within foraging range of the Thanet array [REP7-064]. Given that the sampling in this study is restricted in its temporal and geographic extent it is unlikely that sufficient variation in trait based behaviour has been captured to justify using lower flight speed at this time.
- 17.5.31. The revised flight speeds from Skov et al. (2018) were used in the second [REP1-188] and third [REP6-042] iterations of the CRM that were based on the Applicant's preferred parameterisation. The revised flight speeds were not used in either the first [REP4-049] or second [REP6-043] iteration of the CRM that were based on NE's preferred parameterisation where flight speeds derived from Alerstam et al. (2007) and Pennycuik (1987, 1997) continued to be used.
- 17.5.32. Given the above, we conclude that the use of revised flight speeds is not sufficiently justified on the basis of the evidence that has been submitted and we favour the SNCB recommendation.

⁵¹ The flux factor is the number of birds passing through a rotor sweep in a unit of time

Avoidance rates

- 17.5.33. Avoidance rates (AR) have typically been derived from an empirical review by Cook et al. (2014) [REP4-037] who identified a total of nine OWF sites where observational data were of sufficient quality to estimate robust avoidance rates for CRM use. Observations were made using a combination of radar and laser range finder. The SNCBs published a joint response on how the results should be applied in the offshore wind industry (JNCC et al. 2014) [REP7-068]. It endorses the avoidance rates for all species except kittiwake. This is because the classification of the avoidance behaviour as being in the "*small gull*" category is disputed. Consequently, it is recommended that the AR for the basic Band model is 0.989 ("*all gull*") and not 0.992 ("*small gull*").
- 17.5.34. The Applicant used the recommended AR parameterisation for the first iteration of the CRM but not for subsequent iterations because of the changing evidence base. In the second iteration the Applicant relied upon Skov et al. (2018). However, a review of this work was subsequently published by Bowgen and Cook (2018) [REP4-035] which was then used in the third iteration [REP6-042]. This has led to a shifting CRM parameterisation and a conflicting set of results, as highlighted by NE [REP7-065]. Previous studies suggest that changes in the AR have the greatest effect on the CRM results (eg Chamberlain et al. 2006) [REP7-028] which means that this variable must either be derived from a robust evidence base or otherwise be suitably precautionary.
- 17.5.35. Skov et al. (2018) is an empirically based study of bird behaviour in and around the Thanet OWF which is approximately 11km off Foreness Point in Kent. It comprises 100, 3MW wind turbines located in water depths of 15 to 25m below chart datum covering an area of 35km². The study has generated the most extensive observational dataset of bird behaviour associated with an operational OWF to date. A revised set of AR are set out in paragraph 9.1.12 of the report which are an order of magnitude greater than currently advised in JNCC et al. (2014).
- 17.5.36. NE dispute the use of these AR values because it maintains that they are not directly comparable. This is because the generic AR in existing guidance are derived by comparing observed and predicted collision rates rather than purely through empirical observation. As the predicted collision rates are based on estimates from the Band model, they incorporate elements of model error arising from its assumptions. NE also notes that the study suggests that the Band (2012) model may be underestimating the probability that a bird will collide when crossing the rotor swept area.
- 17.5.37. Following these concerns, Bowgen & Cook (2018) was commissioned to determine how the results of Skov et al. (2018) should be used in CRM. They recommend ARs of 0.995 for gannets and large gulls and 0.990 for kittiwake in relation to the basic model and 0.993 for large gulls and 0.980 for kittiwake in relation to the extended model. NE was unable to comment on the implications of the study at ISH5 [EV-018] nor at Deadline 7 in response to a Rule 17 question on this matter (F2.29

[REP7-064]). We find this review helpful and acknowledge that its conclusions are based on a suitably robust empirical study with a statistically large sample size.

- 17.5.38. The AR used in the first iteration of the CRM [APP-109] were consistent with the approach recommended by the SNCBs. The second [REP1-188] and third [REP6-042] iterations of the Applicant's preferred parameterisation used ARs from Skov et al. (2018) and Bowgen & Cook (2018) respectively. The first [REP4-049] and second [REP6-043] iteration of the NE parameterisation used JNCC et al. (2014).
- 17.5.39. Given the above, we conclude that the use of revised avoidance rates is sufficiently justified on the basis of the evidence that has been submitted and we favour the Applicant's recommendation.

Nocturnal activity factors

- 17.5.40. Band (2012) recommends the use of Nocturnal Activity Factors (NAF) as defined in Garthe & Hüppop (2004) [REP4-039] and King et al. (2009)⁵² in the absence of night-time survey data or other empirical evidence of nocturnal activity levels. The use of these values was reviewed in MacArthur Green (2015) [REP7-025] as part of the East Anglia Three OWF application. The report concluded that a NAF of 1 should be applied to gannet and a NAF of 2 should be applied to kittiwake.
- 17.5.41. The Applicant undertook a literature review which suggests that there is little evidence of nocturnal activity for gannet and only limited activity for kittiwake [APP-109]. This is consistent with the results in Skov et al. (2018) where 48,000 night-time videos were processed with only 0.2% recording any night flying bird activity (total of 76 tracks). This was less than 5% of the observed daytime activity. However, the authors stress that the results are only anecdotal because of the limited sample size.
- 17.5.42. NE disputes the NAF that were used for gannet and kittiwake in its Deadline 1 response [REP1-211] and state that there are no agreed, "empirically derived" NAF that can be used with the Band (2012) model. NE recognises that nocturnal activity levels for some species may be lower than those typically used, as demonstrated in MacArthur Green (2015) and Furness et al. (2018) [REP1-143] but view this evidence as equivocal. This is because of how the tracking studies were interpreted, the models used to derive daylight hours, how day length was defined (ie Forsythe et al. 1995 [REP6-041]) and how the empirical observations translated into nocturnal factors that are applicable to the Band (2012) model.
- 17.5.43. NE highlights the fact that there is no consistency in the gannet NAF in either the breeding or non-breeding seasons as a proportion of daytime activity. For example, MacArthur Green (2015) gave values of 0% and

⁵² King, S., Maclean, I.M.D., Norman, T. and Prior, A. (2009) Developing Guidance on Ornithological Cumulative Impact Assessment for Offshore Wind Farm Developers. COWRIE.

2% for the breeding and non-breeding seasons whilst this was 8% and 3% in Furness et al. (2018) and 4.3% and 2.3% in MacArthur Green (2018) [REP7-027]. Moreover, the daytime activity levels recorded from boat-based surveys do not match the activity levels recorded in tagging studies. For example, gannet activity was recorded at 7-76% when measured from a boat and between 10-50% when measured through tagging. A similar dichotomy was observed for kittiwake with 17-90% from boat-based surveys and 15-42% from tagging surveys. Consequently, in our view, the variation in activity levels at night and during the day are such that no suitably robust estimates can be derived.

- 17.5.44. The Applicant maintained at ISH5 that Furness et al. (2018) took this into account and noted that all of the above values are lower than the standard approach. NE noted, in the same hearing, that a NAF of 1 for gannet which equates to no night-time activity was not supported by the Applicant's own tracking studies. The Applicant considers that the recommended NAFs in Garthe & Hüppop (2004) and King et al. (2009) are not "*evidence based*" and provide a "*false accounting of uncertainty*" and an "*overestimation of the nocturnal activity of gannet and kittiwake*" [REP2-004]. In a Deadline 4 rebuttal [REP4-130] NE suggests that other empirical studies support the recommended parameterisation (eg Wade et al. 2016, Furness et al. 2013 [REP7-029]).
- 17.5.45. The NAF used in the first of the Applicant's preferred CRM iterations used a different parameterisation to the one that was recommended for gannet and kittiwake which was based on MacArthur Green (2015). The second iteration [REP1-188] was then based on different values for gannet and kittiwake that were derived from Furness et al. (2018). The parameters were also expressed as continuous rather than ordinal variables. The third iteration [REP6-042] changed again with MacArthur Green (2018) being associated with the kittiwake NAF. The values for the gulls remained the same throughout.
- 17.5.46. The CRM iterations using the variables preferred NE remained the same throughout [REP4-049 and REP6-043]. NE noted at Deadline 4 [REP4-130] that the NAFs presented at Deadline 1 [REP1-188] were not the same as those used for the collision risk assessments in the Applicant's ES and RIAA, as summarised in [APP-109].
- 17.5.47. Given the above, we conclude that the use of revised nocturnal activity factors is not sufficiently justified on the basis of the evidence that has been submitted and we favour the SNCB recommendation.

Apportioning and Phenology

- 17.5.48. Apportioning is done in order to determine the mortality that is likely to arise from collision (and displacement). This is then apportioned to the qualifying features of different European sites. In this context, the apportioning relates to the proportion of gannet and kittiwake at Flamborough and Filey Coast SPA that are likely to be at risk of turbine collision during the operational phase of the Proposed Development.

- 17.5.49. Age class data from boat-based surveys, derived from earlier Hornsea projects, were used to identify the proportion of adult and immature birds likely to be present in the array area during the breeding season. The Applicant notes that this may include birds from other colonies at the beginning and end of the breeding seasons defined in Furness (2015) [REP1-211] and that these months should consequently be excluded from any subsequent analysis because the majority of individuals would not be attributable to the Flamborough and Filey Coast SPA [APP-054].
- 17.5.50. Both RSPB and NE dispute this approach [RR-113 and RR-097]. In NE's view, breeding seasons should be defined by the breeding population under consideration and informed by colony-specific data (the full extent of time that breeding activities take place). It advises that the appropriate breeding season should be defined by when birds are present at the Flamborough and Filey Coast SPA and notes that the colony observations of kittiwake, gannet and puffin at this colony are "*closely aligned*" to the breeding seasons described in Furness (2015).
- 17.5.51. As NE points out, the definition of a shorter breeding season reduces the predicted collision impacts because lower (non-breeding) apportioning rates are assigned to the months when breeding birds may be present in the array area. The effect was illustrated by NE in relation to the gannet collision mortality apportioning to Flamborough and Filey Coast SPA [REP1-211].
- 17.5.52. In the parameterisations preferred by the Applicant the gannet apportioning for this site is 40.4% (breeding season), 4.8% (post-breeding) and 6.2% (pre-breeding). Breeding was defined as being between April and August. However, colony attendance data for the Flamborough and Filey Coast SPA shows that breeding occurs between March and September [REP3-075 and REP4-137].
- 17.5.53. NE contends that the apportioning and resultant impacts during March and September have been significantly underestimated. We note that the RIAA [APP-051] states that only 6.2% of the population would be potentially affected in March and 4.8% in September. It follows that collision risk would increase to 34.2% in March and 35.6% in September if colony attendance data and/ or Furness (2015) were used to define the breeding season for this species.
- 17.5.54. We asked the Applicant about this issue, in particular why the breeding season used in Furness (2015) was not used to apportion impacts (Q2.2.24 [PD-012] and Q1.2.50 [PD-008]). The Applicant points out that the presence of migrating adults at the beginning of the breeding season and immature birds towards the end of the breeding season would lead to an over-estimate of the mortality that would be attributable to the Flamborough and Filey Coast SPA [REP4-012].
- 17.5.55. The converse is also true, however, with regard to breeding individuals that may be present thus leading to an under-estimate of the mortality attributable to the site. The Applicant highlights two tracking studies in support of the approach which suggest limited or no connectivity

between the array area and the Flamborough and Filey Coast SPA. These are Langston et al. (2013) [REP9-046] and Cleasby et al. (2018) [REP1-144].

- 17.5.56. Langston et al. (2013) considers the foraging range of gannets in relation to proposed OWFs in the North Sea. This is a three year study where adult birds were fitted with satellite tags to investigate their foraging ranges during chick-rearing and early post-breeding periods. A total of 42 birds from Bempton Cliffs, which is part of the Flamborough and Filey Coast SPA, were tracked over this period. We are satisfied that it shows a relatively low utilisation of the array area and that the risk of underestimating the collision risk to gannet from using a shorter breeding season is consequently a remote possibility.
- 17.5.57. Cleasby et al. (2018) is a five year, large scale tracking study that mapped the distribution of a number of species during the breeding season. Habitat selection models were used to define areas of high utilisation or hotspots that are important to particular seabirds. It shows that there are important areas for kittiwake off the east coast of Yorkshire. However, these would not coincide with the array area [REP4-051]. We note the limitations highlighted by RSPB as well as the Applicant's acceptance that there is, albeit limited, connectivity with the array area [REP6-009]. Consequently, we are satisfied that it shows that the risk of underestimating the collision risk to kittiwake from using a shorter breeding season is, again, a remote possibility.
- 17.5.58. We also note the findings of Wischniewski et al. (2018) [REP2-019] which tracked a small number of kittiwake from the Flamborough and Filey Coast SPA. The data from the first year shows some use of the Hornsea One and Hornsea Two OWF zones for commuting purposes but that the key foraging areas are to the north and south of these areas. Neither are within the proposed array area.
- 17.5.59. Given the above, we conclude that the use of a longer breeding season to apportion impacts to the gannet and kittiwake populations at Flamborough and Filey Coast SPA is not justified. Consequently, we favour the Applicant's approach.

Population viability analysis

- 17.5.60. Population viability analysis (PVA) is done in order to determine whether the mortality that is likely to arise from turbine collision (and displacement) would have an adverse effect on the qualifying features of relevant European sites.
- 17.5.61. In this context, this relates to the apportioned mortality of breeding gannet and kittiwake populations associated with Flamborough and Filey Coast SPA. The method generally considers the likely population growth (or decline) with and without an assumed level of additional mortality arising from a particular activity.
- 17.5.62. The Applicant relied upon a model that was developed for evaluating the impacts on the qualifying features of the Flamborough and Filey Coast

SPA in relation to the Hornsea Two OWF and extrapolated the outputs to 35 years to reflect the design lifetime of the current project.

- 17.5.63. This approach was disputed by RSPB [RR-113] and NE [RR-097] with the substance of these objections being explored in ISH5 [EV-018] and our second round of written questions (Q2.2.30 and Q2.2.39 [PD-012]). In response the Applicant made two further submissions during the Examination at Deadline 1 [REP1-135] and Deadline 4 [REP4-092].
- 17.5.64. NE indicates that a greater number of simulations would have been preferable [REP6-055] but had no other substantive concerns at the close of the Examination [REP8-005]. Given the absence of any statistical justification for this position we give this residual concern little weight.
- 17.5.65. RSPB maintains that there are a number of confounding variables such as climate change and alterations to fishing discard policy which mean that it is not possible to make predictions about the viability of either the gannet or kittiwake populations of the Flamborough and Filey Coast SPA in 35 years time. RSPB argues that recent declines in kittiwake productivity have not been adequately considered [REP9-029].
- 17.5.66. We acknowledge the presence of potentially confounding factors and the changes in the productivity of the kittiwake population. However, we view these as simply increasing the uncertainty associated with the analysis rather than as fundamental flaws. Any model-based prediction necessarily carries these caveats as we cannot know the future with any degree of certainty.
- 17.5.67. Given the above, we conclude that the population viability analysis provides a broad indication of likely impact rather than a precise quantification and have weighed this evidence accordingly.
- 17.5.68. At the end of the Examination we noted that there remained considerable differences between the parties on the approach to the CRM analysis. We felt that it might assist the SoS if the Band 2012 model were run using a set of parameters derived from our assessment, as set out above. Bearing this in mind, we asked the Applicant to run the Band (2012) CRM according to our suggested parameterisation and conclude on the implications for the ES and the RIAA (F3.1 [PD-020]). This was submitted at Deadline 9 [REP9-047].
- 17.5.69. In relation to gannet, the analysis showed a total collision risk of between 5-14 individuals per annum and an apportioned collision risk of 2-5 individuals per annum for Option 1. The ES [APP-109] and the RIAA [APP-051] reported the total collision risk as being 17 individuals per annum and an apportioned collision risk of 4 per annum for Option 1. The target breeding population for this feature at this site is 8,469 pairs [APP-051]. The results indicate a 0.23-0.27% increase in baseline mortality as opposed to the 0.3% increase for Option 1 indicated in the RIAA [APP-051].
- 17.5.70. Despite the extended breeding season, the analysis shows that only a small proportion of the population would be affected and that this would

result in only a small increase in background mortality. As the impacts are either similar or reduced, these results do not fundamentally alter the conclusions of the ES [APP-109] or the RIAA [APP-051]. We therefore conclude that there would be no significant risk of an adverse effect on the integrity of gannet populations from collision mortality at Flamborough and Filey Coast SPA from the Proposed Development either alone or in combination.

- 17.5.71. Turning to kittiwake, the analysis showed a total collision risk of between 27-74 individuals per annum and an apportioned collision risk of between 8-21 individuals per annum for Option 1. The ES [APP-109] and the RIAA [APP-051] reported the total collision risk as being 33 per annum and an apportioned collision risk of 8 per annum for Option 1. The target breeding population for this feature at this site is 44,520 pairs [APP-051]. The results indicate a 0.10-0.11% increase in baseline mortality as opposed to the 0.06% increase for Option1 indicated in the RIAA [APP-051].
- 17.5.72. Despite the extended breeding season, the analysis shows that a small proportion of the population would be affected and that this would result in only a small increase in background mortality. Whilst the range of values suggests a greater impact the change in baseline mortality nevertheless remains below 1%. Consequently, the results do not fundamentally alter the conclusions of the ES [APP-109] or the RIAA [APP-051]. We therefore conclude that there would be no significant risk of an adverse effect on the integrity of kittiwake populations from collision mortality at Flamborough and Filey Coast SPA from the Proposed Development either alone or in combination.
- 17.5.73. We are mindful that the final CRM analysis was submitted at a late stage in the examination and that this evidence has been important in our assessment. However, the issues around parameterisation were well rehearsed during the course of the Examination. Consequently, we do not find that this submission is prejudicial to the interests of any party.
- 17.5.74. We have considered the results of the CRM analysis that has been undertaken in broad accordance with NE advice [REP6-043] as well as its response at Deadline 7 [REP7-078]. We do not find that this has a significant bearing on our conclusions due to its overly precautionary nature and the unconvincing justification for some of the parameters, as set out in the above reasoning.
- 17.5.75. At ISH7 [EV-027], the Applicant presented collision risk estimates calculated using two revised turbine scenarios that incorporate increased lower rotor tip heights. The rotor tip height considered in the ES [APP-109] and RIAA [APP-051] was 33.17m above mean sea level. The revised heights that were subsequently considered were 37.5m and 40m above mean sea level. Collision risk estimates for all species were calculated using the original turbine scenario and the two increased lower rotor tip height scenarios. These estimates were then submitted at Deadline 7 [REP7-031].

- 17.5.76. This mitigation could be achieved by an amendment to Requirement 2(2)(c) where the dimension from the lowest point of the rotating blade to sea level is set⁵³. The same change would need to be made to Condition 1(2)(c) of the generation assets DML. Such mitigation would not come without additional costs to the undertaker and potentially greater environmental impacts, for example if a greater number of wind turbine generators were required. However, any environmental impacts would still be within the parameters assessed in the ES.
- 17.5.77. Whilst we have considered this additional mitigation, we do not consider that it would be necessary because we have not identified significant harm in relation to collision mortality.

Displacement Mortality

- 17.5.78. NE and RSPB raised concerns in relation to the assessment of displacement mortality because displacement effects require the calculation of a seasonal mean of peaks between different years. As there were four missing months from the DAS (December-March), they are concerned that the calculation did not fully capture the inter-annual variability in bird numbers and consequently introduced uncertainty that could not be quantified [REP1-211].
- 17.5.79. NE agrees that Lawson et al. (2016) [REP4-040] is suitable for determining the likely displacement effects along the export cable corridor [REP1-212]. RSPB disputes its use due to the fact that it is not a recent survey but nevertheless noted that it had limited concerns over the likely impact of the export cable corridor installation and operation. However, some concern remained over the displacement caused by regular support vessels servicing the turbines during their operational life [REP1-111].
- 17.5.80. NE and RSPB also raised concerns about the way in which seasons were defined in the calculation of the mean seasonal peaks and recommended the use of colony specific information. This would have extended the breeding season and consequently increased the displacement mortality for breeding gannet, puffin and kittiwake [REP1-111]. NE disagreed with the mean seasonal peaks used by the Applicant to calculate displacement mortality for gannet and puffin [RR-097].
- 17.5.81. Both of these issues have already been considered in relation to collision risk and our conclusions are no different in relation to displacement mortality. Namely, that we do not favour the use of longer breeding seasons on the basis of the evidence provided and that the incomplete baseline simply adds precaution to estimates rather than fundamentally undermining the conclusions of the ES [APP-065] or the RIAA [APP-051].

⁵³ It would be necessary to include a correction to account for the difference between mean sea level and lowest astronomical tide, which is the datum used in Requirement 2(2)(c) and in the DML

- 17.5.82. Furthermore, we note that the Applicant has followed SNCB guidance in terms of expressing the variability associated with population estimates and the approach was supported by a literature review to identify evidence-based displacement and mortality rates for use in displacement analyses [REP10-045]. We note that the NE position is not similarly supported [REP1-212] and that there was no specific rebuttal of the Applicant's position [REP2-004]. Issues relating to individual sites will now be considered.

Coquet Island SPA and Farne Islands SPA

- 17.5.83. Coquet is an island approximately 1km off the Northumberland coast and is located over 283km from the proposed array area. It was originally classified in July 1985 and amended in January 2017 for its breeding seabird assemblage principally comprising four species of tern as well as puffin and black-headed gull. It also has a number of non-listed assemblage features including fulmar, herring gull, lesser black-backed gull and kittiwake [APP-051]. The qualifying feature of this site that falls to be considered is the fulmar (assemblage).
- 17.5.84. The Farne Islands comprises a group of low-lying islands approximately 2 to 6 km off the Northumberland coast which are located over 304km from the proposed array area. It was originally classified in July 1985 and amended in January 2017 for its breeding bird assemblage of four tern species, guillemot, puffin, kittiwake, cormorant and shag. It also has a number of non-listed assemblage features including fulmar, black-headed gull, great black-backed gull, herring gull, lesser black-backed gull and razorbill [APP-051]. The qualifying feature of this site that falls to be considered is the fulmar (assemblage).
- 17.5.85. The Applicant considers that fulmar from both sites have a very low vulnerability to displacement impact. This is due to the fact that only a small proportion of the population would be affected. On the basis that there would be an insignificant increase in background mortality, the Applicant concludes that there would be no adverse effect on the integrity of the populations during the operation phase [APP-051].
- 17.5.86. The Applicant highlights the fact that there is little quantitative information on potential displacement of fulmar arising from other wind farm projects which are capable of acting in combination. Consequently, it maintains that the Proposed Development is unlikely to materially alter current in combination displacement impacts and that there would, consequently, be no adverse effect on the integrity of either population [APP-051].
- 17.5.87. NE has advised that because of its concerns about the baseline data and the Applicant's approach to the assessment of impacts, it is unable to conclude beyond reasonable scientific doubt that the conservation objectives of designated sites, including these ones, would not be hindered as a result of the Proposed Development [REP1-211].
- 17.5.88. Given the extremely low number of individuals that would be affected, we are satisfied that there would be no adverse effect on the integrity of

these sites from displacement mortality either alone or in combination with other plans or projects.

Flamborough and Filey Coast SPA

- 17.5.89. This site was classified on 23 August 2018, during the course of the Examination. This subsumed the Flamborough Head and Bempton Cliffs SPA and NE confirmed that it did not require a separate assessment [REP3-075]. The classification does not affect our conclusions.
- 17.5.90. It is a coastal site covering an area of approximately 8,040ha which spans the East Riding of Yorkshire, North Yorkshire and Scarborough. Its marine extent covers approximately 7,472ha and it is located approximately 149km from the Proposed Development [REP1-213]. The qualifying features of this site that fall to be considered are gannet (breeding + assemblage), kittiwake (breeding + assemblage), razorbill (breeding + assemblage), guillemot (breeding + assemblage), herring gull (assemblage), puffin (assemblage) and fulmar (assemblage).
- 17.5.91. The RSPB initially disagreed with the exclusion of the non-breeding guillemot and razorbill populations on the Flamborough and Filey Coast SPA [REP2-012]. However, the Applicant submitted further information [REP5-014] which resolved the RSPB concerns notwithstanding the ornithology baseline data issues, as set out in the final Statement of Common Ground [REP9-029]. NE also concluded that the assessment was reasonable provided 100% of immature birds were apportioned [REP6-054].
- 17.5.92. NE has emphasised the potential connectivity between the Proposed Development and the site in the breeding and non-breeding seasons for puffin [REP1-212]. In the same submission NE also queried whether the Applicant's approach to assessing habitat loss and prey availability is sufficient.
- 17.5.93. NE agrees that a qualitative assessment is adequate for the purposes of considering barrier effects but has queried the assessment of lighting effects [REP1-212 and REP3-075]. The Applicant maintains that prey availability and lighting effects have been adequately considered [REP3-004 and REP5-012].
- 17.5.94. We have considered the above concerns and do not find them of sufficient weight to significantly alter the conclusions that have been reached by the Applicant in the ES [APP-065] and the RIAA [APP-051].
- 17.5.95. Given the above and considering all other matters raised, we conclude that there would be no adverse effect on the integrity of the site from displacement mortality either alone or in combination with other plans or projects.

Greater Wash SPA

- 17.5.96. The site was classified in March 2018 and covers an area of approximately 3,536km². It is a marine site predominantly situated in the

coastal waters between Yorkshire and Norfolk. Water depth ranges from mean high water to about 90m within the Wash approach channel with most of the site less than 30m in depth. It would overlap with the export cable corridor [REP1-213]. The qualifying features that fall to be considered are red-throated diver, common scoter and sandwich tern.

- 17.5.97. The Applicant has not identified any AEoI on the integrity of red-throated diver or common scoter populations from the project alone. This is due to the limited temporal span and localised effect of installation activities as well as the low densities of red-throated diver and common scoter in the area that would be affected. The Applicant also points out that Sandwich tern utilisation of the cable corridor is limited and that, in any event, this species has a low sensitivity to vessel and helicopter disturbance as noted in Wade et al. (2016) [APP-051].
- 17.5.98. However, the RSPB highlights that there is emerging information, particularly from German studies of even higher displacement of red-throated diver from offshore windfarms. It also stresses the incomplete baseline and that this conclusion is only tentative. Nevertheless, it agrees that there would not be a significant impact on these species [REP9-029].
- 17.5.99. Given the above and considering all other matters raised, we conclude that there would be no adverse effect on the integrity of the site from displacement mortality either alone or in combination with other plans or projects.

Benthic SACs

- 17.5.100. A number of matters common to the North Norfolk Sandbanks and Saturn Reef SAC and The Wash and North Norfolk Coast SAC were subject to disagreements at the close of the Examination [REP10-045]:
- benthic ecology baseline characterisation;
 - recoverability of Annex I sandbank features;
 - ability to avoid Annex I reef features;
 - ability to bury cables in different substrates; and
 - rock protection and decommissioning.
- 17.5.101. We shall consider these issues as they apply to each site with reference to Chapter 6 where we have already concluded on some of the substantive, common issues. For the sake of brevity our reasoning will not be repeated and these two chapters should consequently be read together.

North Norfolk Sandbanks and Saturn Reef SAC

- 17.5.102. This is a marine site that was designated in September 2017 and covers an area of approximately 3,603.41km². It is located approximately 40km off the north Norfolk coast and extends to approximately 110km offshore. It comprises the most extensive area of offshore linear ridge sandbanks in the UK and has sandy sediments that support sparse infaunal communities of polychaete worms, isopods, crabs and starfish. It

would overlap with approximately two thirds of the export cable corridor [APP-051].

- 17.5.103. The Annex I qualifying features for this site that fall to be considered are “Sandbanks which are slightly covered by water all the time” and “Reefs”. The conservation status of the site is not favourable at the current time and the objective for this site is to restore these features to favourable condition by restoring their extent and distribution, structure and function and any supporting processes upon which they rely [REP4-050].
- 17.5.104. Turning to the baseline, the SNCBs raised concerns mainly in relation to how the biotopes were classified [REP1-217]. Although the Applicant provided further clarification at Deadline 4 [REP4-097], this failed to resolve these concerns [REP6-047 and REP7-065]. However, further information was submitted by the Applicant at Deadline 7 [REP7-022] in response to a written question (Q1.2.15 [PD-008]).
- 17.5.105. Taking this into account, we are satisfied that the baseline is robust because it is broadly consistent with previous sampling of this zone undertaken by Jenkins et al. (2015) [REP7-023].
- 17.5.106. The Applicant states that sandwave clearance would affect a corridor of up to 30m in width within the site and that this would amount to an area of approximately 2.88km² [APP-062].
- 17.5.107. Turning to recoverability, NE does not agree that the evidence provided by the Applicant demonstrates that recovery after sandwave levelling would be complete [REP1-212 and REP1-217]. It notes that sandwave clearance activities have only been undertaken relatively recently and that there is only very limited evidence on how quickly affected areas recover [REP7-066]. This position remained unchanged throughout the Examination. The MMO also expressed similar concerns [RR-085].
- 17.5.108. The Applicant has submitted further information on sandwave clearance and feature recovery at Race Bank OWF as discussed in Chapter 6 [REP1-183 and REP2-020] and maintains that the assessment is robust [REP1-131, REP1-183 and REP2-004]. Nevertheless, NE disputes this interpretation and its applicability to this site [REP1-215 and REP6-055].
- 17.5.109. The Applicant maintains that comparable situations were considered [REP1-183, REP2-004, REP3-004 and REP4-012] and that the definition of the worst case scenario is suitably robust [REP5-008]. The MMO accepts that the sandwave clearance and cable protection notes demonstrate that the affected habitats could recover [REP1-095].
- 17.5.110. We acknowledge that evidence is lacking which demonstrates the complete recovery of these features. However, available evidence suggests that recovery starts to occur soon after clearance in most instances in this highly dynamic environment provided sufficient substrate remains after levelling [REP1-183 and REP2-020].

- 17.5.111. We note that certain sections of the export cable corridor have relatively large mobile sandwave bedforms of a considerable thickness of up to 6m in places [APP-061]. However, we also note Figures 4.7 to 4.21 of the Preliminary Trenching Assessment [REP5-010 and REP6-026] which show a significant proportion of the route within this site is characterised by a much shallower sandwave depth.
- 17.5.112. Consequently, our reasoning in Chapter 6 also applies to this site. In our view there is reasonable scientific doubt that smaller sandwaves may not recover where underlying sediments are exposed through a combination of post levelling erosion and the excavation of divergent substrata. In coming to this judgement, we are mindful that the deposition of material and other alterations to surface sediments are viewed by NE as most likely to lead to a persistent change to substrate which would not be suitable habitat for sandbank communities [REP7-066]. Whilst the extent of the potential impact is unclear, NE advises that the extent of sandwave levelling is such that this cannot be considered de minimus.
- 17.5.113. Given the above, we conclude that the sandwave clearance associated with the Proposed Development would have an adverse effect on the integrity of this feature as an integrated system. This conclusion not only applies to the North Norfolk Sandbanks and Saturn Reef SAC but also the Wash and North Norfolk Coast SAC given the similarity of the underlying issues. We do not find that the measures in the Benthic Impacts Control Plan [REP10-027] provide sufficient confidence that these effects would be adequately mitigated in either site.
- 17.5.114. Turning to the reef avoidance measures, NE advises that the reef feature has a “*restore*” objective that would be hindered by the Proposed Development and the SNCBs do not agree with the Applicant’s approach to the assessment of impacts [RR-097, REP1-212 and REP1-217].
- 17.5.115. The Applicant and the SNCBs do not agree on the appropriate methods and interpretation of reef features, particularly what qualifies as established reef as part of the wider feature. This was the subject of extensive debate during the Examination [REP1-217, REP3-076, REP3-077, REP1-222, REP1-131, REP2-004 and REP4-012].
- 17.5.116. The MMO also disagrees with the Applicant’s approach [RR-085 and REP1-095]. The SNCBs have limited confidence that the reef feature would recover despite its ephemeral nature [REP1-214]. The Applicant maintains that its assessment is robust and notes that biogenic reef has not been recorded during baseline surveys of the section of the cable corridor that would overlap with this site [REP1-131].
- 17.5.117. Given the concerns about the definition and mapping of the reef feature, the SNCBs query whether it would be possible to avoid it through the micro-siting of the cables. They do not consider that routing the cables through areas of “*lower quality reef*” is acceptable as these areas should also be managed as part of the overall reef feature [REP1-212, REP1-214, REP1-217, REP3-076 and REP3 077].

- 17.5.118. The Applicant points out that the conclusions of the RIAA [APP-051] are predicated on pre-construction surveys that would identify all areas where reef might be present including areas classified as “low” reef according to Gubbay 2007 [REP3-016]. At Deadline 6 the Applicant suggested a change in response to concerns raised by NE relating to the feasibility of micrositing cables around reef features [REP6-038]. The effect of this would be to extend the cable corridor into the temporary working areas where it passes through the site, thus maximising the width of the cable corridor to give the greatest potential for micrositing [REP6-038].
- 17.5.119. The Applicant highlights the fact that micrositing is an established technique for offshore industries [REP2-004, REP3-004 and REP4-012]. The SNCBs agree that this is a standard mitigation measure but argue that it does not automatically make it suitable for use within N2K sites [REP3-076 and REP3-077]. NE points out that areas identified as having no reef may have been colonised and that any operation within areas defined by a geospatial reef layer should thus be avoided [REP7-065].
- 17.5.120. We questioned the derivation of this layer during the course of the Examination through written questions (Q1.2.18 [PD-008] and F2.2 [PD-019]) as well as in ISH2 [EV-007]. In response, NE submitted further information at Deadline 4 and Deadline 7 [REP4-140 and REP7-071]. We note the recommendation of the technical guidance note on fisheries management which suggests that a margin or buffer should be applied to features where its extent may be uncertain or only mapped from point data and that “*regulators should consider the margin as if it were part of the feature*” [REP7-071].
- 17.5.121. However, we have no empirical evidence before us to justify the 500m buffer that has been applied and consequently find it arbitrary. The degree to which the reef layer represents the potential extent of this highly mobile and ephemeral feature is equivocal and lacking any scientific justification. We are satisfied that the combination of pre-construction surveys with greater micrositing flexibility would mitigate the risk of adverse effects on this qualifying feature.
- 17.5.122. This mitigation would be delivered through the Outline CSIP [REP7-021], as secured by Conditions 13(1)(h) of the generation assets DML and 14(1)(h) of the transmission assets DML which commit the undertaker to develop and secure detailed plans for site clearance and cable installation prior to the commencement of any works.
- 17.5.123. We note NE’s requirement for “*absolute certainty beyond reasonable scientific doubt*” that the mitigation would work [REP7-065]. As noted above, the integrity test does not require absolute certainty and decisions are often necessary on the basis of imperfect evidence⁵⁴.

⁵⁴ WWF-UK and RSPB vs SoS for Scotland et al. 1999. CMLR [1999] Env LR 632.

- 17.5.124. Given the above and considering all other matters raised, we conclude that there would be no adverse effect on the integrity of the Annex I reef features of this site.
- 17.5.125. Turning to cable burial, we note that this was considered at length in Chapter 6 and our conclusions are no different either in relation to this site or the Wash and North Norfolk Coast SAC. Namely, that we conclude that substrate-related export cable burial failure would be minimised and that any uncertainty resulting from gaps in the ground model data would be controlled through the Outline CSIP [REP7-021]. This includes the near shore area of the Wash and North Norfolk Coast SAC which was not included in the Preliminary Trenching Assessment [REP5-010].
- 17.5.126. Turning to rock protection and decommissioning, this was also considered in Chapter 6. Whilst our conclusions in relation to the worst case scenario for the extent of rock protection in SACs are the same, the particular circumstances of decommissioning are site specific and therefore require further consideration at this point. Bearing in mind that we accept that micro-siting would avoid the Annex I biogenic reef feature it follows that any adverse effect arising from rock protection and its decommissioning would be primarily associated with the Annex I sandbank feature.
- 17.5.127. Assuming that up to 10% of the cable length within this site could be subject to rock protection, it is estimated that up to 0.01% of the sandbank feature could be affected. As a result, the Applicant concluded that it would not pose a significant risk to the achievement of the conservation objectives for the site [REP10-045].
- 17.5.128. The objectives for this site state, among other things, that the extent and distribution of this feature should be restored and that the entire site represents an integrated sandbank system that should be managed accordingly. It goes on to state that the installation and/ or removal of infrastructure may be having a continuing negative impact thus hindering recovery [REP4-050].
- 17.5.129. The conservation objectives also stress the importance of biological communities in ecological processes that include sediment processing, secondary production, habitat modification, supply of recruits, bioengineering and biodeposition. We note that they go on to state that the loss of characterising sandbank biological assemblages or sandbank sediments from an area of the feature would constitute loss of sandbank habitat and a reduction in overall feature extent [REP4-050].
- 17.5.130. Whilst we accept that the recovery of some ecological function arising from infaunal and epifaunal colonisation of rock berms may occur [REP1-138], this would not be an appropriate substitute for the loss of a designated feature or represent adequate mitigation for this loss. This is because it would have fundamentally different physical and ecological characteristics as previously noted.

- 17.5.131. The seabed within this site which coincides with the export cable corridor has been assessed as having a variable lithology, primarily comprising thin Holocene deposits of loose sand as shown in Figures 4.7-4.21 of the Preliminary Trenching Assessment [REP5-010 and REP6-026] We note the presence of deeper deposits that coincide with the larger sandwave systems which could recover without exposing different stratigraphies associated with either the Boulders Bank or Botany Cut formations. However, these are limited in extent and the chances of rock protection being placed on the deeper surface sediments would therefore be proportionately less.
- 17.5.132. Consequently, we cannot rule out, beyond reasonable scientific doubt, the permanent loss of part of the Annex I sandwave feature either through the rock protection remaining in situ or its decommissioning where the underlying Holocene sediment would be removed, thus exposing a different substrate. We have reached this conclusion on similar grounds to the ones outlined in Chapter 6. This would add to the harm from sandwave clearance that we have already identified.
- 17.5.133. There is also little evidence to suggest that the same biological communities would re-establish when the surface layers are removed during decommissioning, after having been covered with rock for an extended period of time. Whilst we acknowledge that there would be both epifaunal and infaunal colonisation of rock protection, and thus some restoration of ecological processes, the composition of such communities are not predictable given the different sediments that are likely to be exposed and the loss of the original habitat.
- 17.5.134. We note the Applicant's proposals to enhance knowledge on the condition of individual qualifying features and the effectiveness of rock decommissioning [REP9-050] as secured by Condition 24 of the transmission assets DML. Whilst this might assist in the delivery of conservation objectives in the longer term it would not mitigate the potential impacts of the Proposed Development. We also note the supplementary advice for this site suggests that the installation and/ or removal of infrastructure associated with offshore industries is continuing to affect its conservation objectives [REP4-050]. Consequently, the proposals do not weigh in favour of the scheme nor reduce the harm that would be caused.
- 17.5.135. Given the above, and considering all other matters raised, we conclude that the rock protection would permanently reduce the extent and distribution of the sandbank feature as well as its structure and function. This would add to the adverse effect on the integrity of this site that we have already identified from sandwave clearance. Together these effects would undermine the conservation objectives of this site, thus hindering the recovery of favourable conservation status.

The Wash and North Norfolk Coast SAC

- 17.5.136. This site was designated in June 2005 and covers an area of approximately 1,077.61km². It comprises a range of coastal, intertidal and marine habitats extending along the Lincolnshire and Norfolk

coastlines. It has extensive areas of varying, but predominantly sandy, sediments subject to a range of conditions.

- 17.5.137. The SAC overlaps with the export cable corridor. The Applicant states that sandwave clearance would affect a corridor of up to 30m in width within the site and that this would amount to an area of just under 1km² [APP-062].
- 17.5.138. The qualifying features for this site that fall to be considered are "*Sandbanks which are slightly covered by water all the time*" and "*Reefs*". A recent condition assessment on 25 January 2019 indicates that these features and some of their sub features are now in unfavourable condition as a result of fisheries and OWF cable installation [REP7-067].
- 17.5.139. The features that could experience potential adverse effects, again, comprise sandbanks and biogenic reefs. The conservation advice for this site is to restore the favourable condition and thus the favourable conservation status of these features by restoring their extent and distribution, structure and function and any supporting processes upon which they rely [REP4-050].
- 17.5.140. Our reasoning and conclusions in relation to the North Norfolk Sandbanks and Saturn Reef SAC apply to the features relevant to this site and are not repeated here. In summary, in relation to the Wash and North Norfolk Coast SAC, we conclude that the evidence does not establish beyond reasonable scientific doubt that there would be no adverse effect on the integrity of the sandbank feature. We accept that potential impacts on the reef feature would be adequately controlled.
- 17.5.141. The only outstanding issue that has not been addressed in the previous section is the baseline characterisation. NE, the MMO and TWT all expressed concerns about the adequacy of the baseline [RR-047, RR-085, REP1-023 and REP1-117]. The Applicant undertook additional survey work [REP1-140] and the MMO [REP1-095] accepts that the data is adequate for the purposes of characterising the habitats present.
- 17.5.142. Whilst NE agrees that the data is adequate for an ES, it does not agree that it is adequate for the purposes of Appropriate Assessment [REP6-055]. The Applicant nevertheless maintains that the baseline data is robust for this site [REP1-122, REP1-131, REP2-004, REP3-004 and REP5-008]. NE has advised that the assessment should be against the individual features rather than for the site as a whole [REP1-210].
- 17.5.143. The Applicant considers that this has been achieved through the assessment of effects on different biotopes [REP1-122, REP1-131 and REP2-004] and through a revised in combination assessment that considered the additional effects of the Race Bank marine licence on individual sub-features [REP1-178 and REP3-024].
- 17.5.144. We note that NE's concerns primarily relate to the absence of corresponding geophysical data for the nearshore cable corridor route and the extent to which cable burial would consequently be possible

within the SAC [REP1-210]. We recognise the uncertainty that this brings but, as previously noted, we are satisfied that the potential harm is adequately mitigated through the Outline CSIP [REP7-021].

- 17.5.145. We also note that the Eastern Inshore Fisheries and Conservation Authority identified an area of Annex I rocky reef at the edge of the recommended DCO boundary and that further investigation [REP7-007] indicates that this coincides with the area of circalittoral rock and infralittoral rock identified in the ES [APP-102]. The Applicant notes that this would be located in the western temporary working area and would consequently be avoided during cable installation activities [REP9-016].
- 17.5.146. This would be secured through conditions 13(1)(h)(iii) of the generation assets DML and 14(1)(h)(iii) of the transmission assets DML which commit the undertaker to developing and securing approval of a detailed cable laying plan for the Order limits which incorporates a burial risk assessment prior to the commencement of any works [REP10-041].
- 17.5.147. A condition assessment of the site indicates that 61% of reefs are in unfavourable condition and 37% are unfavourable recovering condition [REP6-019]. Turning to the sandbanks, all of the sub-features are classified as unfavourable. This has been attributed to bottom-towed fishing gear, cable installation and offshore oil and gas operations [REP6-019].
- 17.5.148. Whilst the Applicant emphasises the role of bottom-towed fishing gear [REP6-019], NE highlights the fact that any human activity contributing to changes to the extent and distribution of both features presents a risk to restoration and achieving favourable conservation status [REP7-066]. Consequently, the habitat loss that would occur through the use of rock protection would directly undermine the conservation objectives of the site.
- 17.5.149. We acknowledge NE's concerns over whether the cumulative impacts of site preparation works not related to sandwave clearance have been considered [REP7-066]. The Applicant points out [REP9-016] that these have either already been considered in the RIAA [APP-051] or are part of the maximum design scenario [REP1-122].
- 17.5.150. NE also questions whether the Large Shallow Inlet and Bays feature of the Wash and North Norfolk Coast SAC should have been considered [REP7-065]. However, Figure 2.1 of the Applicant's Deadline 7 response [REP7-006] unequivocally shows that this feature does not extend to the part of the North Norfolk Coast which coincides with the export cable corridor.
- 17.5.151. Moreover, this area of coast is an open coastline and could not be described as an inlet or bay according to either Joint Nature Conservation Committee or European Nature Information System classifications [REP7-006]. Consequently, there is no impact pathway for LSE alone and therefore no need for an in combination assessment.

- 17.5.152. Given the above and considering all other matters raised, including the reasoning relating to the North Norfolk Sandbanks and Saturn Reef SAC, we conclude that, whilst there would not be any adverse effect on the integrity of Annex I reefs, the rock protection would nevertheless permanently reduce the extent and distribution of the sandbank feature, as well as its structure and function. This would add to the adverse effect on the integrity of this site that we have already identified from sandwave clearance. Together these effects would undermine the conservation objectives of this site, thus hindering the recovery of favourable conservation status.

Southern North Sea SAC

- 17.5.153. This site was designated on 26 February 2019 for harbour porpoise. This occurred during the course of the Examination and the majority of the submissions consequently refer to this site as the Southern North Sea Site of Community Importance. The designation does not affect our conclusions and the procedural issues that fall to be considered are addressed in Chapter 20.
- 17.5.154. The site is located to the east of England and stretches from the central North Sea (north of Dogger Bank) to the Straits of Dover in the south, covering an area of approximately 36,951km². A mix of habitats, such as sandbanks and gravel beds, cover the seabed and water depths range from mean low water to 75m. The majority of the site has water depths of less than 40m [REP9-073]. The only qualifying feature that falls to be considered is harbour porpoise.
- 17.5.155. The Applicant considers that the noise impact range set out in the RIAA [APP-051], alongside a post consent Marine Mammal Mitigation Protocol (MMMP), would reduce the risk of Permanent Threshold Shift (PTS) to a negligible level. The Applicant maintains that there is no indication that the potential for lethality/ injury or hearing impairment effects associated with underwater noise from piling activities would lead to a reduction in the viability of the harbour porpoise interest feature.
- 17.5.156. NE agrees with this position and has advised that there would be no adverse effects on the integrity of the site from the project alone either in relation to PTS or displacement effects [RR-097 and REP1-213]. Furthermore, we note that all matters relating to the assessment of marine mammal impacts and potential effects on the integrity of the site were agreed with NE at an early stage of the Examination with the exception of potential cumulative effects resulting from the disposal of unexploded ordnance (UXO) and simultaneous piling activity that could arise from other offshore projects [REP1-218].
- 17.5.157. We acknowledge that Whale and Dolphin Conservation (WDC) do not agree that following the current JNCC MMMP guidance would reduce PTS to negligible levels [REP1-022 and REP4-117]. NE has advised that the guidance is out of date and alternative approaches should be considered [REP1-212 and REP4-130]. However, it nevertheless agrees that the soft start procedure is an appropriate form of mitigation to reduce the risk of PTS [REP7-065]. The Applicant maintains that it is committed to

developing a robust MMMP to ensure PTS effects are negligible and that this would be informed by the best guidance available at the time [REP1-122, REP2-004, REP5-008 and REP6-010].

- 17.5.158. WDC have advised that the MMMP should include mitigation measures that are used in other European countries, such as bubble curtains [REP1-022]. We note that the Applicant has not precluded using additional measures and that this is secured through Condition 13(1)(g) of the generation assets DML and Condition 14(1)(g) of the transmission assets DML which commit the undertaker to develop and secure approval of marine mammal mitigation in the event that pile driven foundations are constructed [REP10-041].
- 17.5.159. Although The Wildlife Trusts (TWT) accepted that UXO clearance had been assessed, it nevertheless remains concerned about potential PTS impacts [REP1-227]. However, we note that the Applicant is not seeking consent for UXO clearance works as part of this consent. This would be the subject of a separate marine licence application and there would be a bespoke UXO MMMP in place prior to commencement of any clearance works. This would be agreed with the MMO and statutory consultees and, as such, we are satisfied that this would control any adverse effects alone or in combination with other projects.
- 17.5.160. Notwithstanding outstanding issues, the final position at Deadline 9 between the Applicant and NE [REP9-022] is that whilst all noise impacts should have been assessed together, this matter can nevertheless be addressed through the proposed SIP [REP4-066]. There are no outstanding areas of disagreement with the MMO with regard to the assessment of marine mammal impacts [REP9-023].
- 17.5.161. NE does not agree that adverse effects on integrity from in combination effects with the construction of other offshore wind farms can be excluded [RR-097 and REP1-213]. TWT also highlights a number of additional OWFs that should be included in the absence of a strategic approach that controls simultaneous impacts across multiple projects [REP1-023]. NE advocates the use of the SIP but does not agree that the versions submitted by the Applicant at Deadline 1 [REP1-181] and Deadline 4 [REP4-066] are adequate [REP1-213, REP1-212, REP4-130 and REP6-057].
- 17.5.162. NE and the MMO advise that the SIP should include explicit details of the mitigation measures proposed [REP4-130 and REP6-072]. TWT also highlight the fact that it lacks detail [REP1-023]. The MMO advise that agreement of the final SIP should take place at least 6 months prior to commencement of any activities likely to impact on the site unless otherwise agreed [REP6-072]. The MMO also advises that, as there is an increasing level of noise-generating activities within the site, additional mitigation measures and co-operation across the industry is likely to be required [REP6-073]. NE remains concerned about the lack of a mechanism to enable to consideration of multiple SIPs [REP4-130 and REP6-055].

- 17.5.163. However, we note that NE [REP6-055], the MMO [REP6-073] and Applicant [REP6-010] are all in agreement that the SIP is the appropriate control mechanism to manage any in combination risk and that the content of the Outline SIP is agreed [REP10-045]. The remaining concerns of both NE and TWT relate to strategic regulatory control mechanisms that are beyond the scope of this Examination.
- 17.5.164. TWT and WDC disagree with the approach to cumulative underwater noise management advocated by the SNCBs [REP1-023 and REP4-119] and suggest that noise limits should be set which should not be exceeded during piling [REP1-017, REP1-023 and REP4-119]. The Applicant maintains that its assessment is adequate and in line with established SNCB guidance [REP2-004].
- 17.5.165. The Applicant argues that there is already a high degree of precaution built into the assessment [REP1-179] and no effects on integrity are predicted. Whilst the SIP is intended to mitigate any potential in combination effects that could arise, it is not certain what other activities may occur during the construction period [REP5-008].
- 17.5.166. Consequently, we accept that the detail of the SIP cannot be finalised until project design is decided and the degree of temporal overlap with other projects is known. We note that potential mitigation measures, such as non-piled foundations and scheduling of piling, are listed thus providing sufficient detail. We also accept that the Applicant needs to maintain a flexible approach until the extent and nature of mitigation becomes clear [REP2-004, REP2-005 and REP5-008].
- 17.5.167. However, we nevertheless require a greater degree of certainty over the effectiveness of mitigation measures given the vulnerability of this species to disturbance impacts. Whilst we recognise that Condition 18 of the generation assets DML has a monitoring provision for underwater noise, and that the MMO has enforcement powers under the MCAA, we nevertheless consider that there could be an unacceptable lag between reporting any exceedance of the noise threshold assessed in the ES and the cessation of activity. During such time it is possible that significant negative impacts could occur that would lead to adverse effects. Consequently, we favour the alternative drafting for Condition 18 proposed by the MMO as set out in Chapter 20.
- 17.5.168. A number of additional concerns were raised by WDC and TWT with no agreement being reached by the end of the Examination [REP10-045]. These were broadly related to the baseline characterisation, disturbance impact and likely cumulative effects [REP1-022, REP1-023 and REP4-117].
- 17.5.169. The Applicant is of the view that the baseline data is adequate and consistent with SNCB guidance [REP1-122, REP1-131, REP4-012 and REP6-036]. MMO and NE agree that this is the case [REP1-224 and REP1-218]. However, WDC have highlighted gaps in survey coverage and disputed the adequacy of boat-based, visual surveys [REP1-022]. We

sought clarification on this matter in our second round of written questions (Q2.2.58 and Q2.2.66 [PD-012]) and at ISH5 [EV-018].

- 17.5.170. The Applicant acknowledges the survey limitations but highlights the fact that density surface models, which interpolated harbour porpoise density between surveyed transects, were used to address gaps in coverage. A dedicated marine mammal observer was deployed to undertake visual surveys when weather conditions were suitable [REP4-012].
- 17.5.171. Given the above, we are satisfied that the approach is consistent with established practice for quantitative marine mammal monitoring which, as the Applicant points out, is often combined with boat-based ornithological surveys [REP4-012]. As such, we find that the baseline is sufficiently robust to determine likely impacts on site integrity.
- 17.5.172. Turning to disturbance effects, TWT disputes the use Booth et al. (2017) [REP4-030] to determine the significance of cumulative underwater noise impacts on harbour porpoise because it relies upon expert opinion rather than empirical data [REP1-023]. However, the Applicant subsequently ran an updated version of the Interim Population Consequences of Disturbance model which incorporated all available empirical information on harbour porpoise energetics, diet and responses to piling noise and arrived at similar or lower magnitude effects to the ones reported [REP2-004].
- 17.5.173. We note that details of this analysis were submitted at Deadline 4 and are satisfied that a suitably robust range of information has been used. We therefore conclude that the associated conclusions of the ES [APP-064] and the RIAA [APP-051] remain valid, namely that there would be no long term population level impact arising from disturbance.
- 17.5.174. WDC raised concerns over potential long term effects on the behaviour of harbour porpoise as a result of pile driving activities and highlighted a number of studies [REP1-022]. We note that Carstensen et al. (2006) [REP4-118c], Teilmann and Carstensen (2012) [REP4-118e] and Snyder and Kaiser (2009) [REP4-118d] refer to a single OWF at Nysted in Denmark. Consequently, the results may not be representative and do not establish a general effect that can be applied more widely.
- 17.5.175. We also note that Brandt et al. (2011) [REP4-118b] does not indicate long term effects. As the Applicant points out, activity 2.5km from the pile driving site returned to baseline levels after just 72 hours [REP4-012]. We find the evidence of long term exclusion is equivocal but nevertheless accept the high metabolic demands of this species requires prolonged bouts of feeding which are sensitive to disturbance, thus requiring careful mitigation, as secured by the alternative recommended DCO drafting highlighted above.
- 17.5.176. WDC highlights concerns over the disturbance impact from increased vessel activity at all stages of the Proposed Development because of its ability to interrupt harbour porpoise foraging behaviour and echolocation. This can result in fewer prey capture attempts according to Wisniewska

et al. (2018) [REP4-118f]. However, this study only considered the behaviour of seven tagged porpoises and is consequently limited in scope and wider applicability. Moreover, the authors state that “*the fact that relatively few disturbances were recorded by the tags would suggest a minimal fitness cost of exposure.*” We find this study equivocal and, in any event, WDC acknowledge that this impact was adequately assessed in the ES [REP4-117].

- 17.5.177. TWT recommends that a metric from Heinänen and Skov (2015) [REP4-120d] should be used to assess the cumulative disturbance impacts of shipping. We asked for further clarification on this point in our second round of written questions (Q2.2.63 [PD-012]). TWT indicated that the only way to apply the metric to cumulative impact assessment would be to adopt a strategic approach which is currently unavailable. TWT went on to accept that this was outside the scope of the Examination [REP4-119]. We also find this to be the case for the representations TWT made in relation to a noise management levy, proposals for a strategic monitoring initiative and the use of strategic in combination assessment.
- 17.5.178. TWT highlights the fact that fishing has not been included in the in combination assessment of impacts on marine mammals (or benthic habitats). It points out that fishing is a licensable activity that has the potential to have an adverse impact on the marine environment and that it must be included in all in combination assessments to meet the requirements of Article 6(3) of the Habitats Directive. We sought clarification of this matter in our first round of written questions (Q1.2.107 [PD-008]) and TWT provided a further elaboration at Deadline 4 [REP4-119].
- 17.5.179. On the authority of C127/02 Waddenzee [2004] ECR I-7405 we accept that fishing is a plan or project that should be subject to assessment each time an application for a licence is considered. From a technical point of view, each new fishing licence renewal is a new plan or project and we therefore accept that the potential for new fishing plans or projects should be considered in any in combination assessment.
- 17.5.180. However, from a practical point of view, if the effects of the on-going activity have already been assessed in the baseline then it would not serve the purpose of the legislation to assess the effects of a continuing, existing activity for a second time unless there is evidence to suggest that a new licence is being applied that will seek to intensify or extend the fishing.
- 17.5.181. As we have no such evidence before us and no indication of future fishing activity, that TWT accepts “*is very difficult to predict*” [REP4-119], we conclude that fishing activity should not have been included as an in combination effect and that the conclusions of the ES [APP-064] and RIAA [APP-051] therefore remain valid.
- 17.5.182. Bearing the above in mind and considering all other matters raised we conclude that the Proposed Development would not have an adverse

effect on the integrity of the harbour porpoise populations of the Southern North Sea SAC either alone or in combination with other plans or projects.

North Norfolk Coast SPA/Ramsar Site

- 17.5.183. This site was classified in January 1996. It is a coastal site covering an area of approximately 78.87km². The Ramsar Site was designated in January 1976 and covers a similar area of approximately 78.62km². These overlapping designations are situated east of The Wash, along the northern coastline of Norfolk. They encompass approximately 40km of coastline from Holme to Weybourne and comprise a wide variety of coastal and intertidal habitats [REP1-213]. They are located approximately 0.32km from the onshore cable corridor [APP-051]. The qualifying features that fall to be considered are pink-footed goose (overwintering), waterfowl under Criterion 5 and pink-footed goose under Criterion 6.
- 17.5.184. The onshore cable corridor would avoid permanent habitat loss within the North Norfolk Coast SPA and the temporary footprint within the functionally linked land is not likely to be significant [APP-051]. The assessment indicates that there would be no adverse effects on the population or distribution of pink-footed geese arising from the temporary loss of functionally linked land because this species is highly mobile and has the capacity to take advantage of food resources beyond the area that would be influenced by the onshore cable corridor [APP-051].
- 17.5.185. The Applicant considers that if construction works were to take place on functionally linked sugar beet fields used for foraging between November and January then a pink-footed goose management plan [REP9-062], used in combination with standard light and noise mitigation measures, would avoid or minimise the risk of disturbance [APP-051]. The Applicant views these measures as sufficient to mitigate any AEoI.
- 17.5.186. NE and RSPB raised a number of concerns during the course of the Examination relating to the baseline survey [REP1-111], energetic costs of using alternative foraging areas [REP3-074], level of detail in the Outline CoCP [REP2-012 and REP5-027], need for a 12 month preparatory period [REP1-111], consultation procedures [REP1-207 and REP1-213], effect of potential construction delays [REP3-007 and REP3-074], co-operation of landowners [REP2-012], availability of additional refuge provision outside the zone of influence [REP2-012, REP3-007 and REP3-074] and the provision of post-harvest of sugar beet on functionally-linked foraging land [REP5-027].
- 17.5.187. All outstanding matters relating to RSPB's concerns were resolved by the end of the Examination [REP9-029]. However, this was not the case for NE which has a number of outstanding concerns relating to the definition of the overwintering period, robustness of the decision-making process, definition of periods when geese would be most sensitive, when mitigation would be triggered, level of detail of work restrictions and the extent of sugar beet planting within the cable corridor [REP9-022].

- 17.5.188. NE state that the potential requirement for pink-footed goose mitigation outside the peak overwintering period is shown on its online "*Designated Sites View Package*" [REP9-022]. However, as this evidence was not directly submitted for inclusion in the Examination Library, we are unable to take it into account. In any event, the Applicant has committed to monitoring the pink-footed geese between October and March in the Outline EMP [REP9-065]. This would allow it to respond any changes in peak abundance that might occur [REP7-007].
- 17.5.189. In relation to the other issues, we note that a suitably qualified Ecological Clerk of Works (ECoW) would make construction teams aware of the potential presence and disturbance impact pathways for pink-footed geese. All personnel would be trained to identify flocks of grey goose species so that they would be able to raise any perceived risks with the ECoW.
- 17.5.190. In our view this approach would inform suitably robust decision making and ensure that expert judgement would be brought to bear in terms of the likely sensitivity of pink-footed geese to circumstances that might arise during the course of construction. We are consequently satisfied that this approach would adequately manage the risk to the integrity of the site.
- 17.5.191. Turning to the predicted area of post-harvest sugar beet within the zone of influence that would trigger mitigation, NE has advised that this should be associated with a 25% loss rather than a 50% loss. However, we note that the available food resource is extensive and that the population has consequently been extending eastwards from its core [REP3-003].
- 17.5.192. This suggests that food limitation is not an issue at the current time and that there would be sufficient alternative feeding areas to compensate for the relatively small area that would be affected by a 50% loss. We also note that NE has not provided evidence that would support the adoption of a lower threshold.
- 17.5.193. Given the above and considering all other matters raised, we conclude that there would be no adverse effect on the integrity of the overwintering pink-footed goose population associated with this site either alone or in combination with other plans or projects.

River Wensum SAC

- 17.5.194. This site was designated in 2005 and covers an area of 381.74ha. It is a riverine site that was designated for floating aquatic vegetation that is dominated by water-crowfoot and a number of species that include white-clawed crayfish, bullhead, brook lamprey and Desmoulin's whorl snail.
- 17.5.195. NE has raised concerns over the protection of watercourses in relation to HDD sediment lagoons and the soil storage areas [REP6-057] and this was an outstanding issue at the close of the Examination [REP9-022]. Given that this site is crossed by the cable route there is a potential impact pathway that warrants further consideration.

- 17.5.196. Our findings on this matter are set out in Chapter 14 and apply to this site. Bearing this in mind and considering all other matters raised, we conclude that there would be no adverse effect on the integrity of this site either alone or in combination with other plans or projects.

Overall Conclusions

- 17.5.197. Bearing in mind all relevant representations, the secured mitigation measures and underlying scientific justification for the relative positions of all parties, we recommend to the SoS that the Proposed Development would not result in an adverse effect on the integrity in relation to the relevant qualifying features of the following sites:
- The Southern North Sea SAC;
 - Coquet Island SPA;
 - Farne Islands SPA;
 - Flamborough and Filey Coast SPA;
 - Greater Wash SPA;
 - North Norfolk Coast SPA/Ramsar Site; and
 - River Wensum SAC.
- 17.5.198. However, we cannot rule out an adverse effect on integrity beyond reasonable scientific doubt in relation to the Annex I feature “*sandbanks slightly covered by water at all times*” in the following sites:
- North Norfolk Sandbanks and Saturn Reef SAC; and
 - The Wash and North Norfolk Coast SAC.
- 17.5.199. We conclude that the Proposed Development does not meet the integrity test and that the further tests set out in the Directive must be applied.

17.6. CONSIDERATION OF ALTERNATIVES

Preliminary matters

- 17.6.1. We asked the Applicant and NE to comment on the case for alternative solutions, imperative reasons of overriding public interest (IRoPI) and compensatory measures in the event that the SoS were to conclude that there may be an adverse effect on the integrity of the Flamborough and Filey Coast SPA (Q2.2.7 [PD-012]), the North Norfolk Sandbanks and Saturn Reef SAC or the Wash and North Norfolk Coast SAC (Q2.2.44 [PD-012]).
- 17.6.2. The Applicant’s response highlighted that consideration of alternative solutions, IRoPI and compensatory measures is only required under Article 6(4) of the Habitats Directive if an appropriate assessment determines that there would be an AEoI of a European site. Its position is that AEoI can be excluded. Despite concerns over the perceived premature nature of the question, it nevertheless provided a commentary on IRoPI and alternative solutions for these sites. The Applicant states that these submissions are “*necessarily preliminary in nature*” [REP4-082].

- 17.6.3. The Applicant submits that, whilst the HRA process is often described as a sequential process, in practice, there is overlap and iteration. The Applicant argues that the potential for alternatives can only be gauged once the purpose of the project in question, and the need for that project, has been established. Consequently, the IRoPI must first be established, at least in outline. It is from this starting point that it is possible to begin to consider whether there is an absence of alternative solutions. The Applicant's submissions [REP4-082] are set out in the following order:
- IRoPI;
 - alternative solutions; and then
 - compensatory measures.
- 17.6.4. Whilst we note the Applicant's submissions, it would be for the SoS to apply the relevant tests if it is concluded that they should be applied. Our comments on these matters have sought to look at them in the round and there is no significance in the order in which we have set them out.
- 17.6.5. We also note that the RSPB disputes the Applicant's case on alternative solutions and IRoPI [REP10-056]. The focus of concern for the RSPB is the Flamborough and Filey Coast SPA where, in our view, there would not be an adverse effect on integrity. Nevertheless, we have had regard to RSPB's case on these matters.

Alternative solutions – strategic level

- 17.6.6. The consideration of alternatives is set out in the ES [APP-059]. Site selection was part of the Round 3 offshore wind development programme which included the whole of the former Hornsea Zone. This process was mediated by the Department for Energy and Climate Change, which is now part of the Department for Business, Energy and Industrial Strategy, in conjunction with the Crown Estate (TCE).
- 17.6.7. The Department for Energy and Climate Change conducted a Strategic Environmental Assessment for Offshore Energy in accordance with the Environmental Assessment of Plans and Programmes Regulations 2004. This included consideration of alternatives for all elements covered by the Strategic Environmental Assessment, including future offshore wind leasing.
- 17.6.8. Following this, TCE started a process to identify suitable zones with the selection of sites being carried out in two stages. The first was at a strategic level. This preceded the more detailed planning of individual projects. The Applicant points out that developers are limited by this process to bidding for sites within zones that have been identified by TCE.
- 17.6.9. The identification of the development zones to be tendered in Round 3 was undertaken by TCE using available data to identify areas of seabed which had good potential for offshore wind development. TCE used its national Marine Resource System geographical information system tool to

undertake this analysis. Modelling of potential zone areas was undertaken at a national level using UK-wide datasets.

- 17.6.10. A three stage approach was adopted whereby areas unsuitable for wind farms, due to the presence of one or more exclusions to development, were removed from the analysis. After three iterations and stakeholder consultation a number of different zones were identified as suitable.
- 17.6.11. Offshore wind developers were then responsible for evaluating the opportunities within the identified zones. This included addressing the technical and environmental considerations at a project level before bringing forward projects for consenting within the statutory planning and marine licensing systems.
- 17.6.12. The identification of individual projects within the former Hornsea Zone was undertaken by the process of Zone Appraisal and Planning. This is a non-statutory strategic planning process recommended by TCE specifically for Round 3 zones. Whilst this considered the location of the array area, it was constrained by TCE and was consequently limited in scope.
- 17.6.13. However, the nature, scale, duration, timing and potential delivery by alternative operators are all within scope in this assessment. It is for the SoS to satisfy himself that there are no alternative solutions and this assessment should go beyond the case that is made by an Applicant.
- 17.6.14. There are other locations, and other technologies, with potential for generating renewable energy. In relation to offshore wind farms, the Applicant has set out a schedule of projects over 400MW which have development consent (Table 2, [REP1-164]). These total some 7.5MW of potential generating capacity. Other projects are subject to current applications for development consent.
- 17.6.15. On the other hand, the policy set out in EN-1 (paragraph 4.4.3) states that:
- where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies the IPC should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals*
- 17.6.16. In this context the SoS may decide that other potential offshore wind farm sites do not offer an alternative to this application site on the basis that all such sites will be needed to meet the national need for renewable energy.
- 17.6.17. The Applicant's submission [REP4-082] argues that alternative solutions are those which deliver the overall objectives of the proposed project. The Proposed Development would meet fundamental and urgent objectives set out in EN-1 and EN-3 for:

- reducing carbon emissions, in line with the Climate Change Act 2008, by decarbonising UK energy production by growing the development of offshore renewable energy;
- ensuring security of energy supply for the UK; and
- supporting economic growth.

17.6.18. The Applicant makes a number of further points [REP4-082]:

- Alternatives must be feasible and this Applicant has an extensive track record of delivering offshore generating capacity.
- "*Do nothing*" is not an option because that would fail to deliver the national policy imperative.
- Other forms of energy generation (coal, gas, nuclear) are not alternatives because they do not contribute to renewable energy targets.
- Other forms of renewable energy generation are not alternatives to offshore wind because the UK Government has determined that it is necessary for the energy mix to include a substantial component of offshore wind.
- Locations in other countries would not contribute to national policy objectives.
- There are no feasible locations outside the former Hornsea Zone because
 - The location/ boundaries of the former Hornsea Zone were outside the control of the Applicant and locations outside the former Hornsea Zone are not legally available to the Applicant.
 - The identification of the former Hornsea Zone was the output of a robust Government and TCE process involving Strategic Environmental Assessment of the environmental implications of developing 25GW of offshore wind.
 - There is no good published evidence that identifies other less constrained sites which could host a comparable offshore wind proposal that would avoid or have less impact on Natura 2000 sites.

17.6.19. RSPB has a number of concerns about the Strategic Environmental Assessment process that underpinned the identification of the former Hornsea Zone [REP10-056]. It considers that the DEFRA guidance, which the Applicant relies on in the above analysis, is unduly narrow in its approach to alternatives and that measures such as energy efficiency and/ or alternative forms of renewable energy generation would be appropriate alternatives.

17.6.20. RSPB argues that offshore wind projects in other licenced zones could act as alternatives. RSPB considers that other potentially less constrained sites have already been consented and are merely waiting for appropriate funding to enable them to proceed. Moreover, it points out that TCE has announced ongoing Round 3 extensions and Round 4 leasing rounds which seek to identify other areas of future offshore wind development.

Alternative solutions – project level

- 17.6.21. The Applicant's approach to site selection and consideration of alternatives is set out in Chapter 4 of the ES [APP-059] and is supported by four technical appendices [APP-092, APP-093, APP-094 and APP-095].
- 17.6.22. In Chapter 5 we describe how the offshore cable corridor search area was reviewed in relation to the Cromer Shoal Chalk Beds MCZ and the North Norfolk Sandbanks and Saturn Reef SAC. As requested by stakeholders, two potential alternative offshore routes were considered. The Applicant decided to take forward the seaward potential alternative route because, although this would extend the length of the offshore cable corridor, it would reduce the direct impact of cable laying on the SAC.
- 17.6.23. We conclude in Chapter 5 that there has been an iterative design process which has sought to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives, in accordance with EN-1. For the purposes of this analysis, we consider that the project design has been informed by a consideration of alternatives in which avoiding or minimising harm to marine protected areas has been an important consideration.

Summary on alternative solutions

- 17.6.24. On the basis of the evidence before us, we consider that it is reasonable to focus on other potential sites for offshore wind energy, rather than other forms of energy generation, because of the policy imperative set out above. This approach would be consistent with Defra Guidance⁵⁵. Alternatives have been considered at a strategic level and, in our view, there is a strong case for arguing that all of the consented projects will be required to meet the national need. There are other projects currently subject to applications for development consent. If consented, they too would be needed.
- 17.6.25. We are satisfied that alternatives have been properly considered at a project design level.
- 17.6.26. Nevertheless, we are mindful that the Applicant regards its submissions on these matters as preliminary in nature. We therefore recommend that, should the SoS wish to consider alternative solutions, it would be appropriate to seek further information from the Applicant and the relevant SNCBs.

17.7. IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST

- 17.7.1. The Applicant has presented its preliminary IROPI assessment conclusions, noting that it cannot know what conclusion the ExA and the SoS may reach in relation to adverse effects on integrity [REP4-082]. The Applicant argues that the fundamental importance of, and need to

⁵⁵ Habitats and Wild Birds Directives: guidance on the application of article 6(4) – Defra (December 2012) (Paragraph 13)

urgently deliver, the Proposed Development is clear and demonstrable. It arises from the important and urgent requirement to deliver substantial amounts of renewable energy generating capacity. Detailed information on the legal and policy drivers can be found in section 8 of the Statement of Reasons [REP9-011], section 3 of the Planning Statement [APP-177] and Chapter 2 (Policy and Legislation) in Volume 1 of the ES [APP-057].

- 17.7.2. As the Proposed Development would not adversely any priority habitats, as defined under Annex 1 of the Habitats Directive, this test consequently includes consideration of social and economic benefits in addition to those of human health, public safety or any beneficial consequences of primary importance to the environment.
- 17.7.3. The Applicant draws attention to the decision of the SoS in relation to the Able Marine Energy Park NSIP, which involved a proposal for a new quay together with associated facilities, partly in European sites in the Humber Estuary. The SoS's decision included the following⁵⁶:
- Specifically, he accepts that the applicant has made a compelling case that the overriding public interest in decarbonising the means of energy production, securing energy supplies from indigenous sources, manufacturing large scale offshore generators, increasing the UK's manufacturing base, and regenerating the Humber sub-region together outweigh the loss of 45 hectares of a Natura 2000 site.*
- 17.7.4. The Applicant points out that climate change and renewable energy considerations were accepted as IROPI at Able Marine, which was a port development providing logistical support to the offshore wind sector. It considers that similar arguments should apply in respect of an offshore wind farm.
- 17.7.5. In summary, the Applicant argues that the Proposed Development would deliver, and is consistent with, national strategic policy in EN-1 and EN-3 and therefore demonstrates a high level of public interest. National policy is clear on the scale and urgency of the need for renewable energy projects. Combating climate change and contributing to the provision of affordable and sustainable energy are objectives of fundamental social, environmental and economic importance. These objectives fall into the categories human health, public safety and primary beneficial consequences for the environment. These are the most important forms of IROPI. The potential contribution of the Proposed Development is particularly large and significant, having an estimated generating capacity of 2.4GW.
- 17.7.6. RSPB submits that the Applicant has failed to make out its IROPI case in terms that establish precisely the contribution of its project to the claimed public interests. RSPB considers this makes it difficult for the

⁵⁶ Paragraph 17, Annex 1 to the SoS's decision letter of 18 December 2013 regarding the Proposed Able Marine Energy Park Development Consent Order.

SOS to undertake the IROPI assessment necessary under Article 6(4) [REP10-056].

- 17.7.7. We note that the Applicant has submitted only preliminary comments on IROPI. If the SoS is minded to consider IROPI, we recommend that further information is sought from the Applicant and the relevant SNCBs.

17.8. COMPENSATORY MEASURES

- 17.8.1. As noted above, we asked the Applicant to comment on the case for compensatory measures. NE was also asked to suggest any feasible compensatory measures for the Flamborough and Filey Coast SPA, the North Norfolk Sandbanks and Saturn Reef SAC and The Wash and North Norfolk Coast SAC (Q2.2.8 and Q2.2.45 [PD-012]).
- 17.8.2. The Applicant's case is that there would be no AEOI on these sites and that, consequently, it is not necessary to identify compensatory measures. Until such time as the nature and extent of any adverse effect has been articulated, the Applicant does not feel it can address compensatory measures. Nevertheless, it would be willing to discuss matters in principle with NE. If the SoS concludes that compensatory measures are required, the Applicant considers that there is a legitimate expectation that it would have an opportunity to make submissions on the matter and to enter into discussions with NE and the SoS before a decision is made [REP4-082].
- 17.8.3. The Applicant notes that Defra has produced guidance on the application of Article 6(4) of the Habitats Directive which advises that Competent Authorities and SNCBs should help applicants identify suitable compensatory measures [REP4-082].
- 17.8.4. NE's response provided general advice on how compensatory measures should be developed but stated that there are few cases that have reached the IROPI stage within the marine environment. Those that have do not bear much resemblance to the Proposed Development. NE was therefore unable to provide specific advice on the compensatory measures which might be required, particularly in light of its concerns with the Applicant's baseline data.
- 17.8.5. NE stated that it would be willing to engage in informal discussions on compensatory measures with the Applicant. In the absence of any previous examples to draw upon, it would look to the Applicant to propose options supported by empirical evidence.
- 17.8.6. At Deadline 5 the Applicant agreed with NE that it was the duty of the SoS to secure any compensatory measures but reiterated that it was the duty of NE to assist the SoS in identifying such measures [REP5-008]. RSPB provided a detailed critique of the Applicant's position on compensatory measures at Deadline 10 [REP10-056].
- 17.8.7. We cannot recommend any compensatory measures for the SoS to consider because there is no evidence before us of any such measures. Should the SoS wish to consider the case for compensatory measures for

European sites then the issue would need to be pursued further with the Applicant and the relevant SNCBs.

17.9. HRA CONCLUSIONS

- 17.9.1. Our conclusions are based on the evidence set before us, in particular, on the basis that no reasonable scientific doubt should remain as to any likely adverse effects on European sites. We have carefully considered all the information submitted as part of the Examination.
- 17.9.2. We conclude that the Proposed Development would not result in an adverse effect on integrity in relation to the relevant qualifying features of the following sites:
- The Southern North Sea SAC;
 - Coquet Island SPA;
 - Farne Islands SPA;
 - Flamborough and Filey Coast SPA;
 - Greater Wash SPA;
 - North Norfolk Coast SPA/Ramsar Site; and
 - River Wensum SAC.
- 17.9.3. However, we cannot rule out an adverse effect on integrity beyond reasonable scientific doubt in relation to the Annex I feature "*sandbanks slightly covered by water at all times*" in the following sites:
- North Norfolk Sandbanks and Saturn Reef SAC; and
 - The Wash and North Norfolk Coast SAC.
- 17.9.4. Whilst the SoS is the Competent Authority under the Habitats Regulations, our conclusion is that we cannot be satisfied that the tests in the Habitats Regulations have been met and that the Proposed Development would not adversely affect the integrity of European sites.
- 17.9.5. We cannot recommend any compensatory measures for the SoS to consider because there is no evidence before us of any such measures. We recommend that the SoS seeks further information from the Applicant and the relevant SNCBs regarding alternative solutions, IROPI and compensatory measures.

18. CONCLUSION ON THE CASE FOR DEVELOPMENT CONSENT

18.1. INTRODUCTION

The need for renewable energy

- 18.1.1. The Overarching National Policy Statement for Energy (EN-1) describes how the energy sector can help deliver the Government's climate change objectives by clearly setting out the need for new low carbon energy infrastructure to contribute to climate change mitigation. The UK needs all the types of energy infrastructure covered by EN-1 in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions.
- 18.1.2. EN-1 goes on to say that applications for development consent should be assessed on the basis that the Government has demonstrated that there is a need for those types of infrastructure in EN-1. Substantial weight should be given to the contribution which projects would make towards satisfying this need when considering applications for development consent.
- 18.1.3. The National Policy Statement for Renewable Energy Infrastructure (EN-3) is intended to be read together with EN-1. It states that the decision-maker should act on the basis that the need for the infrastructure covered by EN-3, which includes offshore wind farms, has been demonstrated by EN-1.
- 18.1.4. In Chapter 4 we conclude that the Proposed Development would make a substantial contribution to the delivery of renewable energy. To this extent it would support the objectives of EN-1 and EN-3. Accordingly, we attach substantial weight to the contribution it would make towards meeting the national need demonstrated by EN-1.

Alternatives and design flexibility

- 18.1.5. In Chapter 5 we conclude that there has been an iterative design process which has sought to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives. We consider that the Applicant has carried out a reasonable site selection process and has provided information about the choices it has made.
- 18.1.6. The Applicant has explained its reasons for seeking design flexibility in respect of the transmission system and the ability to implement the Proposed Development on a phased basis. We consider that the Applicant has justified the approach it has taken to these matters and to design flexibility generally.
- 18.1.7. In our view the Applicant has set out the maximum extent of the proposed development and has carried out the assessment of impacts on

that basis. In summary, we conclude that the Applicant's approach to alternatives and design flexibility is in accordance with EN-1 and EN-3.

18.2. ASSESSING THE IMPACTS OF THE PROPOSED DEVELOPMENT

Offshore ecology

- 18.2.1. In Chapter 6 we conclude that the ES has assumed a realistic worst case scenario and sets out the potential effects on specific elements of offshore biodiversity including fish, intertidal habitats, marine mammals, subtidal habitats and birds. Transboundary effects have been considered and the screening exercise found that there was no potential for significant transboundary effects with regard to offshore ecology or marine processes.
- 18.2.2. However, we do not agree that there is adequate mitigation in place for the effect of rock protection measures and sandwave clearance on benthic habitats. Consequently, such measures would lead to a small but permanent loss of habitat which would harm the qualifying features and hinder the conservation objectives of the Cromer Shoal Chalk Beds Marine Conservation Zone. At the time of the Examination, Markham's Triangle was a proposed Marine Conservation Zone thus not subject to the requirements of the Marine and Coastal Access Act 2009. Nevertheless, for the same reasons, we consider that there would be a permanent loss of habitat at Markham's Triangle which should also be taken into account.
- 18.2.3. We conclude that the Proposed Development would be contrary to EN-1 and EN-3 (insofar as they relate to offshore ecology), the Marine Policy Statement (insofar as it relates to offshore ecology) and policies MPA1 and BIO1 of the East Inshore and East Offshore Marine Plans. We consider that these issues weigh significantly against the Order being made.

Navigation and other offshore operations

- 18.2.4. In Chapter 7 we conclude that an assessment of navigational risk has been carried out in accordance with the relevant guidance, taking account of inputs from the Maritime and Coastguard Agency and other navigational stakeholders. Effects on search and rescue operations, recreational users and other offshore operations have been considered. Taking account of the proposed mitigation, which would be secured through the recommended DCO (including the DMLs and the protective provisions) we conclude that the Proposed Development would not pose unacceptable risks to navigational safety.
- 18.2.5. With regard to assets operated by Spirit Energy, we conclude that there would be no increase in collision risks and no increased risks to personnel working at those assets. Restrictions on helicopter access to platforms would have operational impacts but would not increase risks to personnel. Effects on current and future Spirit Energy operations could be mitigated by the protective provisions suggested by the Applicant. Those

provisions would secure co-existence, in accordance with the Marine Policy Statement, the East Inshore and East Offshore Marine Plans and EN-3.

- 18.2.6. In summary, we conclude that the Applicant has sought to minimise negative impacts and to design the project envelope for the wind farm with a view to avoiding or minimising disruption or economic loss. Mitigation measures have been identified to negate or reduce effects on other operations to a level sufficient to enable consent to be granted. We consider that the Applicant's approach to navigational safety and other offshore operations is in accordance with the Marine Policy Statement, the East Inshore and East Offshore Marine Plans and EN-3. This is not a matter which weighs significantly against the Order being made.

Commercial fishing

- 18.2.7. In Chapter 8 we identify that there would be some disruption to the fishing industry. Impacts on the UK potting fleet would be minimised through the measures identified in the ES and secured through the recommended DCO and DMLs. Residual impacts would be mitigated through the Fisheries Co-existence and Liaison Plan.
- 18.2.8. Taking account of the cumulative impact with other projects, there would be adverse effects of reduction in access and displacement for demersal trawlers during all stages of the Proposed Development. This would be minimised and mitigated through designed-in measures identified in the ES.
- 18.2.9. In summary, we have not identified any conflict with EN-3, the Marine Policy Statement or the East Inshore and East Offshore Marine Plans. We conclude that commercial fishing is not a matter which weighs significantly against the Order being made.

Land use and recreation

- 18.2.10. In Chapter 9 we conclude that satisfactory mitigation measures are proposed in the Outline CoCP to minimise the effects of the construction of the onshore infrastructure upon farming operations. Whilst there would be a moderate adverse effect on the best and most versatile agricultural land during construction and operation, we are satisfied that the Applicant has reasonably minimised the impacts on such land. The permanent above ground works would affect three farm holdings. However, the proportion of land taken from each holding is unlikely to significantly affect its long term operation.
- 18.2.11. We are satisfied that no other issues would arise that would result in any significant adverse land use and recreation impacts. Overall, we are satisfied that the findings of the ES are reasonable and that necessary mitigation measures could be secured through the recommended DCO. The land use and recreation impacts would satisfactorily accord with EN-1 and do not weigh significantly against the Order being made.

Transport and highway safety

- 18.2.12. In Chapter 10 we conclude that substantial progress has been made on the development of construction traffic management and mitigation measures during the Examination. Further development of these measures would take place, in consultation with stakeholders, before the final Construction Traffic Management Plans were submitted for approval. We attach significant weight to the views of Norfolk County Council (as the local highway authority) and Highways England, both of which are generally in agreement with the Applicant's approach and the proposed mitigation measures.
- 18.2.13. We acknowledge that outstanding concerns remain from residents and Parish Councils, particularly in relation to construction traffic impacts at the main construction compound at Oulton airfield and the use of the B1145 through the village of Cawston. The maximum number of HGV movements in such locations would be substantial, particularly when the potential cumulative impact with Norfolk Vanguard is taken into account, and there is potential for some localised highways impacts.
- 18.2.14. In summary, we consider there are likely to be limited temporary adverse highway impacts during construction, particularly from potential cumulative impacts with Norfolk Vanguard in certain locations. However, we are satisfied that reasonable mitigation measures can be secured through the recommended DCO, such as to reduce the impacts to acceptable levels. The traffic and transport impacts would satisfactorily accord with EN-1. We conclude that transport and traffic matters do not weigh significantly against the Order being made.

Living conditions for local residents

- 18.2.15. In Chapter 11 we conclude that the measures developed within the Outline Code of Construction Practice would satisfactorily mitigate and minimise adverse impacts on health and quality of life from noise and other impacts during the construction of the onshore infrastructure.
- 18.2.16. Particular concerns have been raised during the Examination regarding impacts on residential living conditions from construction traffic. Given the substantial traffic flows that would be necessary for construction, we consider that there would inevitably be some adverse impacts. However, mitigation measures have been developed during the Examination in consultation with the relevant local planning authorities, particularly in relation to Cawston and the main construction compound at Oulton airfield. We consider that such measures would be a reasonable and proportionate response to the issues raised and would satisfactorily reduce the noise and disturbance for local residents to acceptable levels for the temporary construction work periods.
- 18.2.17. We consider that the mitigation measures secured in the recommended DCO would ensure that no significant impacts on the living conditions of local residents would result from the operational phase of the Proposed Development. In addition, we conclude that no adverse health impacts would result from electric and magnetic fields.

- 18.2.18. Overall, we consider that the Proposed Development would satisfactorily accord with relevant aims of EN-1, EN-5 and the UK Marine Policy Statement (insofar as the Marine Policy Statement relates to construction impacts in coastal areas). We conclude that matters relating to the living conditions of local residents, including effects on human health, do not weigh significantly against the Order being made.

Landscape and visual impacts

- 18.2.19. In Chapter 12 we conclude that there would be some limited temporary visual and landscape impacts resulting from construction of the onshore export cables. We are satisfied that the Applicant has reasonably sought to minimise the impacts, including through the use of horizontal directional drilling to avoid sensitive landscape features. Furthermore, the landscaping proposals would satisfactorily reverse the adverse impacts arising from construction within a reasonable timescale, such that there would be no long term landscape or visual harm.
- 18.2.20. Part of the cable corridor would be located within the Norfolk Coast Area of Outstanding Natural Beauty (AONB), leading to limited short term adverse impacts from construction. However, we consider that the proposed mitigation measures would minimise the impacts and result in no longer term impacts upon the landscape and scenic beauty of the AONB. We consider that there is an exceptional case for development within the AONB.
- 18.2.21. The permanent above ground infrastructure would lead to some adverse landscape and visual impacts. The Applicant has provided illustrative landscaping proposals which would reduce the effects upon landscape character and visual impacts. The detailed design of the buildings/structures and the detailed landscaping proposals would be subject to the approval of the relevant local planning authority.
- 18.2.22. Overall, we are satisfied that the adverse impacts on the landscape and seascape would not be so damaging as to outweigh the benefits of the Proposed Development. We consider that the Proposed Development would accord with the relevant aims of EN-1, EN-3, EN-5, the UK Marine Policy Statement and the East Inshore and East Offshore Marine Plans. We have had regard to the conflict with Policy 4.6 of the South Norfolk Development Management Policies Document. However, given that the Proposed Development is a Nationally Significant Infrastructure Project, we attach greater weight to our finding of accordance with EN-1, EN-3 and EN-5. Overall, we conclude that matters relating to landscape and visual impacts do not weigh significantly against the Order being made.

The historic environment

- 18.2.23. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the desirability of preserving designated heritage assets, including listed buildings and their settings, the character or appearance of conservation areas and scheduled monuments or their settings.

- 18.2.24. In Chapter 13 we conclude that the proposed High Voltage Direct Current convertor/ High Voltage Alternating Current substation would result in moderate adverse impacts upon the settings of the following designated heritage assets:
- Gowthorpe Manor;
 - Mangreen Hall;
 - Roman town of Venta Icenorum; and
 - Church of St Edmund.
- 18.2.25. There would be minor adverse impacts upon the settings of other heritage assets in the vicinity of the convertor/ substation, including Keswick Hall and its non-designated historic parkland, and several heritage assets located in proximity of the cable corridor. There would be minor adverse impacts on both onshore and marine archaeology. Impacts on archaeology would be mitigated by written schemes of investigation which would be secured by the DCO and DMLs.
- 18.2.26. We conclude that there would be no harm to the significance of listed buildings in Cawston or to the character and appearance of the Cawston Conservation Area. Nor would there be any harm to the setting or significance of the Blickling Conservation Area. The significance of Oulton airfield, an undesignated heritage asset, would not be harmed.
- 18.2.27. Where we have found that there would be harm to the significance of designated heritage assets, we consider that this would be less than substantial harm in each instance. We have not identified any instances, during construction, operation or decommissioning where the Proposed Development is likely to result in substantial harm to or loss of the significance of any designated heritage asset. EN-1 requires that the harm we have identified should be weighed against the public benefit of the development, recognising that the greater the harm the greater the justification that will be needed.
- 18.2.28. The benefits of the Proposed Development are set out in Chapter 4 of this report where we conclude that it is of a scale which would make a very significant contribution to the UK supply of renewable energy. We consider that the public benefits of the proposal in terms of the delivery of renewable energy outweigh, in each case, the harm that we have identified in relation to designated heritage assets. We also consider that the minor adverse effects on undesignated heritage assets would be outweighed by the public benefits of the Proposed Development.
- 18.2.29. Taking account of the public benefits, we are satisfied that there is clear and convincing justification for the harm that would result, both individually and collectively, upon designated heritage assets. Overall, we consider that matters concerning the historic environment would accord with EN-1, EN-3, the UK Marine Policy Statement and the East Inshore and East Offshore Marine Plans. We conclude that such matters do not weigh significantly against the Order being made.

Onshore ecology

- 18.2.30. In Chapter 14 we conclude that the Applicant has set out potential effects on internationally, nationally and locally designated sites of ecological or geological conservation importance as well as likely effects on section 41 species and protected species. An Outline Landscape Plan has been produced which would secure opportunities to conserve and enhance biodiversity.
- 18.2.31. Whilst there would be impacts on some species and a reduction in the extent of some habitats, such impacts would be minimised through measures identified in the ES. Residual impacts would be mitigated through the Code of Construction Practice and Ecological Management Plan, both of which would be secured by the recommended DCO.
- 18.2.32. In summary, we consider that the findings of the ES are reasonable and that necessary mitigation measures could be secured through the recommended DCO. We have not identified any significant conflict with EN-1, the National Planning Policy Framework or Policy EN9 of the North Norfolk Local Development Framework Core Strategy 2008. We conclude that onshore ecology is not a matter which weighs significantly against the Order being made.

Socio-economic

- 18.2.33. In Chapter 15 we conclude that there would be potential for disturbance from construction works resulting in some adverse effects on tourism, particularly near the landfall where tourism activity is more concentrated. Whilst it is difficult to quantify the magnitude of these effects, there is no evidence that they would be significant. We consider that they would be short term and localised. The Applicant has proposed what we consider to be reasonable mitigation measures which would be secured through the recommended DCO.
- 18.2.34. There is considerable uncertainty regarding the level of employment and gross value added benefits potentially arising from the proposed development. Whilst it is possible that significant positive effects would result, the uncertainty is such that we attach only moderate weight to such benefits. There would, however, be general accordance with the relevant policies of EN-1, the UK Marine Policy Statement and the East Inshore and East Offshore Marine Plans.
- 18.2.35. Overall, we find that the adverse impacts on tourism and recreation would be likely to be minor and would be unlikely to result in significant harm. We are satisfied that the findings of the ES are reasonable and that necessary mitigation measures could be secured through the recommended DCO. We conclude that the adverse socio-economic impacts on tourism would not be such as to weigh significantly against the Order being made. We attach moderate weight to the employment and gross value added benefits which weigh in favour of the Order being made.

Other matters

- 18.2.36. We conclude that the Applicant has taken account of functional aspects of design, climate change adaptation, flood risk, waste management and water quality as required by EN-1 and EN-3. Where appropriate, control mechanisms would be secured in the recommended DCO. These are not matters which weigh significantly against the Order being made.
- 18.2.37. Having regard to the duties under Regulation 3 of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, we are satisfied that no activities associated with the Proposed Development would result in deterioration of surface water status or groundwater status. Granting development consent would be consistent with the duties under Regulation 3.
- 18.2.38. As required by Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the United Nations Environmental Programme Convention on Biological Diversity in relation to the likely impacts of the Proposed Development in the relevant chapters of this report.
- 18.2.39. In Chapter 1 we consider the other consents that would or may be required to carry out the Proposed Development. Without prejudice to the exercise of discretion by future decision-makers, we can see no apparent impediments to the implementation of the Proposed Development, should the SoS be minded to grant development consent.

18.3. MARINE CONSERVATION ZONES

- 18.3.1. In Chapter 6 we conclude that the placement of rock protection and sandwave clearance would result in the permanent loss of an, albeit small, proportion of one of the designated features of the Cromer Shoal Chalk Bed Marine Conservation Zone (MCZ). In our view this would amount to a significant effect which would be contrary to the conservation objectives of this site. It would thus pose a significant risk of hinderance and would be in conflict with section 126(6) of the Marine and Coastal Access Act 2009 (MCAA).
- 18.3.2. If the Secretary of State (SoS) is in agreement with that view then the requirements of section 126(7) would be engaged and we recommend that a Stage II assessment, as described in the MCZ assessment guidance, would be necessary prior to any consent being granted. This assessment requires the SoS to be satisfied that:
- there is no other means of proceeding with the act which would create a substantially lower risk of hindering the achievement of those objectives;
 - the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment that will be created by proceeding with it; and
 - the person seeking the authorisation will undertake, or make arrangements for the undertaking of, measures of equivalent

environmental benefit (MEEB) to the damage which the act will or is likely to have in or on the MCZ.

- 18.3.3. Whilst it would be for the SoS to apply these tests, we have offered an opinion on the first two. In Chapter 6 we conclude that the first two tests are capable of being met. However, during the Examination, no party was able to assist us with the issue of MEEB. Whilst the Applicant asserted that there would be no difficulty in meeting the requirements of section 126(7) of MCAA, no detailed submissions were made. The Applicant considers that there is a legitimate expectation that, if need be, sufficient time would be made available for further detailed representations before the application for development consent is determined [REP4-012].
- 18.3.4. We recommend that, if the SoS is minded to grant development consent, further information is sought in relation to the requirements of section 126(7) of MCAA.
- 18.3.5. In Chapter 6 we conclude that, in the event that Markham's Triangle is designated as an MCZ before the application is determined, then there would also need to be a Stage II assessment for that site.

18.4. HABITATS REGULATIONS ASSESSMENT

- 18.4.1. Whilst the SoS is the Competent Authority under the Habitats Regulations, our conclusion is that the Proposed Development would not result in an adverse effect on integrity in relation to the relevant qualifying features of the following sites:
- The Southern North Sea SAC;
 - Coquet Island SPA;
 - Farne Islands SPA;
 - Flamborough and Filey Coast SPA;
 - Greater Wash SPA;
 - North Norfolk Coast SPA/Ramsar Site; and
 - River Wensum SAC.
- 18.4.2. However, we cannot rule out an adverse effect on integrity beyond reasonable scientific doubt in relation to the Annex I feature "*sandbanks slightly covered by water at all times*" in the following sites:
- North Norfolk Sandbanks and Saturn Reef SAC; and
 - The Wash and North Norfolk Coast SAC.
- 18.4.3. Whilst the SoS is the Competent Authority under the Habitats Regulations, our conclusion is that we cannot be satisfied that the tests in the Habitats Regulations have been met and that the Proposed Development would not adversely affect the integrity of European sites.
- 18.4.4. We cannot recommend any compensatory measures for the SoS to consider because there is no evidence before us of any such measures. We recommend that the SoS seeks further information from the Applicant and the relevant statutory nature conservation bodies (SNCB)

regarding alternative solutions, imperative reasons of overriding public importance (IRoPI) and compensatory measures.

18.5. OVERALL CONCLUSIONS

- 18.5.1. The Proposed Development would make a substantial contribution to the delivery of renewable energy. To this extent it would support the objectives of EN-1 and EN-3. Accordingly, we attach substantial weight to the contribution it would make towards meeting the national need demonstrated by EN-1. The Proposed Development would not accord with EN-1 and EN-3 insofar as they relate to offshore ecology. In all other respects it would accord with EN-1, EN-3 and EN-5. Looking at the relevant National Policy Statements (NPS) in the round, we conclude that the proposed Development accords with them when they are considered as a whole.
- 18.5.2. The contribution to renewable energy would also support the objectives of the Marine Policy Statement and the East Inshore and East Offshore Marine Plans (EIEOMP). The Proposed Development would not accord with the Marine Policy Statement and EIEOMP insofar as they relate to offshore ecology. In all other respects it would accord with the Marine Policy Statement and EIEOMP. Looking at the Marine Policy Statement and EIEOMP in the round, we conclude that the proposed Development accords with them when they are considered as a whole.
- 18.5.3. Whilst the SoS is the Competent Authority under the Habitats Regulations, our conclusion is that we cannot be satisfied that the Proposed Development would not adversely affect the integrity of European sites and that the tests in the Habitats Regulations have been met. In the absence of any evidence on site-specific compensatory measures for the affected SACs, we cannot be assured that determining the application in accordance with the relevant NPS would not lead to the UK being in breach of its international obligations under the Habitats Directive. Mindful of section 104(4) of PA2008, we must therefore recommend that development consent is not granted.
- 18.5.4. Having reached that conclusion, it is not necessary for us to conclude on the balance of adverse impacts and benefits. Moreover, in the absence of information on compensatory measures that would be an incomplete exercise. Nevertheless, it may assist the SoS if we summarise the adverse impacts and benefits as we see them.
- 18.5.5. First, there is a group of factors where we conclude that any adverse impacts would be minor or where impacts would be sufficiently mitigated, such that they would not weigh significantly against the Order being made:
- navigation and other offshore operations;
 - commercial fishing
 - land use and recreation;
 - transport and highway safety;

- living conditions for local residents, including effects on human health;
 - landscape and visual impacts;
 - historic environment;
 - onshore ecology;
 - socio-economic (in relation to tourism and recreation); and
 - other matters - functional aspects of design, climate change adaptation, flood risk, waste management and water quality.
- 18.5.6. We have identified harm in relation to offshore ecology, to which we attach significant weight.
- 18.5.7. On the other hand, we attach substantial weight to the contribution the Proposed Development would make towards meeting the national need for renewable energy demonstrated by EN-1. In addition, we attach moderate weight to socio-economic benefits relating to employment and gross value added.
- 18.5.8. Should the SoS agree with our recommendation on adverse effects on the integrity of European sites, it would then be necessary to consider the case for alternative solutions, IRoPI and compensatory measures or to refuse to grant development consent. If the SoS wishes to consider the case for alternative solutions, IRoPI and compensatory measures we recommend that further information is sought from the Applicant and the relevant SNCBs.
- 18.5.9. If the SoS is minded to grant development consent, we recommend that:
- further information is sought in relation to the Cromer Shoal Chalk Beds Marine Conservation Zone and the requirements of section 126(7) of the Marine and Coastal Access Act 2009; and
 - in the event that Markham's Triangle is designated as a Marine Conservation Zone before the application is determined there would need to be a Stage II assessment for that site in accordance with section 126(7) of the Marine and Coastal Access Act 2009.

19. COMPULSORY ACQUISITION AND RELATED MATTERS

19.1. INTRODUCTION

- 19.1.1. This chapter of the report deals with the compulsory acquisition (CA) of land, rights over land and related matters including temporary possession (TP).
- 19.1.2. For reasons related to the Habitats Regulations Assessments which are considered in Chapter 17, we are unable to recommend that development consent should be granted. The case for compulsory acquisition depends upon the public benefits flowing from the scheme, which cannot be realised in the absence of development consent. It follows that, without a recommendation that consent be granted, the case for compulsory acquisition cannot be made out.
- 19.1.3. Nevertheless, we are mindful of the fact that the SoS may conclude that development consent should be granted, perhaps following further consultations on matters pertaining to the Habitats Regulations Assessments and/ or other matters. We have therefore written this chapter in a way that would enable the SoS to consider CA matters in the event that he is minded to grant development consent.
- 19.1.4. Our examination of the application documents and Relevant Representations resulted in the following issues being identified relevant to CA and related issues:
- Rochdale envelope;
 - choice of transmission system;
 - project phasing;
 - loss of agricultural land;
 - soil quality;
 - effects on farming operations;
 - public open space;
 - land with potential for development;
 - nature and extent of land, rights and powers to be acquired;
 - TP;
 - access for construction and maintenance;
 - funding and guarantees for compensation;
 - human rights; and
 - consideration of alternatives.
- 19.1.5. These matters were considered under the following principal issues:
- Alternatives and design flexibility;
 - Land use and recreation; and
 - Compulsory acquisition.

They formed part of our initial assessment of principal issues, published at Annex B to the Rule 6 letter [PD-006].

19.1.6. This chapter is organised as follows:

- Legislative requirements;
- The Applicant's request for powers of CA and TP;
- The purpose and extent of the powers being sought;
- Examination of the case for CA and TP; and
- Conclusions.

19.2. LEGISLATIVE REQUIREMENTS

19.2.1. The development consent regime for Nationally Significant Infrastructure Projects is created by PA2008.

Compulsory Acquisition

19.2.2. Under section 122, a DCO may only authorise compulsory acquisition if the land:

- 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 of PA2008;

and there is a compelling case in the public interest for the land to be acquired compulsorily.

19.2.3. Under section 123, the SoS must be satisfied that either:

- 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.

19.2.4. It is therefore for the applicant to defend and justify its proposals and to show how the above tests are satisfied for each parcel of land which it intends to acquire compulsorily.

19.2.5. In particular, the applicant should be able to show that:

- the land to be acquired is no more than is reasonably required⁵⁷; and
- the public benefit outweighs the private loss⁵⁸.

19.2.6. Factors to be taken into account in the decision whether or not to include a provision in the DCO authorising the compulsory acquisition of land include whether:

- there is a need for the project;

⁵⁷ Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land: DCLG September 2013, paragraph 11

⁵⁸ Ibid paragraph 13

- all reasonable alternatives to compulsory acquisition, including modifications to the project, have been explored⁵⁹;
- the proposed interference with the rights of those with an interest in the land is
 - for a legitimate purpose; and
 - necessary; and
 - proportionate⁶⁰;
- the applicant has a clear idea of how the land which is to be acquired is to be used⁶¹;
- there is a reasonable prospect of the requisite funds for compulsory acquisition becoming available⁶²; 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 Rights⁶³.

19.2.7. The application must be accompanied by a funding statement which explains how the compulsory acquisition is to be funded. The applicant is also advised to include as much information as is available at this stage about how the project as a whole is to be funded and the business case⁶⁴.

19.2.8. The applicant should also be able to show that adequate funding will be available for compulsory acquisition within the statutory time period⁶⁵.

19.2.9. In this case the Applicant wishes to apply to vary the statutory time period from five to seven years. The Applicant should be able to explain why this variation is necessary.

19.2.10. The applicant must also submit with the application a statement of reasons relating to the compulsory acquisition which justifies the compulsory acquisition sought, explains why there is a compelling case in the public interest and gives reasons for the creation of new rights⁶⁶.

Temporary possession

19.2.11. Further to Part 1 of Schedule 5 to PA2008 at paragraph 2, TP powers are capable of being within the scope of a DCO. PA2008 and the associated DCLG CA Guidance do not contain the same level of specification and tests to be met in relation to the granting of TP powers, as by definition such powers do not seek to deprive or amend a person's interests in land permanently.

⁵⁹ Ibid paragraph 8

⁶⁰ Ibid paragraph 8

⁶¹ Ibid paragraph 9

⁶² Ibid paragraph 9

⁶³ Ibid paragraph 10

⁶⁴ Ibid paragraph 17

⁶⁵ Ibid paragraph 18

⁶⁶ Ibid paragraph 32

- 19.2.12. The Neighbourhood Planning Act 2017 (NPA2017) contains provisions which amount to a codification of new TP practice. In recognition of the greater extent to which TP is being sought by scheme promoters, and also in recognition of the extended durations for which TP powers are being sought, the NPA2017 provides for enhancements to the rights of Affected Persons (AP) subject to TP.
- 19.2.13. These enhancements are with a view to ensuring that APs subject to TP enjoy rights to notice and to relevant compensation which are equivalent or proportionate to those rights already available to APs subject to CA. However, at the close of the Examination, the relevant provisions of NPA2017 had not come into force.

19.3. THE APPLICANT'S REQUEST FOR CA AND TP POWERS

CA powers

- 19.3.1. Paragraph 9.1 of the covering letter to the application [APP-001] states that:

The Applicant is seeking authority within the Order to acquire compulsorily land and interests and other related powers to support the delivery of Hornsea Three...

- 19.3.2. The Applicant sought CA powers within the draft DCO [APP-027] 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.

- 19.3.3. The Applicant also submitted:

- an Explanatory Memorandum to the draft DCO [APP-028];
- a Funding Statement [APP-029];
- Annex 1 to the Funding Statement [APP-030];
- Annex 2 to the Funding Statement [APP-031];
- a Statement of Reasons [APP-032];
- a Book of Reference [APP-033];
- an onshore land plan [APP-011];
- a Crown land plan (onshore and offshore) [APP-022]; and
- a special category land plan (onshore) [APP-023].

Taken together, these documents set out the land and rights sought by the Applicant together with the reasons for seeking compulsory powers and the basis on which compensation would be funded.

- 19.3.4. There were changes made to all these application documents during the Examination, except for Annex 2 to the Funding Statement. There was also a change to the application. 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 final draft DCO [REP10-041];
- the Explanatory Memorandum to the draft DCO [REP9-005];

- the Funding Statement [REP1-229];
- Annex 1 to the Funding Statement [REP1-137];
- Annex 2 to the Funding Statement [APP-031];
- the Statement of Reasons [REP9-011];
- the Book of Reference [REP9-008];
- the onshore land plan [REP9-017];
- the Crown land plan (onshore and offshore) [REP9-018]; and
- a special category land plan (onshore) [REP-019].

19.3.5. Paragraph 1.1.3.1 of the Statement of Reasons [REP9-011] explains that:

it has not yet been possible ... to acquire all of the land, the temporary use of land and the rights required by agreement ...

The position at the end of the Examination is therefore that the Applicant seeks CA powers within its final draft DCO [REP10-041] 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.

19.3.6. The relevant Articles in the Applicant's final draft DCO [REP10-041] are as follows:

- Article 18 – Compulsory acquisition of land;
- Article 19 – Time limit for exercise of authority to acquire land compulsorily;
- Article 20 – Compulsory acquisition of rights;
- Article 21 – Private rights;
- Article 22 – Application of the Compulsory Purchase (Vesting Declarations) Act 1981;
- Article 23 – Acquisition of subsoil only;
- Article 24 – Modification of Part 1 of the Compulsory Purchase Act 1965;
- Article 25 – Rights over or under streets;
- Article 28 – Statutory undertakers;
- Article 29 – Recovery of costs of new connections; and
- Article 41 – Crown rights.

19.3.7. The following schedules to the Applicant's final draft DCO [REP10-041] are also relevant:

- Schedule 3 – Streets to be temporarily stopped up;
- Schedule 4 – Public rights of way to be temporarily 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; and
- Schedule 9 – Protective provisions.

19.3.8. The draft DCO was updated during the examination at Deadline 4 [REP4-003], Deadline 6 [REP6-003], Deadline 7 [REP7-003], Deadline 9 [REP9-003] and Deadline 10 [REP10-041].

- 19.3.9. The Explanatory Memorandum was updated during the Examination at Deadline 9 [REP9-005].
- 19.3.10. The Funding Statement was revised at Deadline 1 [REP1-229], as was Annex 1 to the Funding Statement [REP1-137]. Annex 2 remained unchanged [APP-031].
- 19.3.11. The Statement of Reasons was updated at Deadline 4 [REP4-009] and Deadline 9 [REP9-011]. The appendices to the Statement of Reasons were updated at Deadline 1 as was the Applicant's CA Schedule [REP1-134].
- 19.3.12. The Book of Reference was updated at Deadline 4 [REP4-139] and at Deadline 9 [REP9-008].
- 19.3.13. The onshore land plan was updated at Deadline 4 [REP4-102, REP4-103 and REP4-104] and at Deadline 9 [REP9-017].
- 19.3.14. The Crown land plan was updated at Deadline 9 [REP9-018].
- 19.3.15. The special category land plan was updated at Deadline 9 [REP9-019].

TP powers

- 19.3.16. The Applicant also seeks powers to use land on a TP basis under the following Articles:
- Article 26 – Temporary use of land for carrying out the authorised project; and
 - Article 27 – Temporary use of land for maintaining the authorised project.
- 19.3.17. The land which the Applicant seeks to use temporarily is shown in yellow on the onshore land plan [REP9-017] and the plots are also listed in Schedule 8 to Applicant's final draft DCO [REP10-041] and described in the Book of Reference [REP9-008] as being for temporary possession.

Order land

- 19.3.18. Land over which CA and/or TP powers are sought is referred to in this chapter as the Order land.

Conclusion

- 19.3.19. The Applicant seeks CA powers within its final draft DCO [REP10-041] for both land and rights over land, including additional land [REP4-008].
- 19.3.20. The Applicant sought CA powers within the original application [APP-027]. The requirements of section 123(2) of PA 2008 are therefore satisfied in respect of land (including new rights over land) over which CA was sought in the original application
- 19.3.21. The application for additional land is discussed later in this chapter and is described more fully in Chapter 2. It included a 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 requirements of section 123(4) of PA 2008 are therefore satisfied in respect of the additional land.

- 19.3.22. The requirements of section 123 of PA2008 are therefore satisfied in respect of all the land and rights over land now sought in the Applicant's final draft DCO [REP10-041].

19.4. THE PURPOSE AND EXTENT OF THE POWERS THAT ARE SOUGHT

- 19.4.1. The purposes for which land (and rights over land) are required are set out and described in:

- the final draft DCO [REP10-041];
- the Statement of Reasons [REP9-011];
- the Book of Reference [REP9-008]; and
- the onshore land plan [REP9-017].

- 19.4.2. The Proposed Development would be both offshore and onshore. However, CA and TP powers are sought only over the Order land shown on the onshore land plan [REP9-017].

- 19.4.3. Other documents which were provided with the application, or produced by way of clarification in the course of the Examination, assisted our understanding of the purposes for which land and rights over land are sought:

- the Project Description [APP-058];
- a Transmission System Briefing Note [REP1-164];
- an Indicative HVDC cable corridor cross section [REP3-011]; and
- a Clarification Note on onshore cable corridor widths (HVAC and HVDC) [REP6-013].

- 19.4.4. Section 1.1.2 and section 4 of the Applicant's Statement of Reasons [REP9-011] summarise the main components of the onshore works as follows:

- a foreshore connection;
- an onshore connection to an onshore substation which could also include an onshore HVAC booster station sited along the route; and
- a connection from the onshore substation to National Grid's existing Norwich Main electricity substation.

- 19.4.5. Paragraph 1.1.3.1 of the Statement of Reasons [REP9-011] explains that the Applicant has been seeking to acquire the land, rights over land and temporary use of land by voluntary agreement. However, it has not yet been possible to acquire all of the land and rights required by agreement. Consequently, in paragraph 1.1.3.3 of the Statement of Reasons [REP9-011] the Applicant states that:

These powers are being sought in order for the Applicant to be able to construct, operate and maintain Hornsea Three without impediment.

The Order land

- 19.4.6. In sections 1.1.3 and 5.2 of the Statement of Reasons [REP9-011] the Applicant sets out a description of the Order land. This land is shown on the onshore land plan [REP9-017] edged red, and each plot is listed and described in the Book of Reference [REP9-008]. The Book of Reference also explains the various categories of Order land.
- 19.4.7. Land where the freehold is to be acquired compulsorily is shown coloured pink on the onshore land plan [REP9-017]. This land is required for:

- the onshore booster station at Little Barningham (plot 9-012), should HVAC transmission be selected; and
- the converter/substation at Swardeston (plot 33-014).

The Applicant explains in the Statement of Reasons (paragraph 5.2.1.8) [REP9-011] that where it is seeking to use CA powers to acquire land, or new rights over land, powers for temporary use of such land are also being sought pursuant to Articles 26 and 27. The Applicant therefore relies upon Articles 18, 26 and 27 in respect of this land, which would also have easements, servitudes and other private rights extinguished in accordance with Article 21(1).

- 19.4.8. Land over which new rights are required for landscaping of the works also relates to:
- the onshore booster station at Little Barningham (plots 9-002, 9-004, 9-011, 9-020 and 9-023), should HVAC transmission be selected; and
 - the converter/substation at Swardeston (plots 33-012, 33-013, 33-020 and 33-022)

and is coloured green on the onshore land plan [REP9-017]. The Applicant relies upon Articles 20, 26 and 27 in respect of rights sought over this land, which would also have easements, servitudes and other private rights extinguished in accordance with Article 21(2).

- 19.4.9. The majority of the rights to be acquired compulsorily relate to the cable route and are new connection works rights. This land is coloured blue on the onshore land plan [REP9-017]. The standard cable corridor width is 80m, but at the following locations a greater width would be needed:
- the landfall area at Weybourne, where there would need to be flexibility in the location of the transition joint bays and the onshore cable route would need to be aligned to suit (plots 1-001 to 1-004, 1-006 to 1-008);
 - the crossing of the North Norfolk railway, where the cable circuits would be separated into their constituent cables to cross beneath the railway using horizontal directional drilling (HDD) (plots 3-017 to 3-019);
 - the onshore booster station at Little Barningham, should HVAC transmission be selected (plots 9-005 to 9-010, 9-013 to 9-016, 9-019);

- where the cable route crosses the proposed Norfolk Vanguard cable route east of Reepham and north of the Marriotts Way heritage trail (plots 16-001 to 16-004);
- at the woodland, Bawburgh Road and the river Yare crossing near Marlingford where HDD is proposed (plots 26-012 to 26-015, 27-004);
- at the crossing of the A11 trunk road and the Network Rail railway line where HDD is proposed (plots 30-023, 30-024, 30-027 to 30-029);
- at the converter/substation at Swardeston (plots 32-010, 33-006 to 33-011, 33-015, 33-018, 33-019); and
- at the existing Norwich Main electricity substation (plots 34-002 to 34-008, 34-010, 34-011).

There would also be some minor localised widening of the corridor at sharp bends in the alignment. The Applicant relies upon Articles 20, 26 and 27 in respect of rights sought over this land, which would also have easements, servitudes and other private rights extinguished in accordance with Article 21(2). Land within the cable corridor which is not required after construction would be subject to temporary possession.

19.4.10. Where both new connection works rights and landscaping rights are required over the same plot of land, this is shown coloured blue with green diagonal stripes on the onshore land plan [REP9-017]. This land relates to:

- the booster station at Little Barningham, should HVAC transmission be selected (plot 9-015); and
- the converter/substation at Swardeston (plots 33-011, 33-015, 33-018, 33-019, 33-021).

19.4.11. Land over which new rights are required for access for construction and maintenance of the works is coloured brown on the onshore land plan [REP9-017]. This land is required for access to:

- the foreshore (plots 1-014, 1-016);
- the cable route (plots 3-024 to 3-028, 20-006, 20-007, 20-010, 20-011, 21-012, 21-013, 25-003 to 25-005; 26-002 to 26-004, 26-016, 26-017, 28-004, 28-005, 30-003 to 30-005, 30-015, 30-016, 30-021, 30-022, 30-025, 30-026)
- the booster station at Little Barningham, should HVAC transmission be selected (plots 9-017, 9-024, 9-025, 10-004); and
- the existing Norwich Main electricity substation (34-009, 34-012).

Again, the applicant relies upon Articles 20, 26 and 27 in respect of rights sought over this land, which would also have easements, servitudes and other private rights extinguished in accordance with Article 21(2).

19.4.12. Where both new connection works rights and access rights are required over the same plot of land, this is shown coloured blue with brown diagonal stripes on the onshore land plan [REP9-017]. This land relates to

- the booster station at Little Barningham, should HVAC transmission be selected (plots 9-003, 9-007 to 9-010, 9-014,9-021);
- the converter/substation at Swardeston (plots 33-007 to 33-010); and
- the existing Norwich Main electricity substation (plots 34-009, 34-012).

19.4.13. Article 22 of the final draft DCO [REP10-041] seeks to incorporate the provisions of the Compulsory Purchase (Vesting Declarations) Act 1981 with modifications.

19.4.14. Section 158 of PA2008 gives the Applicant statutory authority and protection to override easements and other rights.

Temporary possession of land

19.4.15. Where use of land is required only temporarily this is shown coloured yellow on the onshore land plan [REP9-017]. This land is required for storage compounds during construction, including the main construction compound at Oulton airfield, and also for access roads to the cable route required during construction.

19.4.16. The NPA2017 provisions relating to TP would, in general terms, enhance the rights of APs subject to TP. However, these provisions had not come into force at the time of the application and the Applicant has not sought to incorporate any of them. This matter was explored during the Examination and is reported on further in the next section of this chapter.

Time limit for exercise of CA powers

19.4.17. Under Article 19 the Applicant has applied to vary the statutory time period for the exercise of CA powers from five years to seven years. This matter was explored during the Examination and is reported on further in the next section of this chapter.

Crown land and rights

19.4.18. As it is not possible to authorise the CA of rights over Crown land in the DCO other than those rights which already exist and are held otherwise than by or on behalf of the Crown, the Applicant is required to negotiate a separate lease with the Crown for any other rights which it requires in the plots which are Crown land.

19.4.19. Rights over Crown land are sought so section 135 of PA2008 is engaged. This land is shown separately on the Crown land plan [REP9-018]. The land is both offshore and onshore but consent for CA of an interest in Crown land held otherwise than by or on behalf of the Crown is only sought onshore. The onshore land is described in Part 4 of the Book of Reference [REP9-008].

19.4.20. Consent for CA of an interest in Crown land held otherwise than by or on behalf of the Crown is sought from the Queen's Most Excellent Majesty In Right Of Her Crown over land on the foreshore (plots 1-001, 1-002,

1-003). Written confirmation from The Crown Estate that the Commissioners consent to this was submitted by the close of the Examination [REP10-010]. This is contingent on the wording of Article 41 (Crown rights) in the version of the DCO submitted at Deadline 6 [REP6-003] rather than the final version [REP10-041].

- 19.4.21. Consent for CA of an interest in Crown land held otherwise than by or on behalf of the Crown is sought from the Secretary of State for Defence in respect of a Category 2 interest in land at the north end of the onshore cable route at Weybourne Military Camp (plots 1-005 to 1-018) and a Category 2 interest in land at the southern end between the Network Rail line and Cantley Lane (plots 30-029, 30-030). Although a representation was made which did not maintain any safeguarding objections [RR-086], the necessary consent to this from the Secretary of State for Defence had not been obtained by the Applicant at the close of the Examination.
- 19.4.22. Consent for CA of an interest in Crown land held otherwise than by or on behalf of the Crown is sought in respect of land in the ownership of the Secretary of State for Environment, Food and Rural Affairs at Bodham Wood (plot 3-031). Consent to this was given by the Forestry Commission on behalf of the Secretary of State for Environment, Food and Rural Affairs [REP8-006].

Statutory undertakers

- 19.4.23. Representations were received from Cadent Gas [RR-048, REP1-198], National Grid (for both NGET and National Grid Gas) [RR-062], UK Power Networks [RR-118] and Network Rail (NR) [AS-010, REP1-251]. Cadent Gas, UK Power Networks and National Grid Gas had withdrawn their representations by Deadline 7 [REP7-098, REP7-099, REP7-096], leaving representations outstanding from NR and NGET.
- 19.4.24. Rights over land in the ownership of NR are sought in respect of the Norwich to Wymondham railway (plot 30-028). NR made a representation [AS-010] at the start of the Examination which was not withdrawn before the end of the Examination, so the tests set out in section 127 of PA2008 are engaged and are reported on in the following section.
- 19.4.25. Rights over land owned by National Grid Electricity Transmission (NGET) are sought in respect of land at the existing Norwich Main electricity substation (plots 34-003 to 34-005, 34-008 to 34-012). NGET made a representation [RR-062] but this was withdrawn before the end of the Examination [REP10-005].
- 19.4.26. Rights over other land where statutory undertakers, including NR and NGET, currently enjoy rights and have apparatus installed are also sought as part of the application. These rights engage section 138 of PA2008 which applies irrespective of any representation or agreement. They are described in Part 3 of the Book of Reference [REP9-008].

Open space

- 19.4.27. New rights are sought over open space land as defined in section 132 of PA2008. This land is on the beach and foreshore (plots 1-001 to 1-004), at Bodham Wood (plot 3-031) and at Marriott's Way heritage trail (plots 16-016 to 16-018, 16-020 and 20-008). As well as being shown on the onshore land plan [REP9-017], these plots are also shown separately on the special category land plan [REP9-019] and described in Part 5 of the Book of Reference [REP9-008].

Funding

- 19.4.28. The application is accompanied by a funding statement, which was updated at Deadline 1 [REP1-229]. This describes how the project company, Orsted Hornsea Project Three (UK) Limited, fits in to the corporate structure and its relationship to the parent company, Orsted A/S. The project company is described as a special purpose vehicle, financed by its shareholders on a rolling budget basis in the same way as on the Race Bank and Walney Extension projects.
- 19.4.29. The updated funding statement [REP1-229] sets out the current cost estimate of £5-8 billion along with a revised estimate for contingent liability of £43.6 million. This estimate includes all liability associated with the acquisition of land or interests in land. It has been revised upwards from £28 million due to potential loss of development value (residential and commercial) and loss of minerals as explained in a letter from the Applicant's specialist advisers [REP1-137].
- 19.4.30. Paragraph 1.3.1.4 of the updated funding statement [REP1-229] states that the Applicant does not expect any claims for blight. This was explored in the Examination.
- 19.4.31. The updated funding statement [REP1-229] states that adequate funding would be available for compulsory acquisition within the statutory time period. It goes on to state in paragraph 1.4.1.5 that Article 42 (now 43) requires that powers must not be exercised unless a guarantee in respect of the liabilities of the undertaker to pay compensation is in place.

19.5. EXAMINATION OF THE CASE FOR CA AND TP POWERS

Introduction

- 19.5.1. The purpose of the examination of the CA and TP case is:
- to consider the CA and related provisions within the Applicant's preferred DCO;
 - to consider whether the conditions relating to the land being required for the proposed development or required to facilitate or be incidental to the proposed development are met; and
 - to consider whether there is a compelling case in the public interest for the CA and TP provisions.
- 19.5.2. This section of the CA and TP chapter sets out:

- whether the application documents meet the requirements of the relevant regulations and guidance;
- objections and representations made in respect of the powers being sought;
- the way in which the proposals for CA and TP powers were examined;
- a request to change the application and include additional land;
- matters outstanding at the end of the Examination;
- considerations in respect of the Human Rights Act 1998; and
- considerations in respect of the Public Sector Equality Duty.

Application documents

- 19.5.3. The application documents submitted relevant to CA and TP have been described above. The Explanatory Memorandum [APP-028] explained by reference to the draft DCO [APP-027] the powers sought to construct, operate and maintain the project. It also gives reasons for the need to vary the statutory time period from five to seven years.
- 19.5.4. The Funding Statement [APP-029] explained how the compulsory acquisition is to be funded and included information about how the project as a whole is to be funded and the business case. It also explained how the necessary funding will be secured when required.
- 19.5.5. In the Statement of Reasons [APP-032], the Applicant put its case for the CA and TP powers requested. At paragraph 7.2.1.4 the Applicant states that:

As Hornsea Three is a NSIP, the Applicant considers that there is a compelling case in the public interest for the power to compulsorily acquire land and rights over land (together with the imposition of restrictions) to be included in the Order. The extent of the Order Land is no more than is reasonably necessary for the construction and operation of Hornsea Three and is therefore proportionate and necessary. Compensation is payable to all affected landowners and occupiers.

Paragraph 7.1.1.7 of the Statement of Reasons concludes that the conditions of section 122 of PA2008 have been met.

- 19.5.6. Appendix A to the Statement of Reasons [APP-032] explained how the Applicant had gone about negotiating with landowners in respect of the land and rights required. Appendix B gave the status of negotiations with landowners and occupiers, including Crown land. Appendix C summarised the status of negotiations with statutory undertakers and Appendix D with other apparatus owners, in all cases at the time of the application.
- 19.5.7. We examined all these documents and found that they met the requirements of the relevant regulations and guidance.

Objections and representations made in respect of CA and TP

- 19.5.8. There were 150 relevant representations, of which 55 related to CA and TP issues. In addition, 3 Written Representations related to CA and TP issues.

- 19.5.9. Carter Jonas representing Saltcarr Farms Limited wrote in respect of the Applicant's request for temporary possession of land at Oulton airfield for the main construction compound [RR-104]. The representation did not object to this in principle and stated that negotiations would continue with the Applicant with a view to reaching a satisfactory agreement. However, it raised the issue of the impact of the Applicant's proposals on the Saltcarr Farms Limited pig operation and on the solar farm nearby. No further submissions were made on these matters.
- 19.5.10. Gerald Bullimore and Sherrill Bullimore [RR-002, RR-003] objected to the use of CA powers in relation to a smallholding near Kelling at the northern end of the onshore cable corridor and suggested an alternative route. Their objections were not withdrawn.
- 19.5.11. Martin Kemp [RR-051] objected to the cable route coming through his farm to the north of Norwich Road, which he said was earmarked for future development which would be sterilised. The Applicant had been unable to gain access to land to survey it and had consequently proposed two alternative access routes from Norwich Road to the cable route. The alternative access routes were discussed further in the Examination and this matter was resolved, without prejudice to Mr Kemp's overall objection to the use of CA powers in respect of his land.
- 19.5.12. The Crown Estate (TCE) submitted a relevant representation [RR-009] explaining its interests and requesting to be registered as an interested party in the Examination.
- 19.5.13. The remaining 53 representations related to the impact of the project on agricultural operations and were made by agents representing landowners who had formed themselves into the Land Interest Group (LIG). Details of these landowners and affected plots are set out in Appendix D. The National Farmers' Union (NFU) [RR-146] advised and represented the LIG in the Examination.
- 19.5.14. This arrangement was explained by NFU in its relevant representation [RR-146] and in its submission at Deadline 1 [REP1-066], which was agreed and submitted separately by the individual members of the LIG. The issues raised by NFU/LIG were:
- consultation and engagement;
 - CA and the compelling case requirement;
 - choice of transmission system;
 - booster station;
 - construction and funding;
 - cumulative impact;
 - joint bays and link boxes;
 - field drainage;
 - soils;
 - drainage;
 - dust/irrigation;
 - access routes to the Order limits;
 - access to land and the haul road; and

- request to attend hearings.

The way in which the proposals for CA and TP were examined

19.5.15. The following issues arose during the Examination:

- clarification of the nature and extent of the rights being sought, both in terms of land required and duration;
- consideration of alternatives and design flexibility and whether all of the Order land is required for the delivery of the project, with a clearly defined purpose, with particular reference to alternative cable alignments at Moor Farm, alternative accesses at Norwich Road and the crossing of the proposed Norfolk Vanguard project;
- phasing of the construction of the project;
- impact on agricultural operations;
- whether the powers of temporary possession sought are no more than are reasonably necessary, and are proportionate, both in terms of land required and duration;
- whether the extension of the time limit to exercise powers of CA from five years to seven is justified; and
- consideration of a change to the application.

19.5.16. SoCGs were requested from various parties at the Preliminary Meeting [PD-006]. Those which were of particular relevance to CA and TP were the SOCGs requested between the Applicant and:

- NGET, National Grid Gas (NGG), Cadent Gas, Network Rail, Anglian Water, Environment Agency, UK Power Networks;
- LIG; and
- Norfolk Vanguard and Norfolk Boreas (jointly) in respect of the potential interaction of powers sought by the two current applications.

Written questions

19.5.17. Following the Panel's consideration of the principal issues to be examined, the following topics were explored with the Applicant in the Examination through Written Questions [PD-008]:

- outstanding objections to the exercise of CA or TP powers;
- what reasonable alternatives to CA had been explored;
- access to land, negotiations with landowners and others affected by the project, and the acquisition of the necessary land, rights over land and temporary use of land, including at Moor Farm and Norwich Road and Crown land, whether by agreement or otherwise;
- the extent of CA both generally along the cable route (in terms of the standard working width) and also for the onshore booster station at Little Barningham and the converter/substation at Swardeston depending upon whether HVAC or HVDC transmission is selected;
- landlocked land;
- what would happen to any Order land found not to be required;
- funding, including company structure, contingent liability, blight, market risks and guarantees;
- how temporary use of land would be taken;

- the extent of temporary interference with public rights of way and open space land, both during construction and maintenance,
- 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);
- use of horizontal directional drilling;
- justification for the extension of the time limit for exercise of CA powers from five to seven years;
- the extent of creation of new rights and acquisition of existing rights;
- changes to legislative provisions including NPA2017;
- phasing and consequent duration of temporary use of land; and
- Crown rights wording.

19.5.18. The LPAs were asked by way of written questions [PD-008] whether they agreed with the Applicant that approval of a funding guarantee should be given by the Secretary of State rather than being delegated to local authorities. North Norfolk District Council did not respond and Broadland District Council and South Norfolk Council agreed [REP1-056, REP1-231].

19.5.19. Additionally, statutory undertakers were asked whether they were content with provisions authorising the Applicant to transfer the power to acquire new rights or impose restrictions and whether they were satisfied with the protective provisions being suggested by the Applicant. Highways England was asked whether its interests were adequately protected, particularly in relation to the A11 and A47 trunk roads.

19.5.20. We considered the responses to our written questions and decided to issue further written questions [PD-012] in relation to the following matters:

- the Contract for Difference (CfD) cap and alternative sources of funding;
- Crown consents under section 135 of PA2008 and drafting of the Crown rights article (now Article 41);
- whether all persons with interests in landlocked plots should be listed as Category 3 persons in Part 2b of the Book of Reference;
- the wording of Article 35 (now Article 36) and the Explanatory Note with reference to the approved guarantee or other form of security; and
- discussions with Statutory Undertakers relating to representations which are not withdrawn at the end of the Examination and the tests in sections 127 and 138 of PA 2008.

19.5.21. We considered the responses to our further written questions, received at Deadline 4, and decided to explore outstanding issues at the Compulsory Acquisition Hearing (CAH).

CA hearing

19.5.22. A CAH was held in accordance with section 92 of PA2008 [EV-020] covering the following issues:

- DCO provisions engaging CA and TP powers;

- statutory conditions and general principles;
- outstanding objections;
- choice of cable alignment at Moor Farm;
- choice of access to cable route at Norwich Road;
- impacts on farming land and interests;
- other parties who may be affected by the project;
- impacts on other land and interests;
- alternatives and design flexibility;
- funding;
- Statutory Undertakers;
- Crown land;
- public open space; and
- human rights and the Public Sector Equality Duty.

19.5.23. At the CAH, questions were put to the Applicant and other parties present were also invited to comment and to put questions through the Panel. The Applicant set out the Articles which engage CA and TP powers, using the numbering in the draft DCO as revised at Deadline 4 [REP4-003]. The Applicant put its case that the draft DCO adequately provides for compensation for both the acquisition of land or rights and the temporary use of land [REP6-012].

Protective provisions

19.5.24. The Applicant confirmed that Appendices C and D of the Statement of Reasons [REP4-009] contained the latest published position in respect of protective provisions for the benefit of Statutory Undertakers and other apparatus owners. Agreement had been reached with all parties except for Cadent Gas, NGET, NGG, Eastern Power Networks and NR. The Applicant stated that it expected to reach agreement with Cadent Gas, NGET, NGG and Eastern Power Networks before the end of the Examination [REP6-012]. Submissions from Cadent Gas [REP6-064] and NGET and NGG [REP6-063] supported the Applicant's position.

Network Rail

19.5.25. The Applicant advised that it might not be possible to reach agreement with NR before the end of the Examination and put its case [REP6-012] for the protective provisions as then drafted in part 5 of Schedule 9 to the draft DCO [REP4-003]. NR did not appear at the CAH but submitted a further written representation giving an update of its position [REP6-065]. With regard to the protective provisions, NR stated that the points of difference related to indemnity (paragraph 15) and the timing constraints in the arbitration rules (paragraph 21). The Applicant argued that the wording of NR's proposed indemnity was unduly onerous, drawing attention to the Examining Authority's report into the Hinkley Point C Connection Project in support of its position [REP6-012].

19.5.26. NR also advised that discussions were progressing on the property and asset protection agreements referred to in its Written Representation [REP1-251]. NR hoped that these would be agreed before the end of the Examination.

Temporary possession

- 19.5.27. The Applicant maintained its position that Article 6 should disapply NPA2017 insofar as it relates to TP. At ISH3 the Applicant had submitted that the TP provisions of NPA2017 should not apply because the regulations that would give effect to those provisions had not been consulted upon. NFU/LIG argued that farmers would need 3 months notice, not the 14 days in Article 6. The Applicant referred to its response to Q1.13.18 [REP1-122] and to ISH3 [REP3-005], arguing that 14 days notice was usual for DCOs and that there were no residential properties along the cable route [REP6-012]. It was also argued that the flexibility of 14 days notice meant that the undertaker would not remain in possession longer than it had to [REP3-005].

Time limit for compulsory powers

- 19.5.28. NFU/LIG did not consider it necessary to extend the time limit for exercise of compulsory powers from five to seven years [REP6-079] as this would encourage the Applicant to complete the project more quickly. The issue of timescales for implementation and phasing had been explored at ISH1 and ISH3 and is reported on in Chapter 5. At the CAH, the Applicant argued that having seven years would allow more time for HVDC technology to advance, potentially requiring a smaller land take.

Phasing

- 19.5.29. Following on from the Applicant's point above about HVDC technology, and in response to a question from N2RS (No to Relay Stations) about the onshore booster station, the Applicant explained that the booster station could be built in two phases. If the first phase were built as HVAC and the second as HVDC then only the booster station for the first phase (which would be smaller) would actually be built.
- 19.5.30. Concerns were also raised by NFU/LIG about phasing and how the construction would take place. They asked how it was possible for Hornsea Project 4 to be able to confirm that the cables would be installed in one phase whereas the Applicant requires the flexibility to construct the Proposed Development in two phases. NFU/LIG consider that if land were not reinstated over an eight year period that would have a big impact on farming businesses [REP6-079].

Statutory conditions and general principles

- 19.5.31. In response to our invitation to address the statutory conditions and general principles, the Applicant:
- confirmed that the application includes a request for compulsory acquisition in accordance with section 123(2) of PA2008 in section 6 of the Statement of Reasons [APP-032] and the covering letter [APP-001];
 - explained how the purposes for which CA powers are sought comply with the requirements of section 122(2) of PA2008, citing sections 6 and 7 of the Statement of Reasons [APP-032];

- confirmed that consideration had been given to reasonable alternatives, as set out in paragraph 6.3.2.9 of the Statement of Reasons [APP-032] and also under Site Selection and Alternatives in the Environmental Statement Chapter 4 Volume 1 [APP-059];
- argued that the rights to be acquired, including those for TP, were necessary and proportionate, citing paragraph 7.2 of the Statement of Reasons [APP-032]; and
- explained that, in accordance with section 122(3) of PA2008, there is a compelling case in the public interest for the land to be acquired compulsorily, referring to sections 7.6, 7.8 and 8 to justify its position, and arguing that the public interest in the project outweighs any interference with private rights [REP6-012].

19.5.32. There were no comments from any of the other parties present on the statutory conditions.

Outstanding objections to CA and TP

19.5.33. The Applicant advised that the majority of landowners were represented by LIG and were in regular discussions. Other landowners had also instructed solicitors and only two were not engaging with the process.

Voluntary agreement

19.5.34. The Applicant clarified its response [REP4-012] to our written question (Q1.14.29), confirming that it is seeking CA powers where there is voluntary agreement over both land and rights. The Applicant considers this is necessary to ensure that the project is delivered in the event that

- the landowner does not comply with the terms of the agreement; or
- the landowner becomes insolvent; or
- previously undiscovered land interests are discovered.

Blight

19.5.35. The Applicant confirmed its view, expressed in its response [REP4-014] to our written question (Q1.14.10) and in the Funding Statement [REP1-228], that no claims for statutory blight were expected.

Alternative cable alignments at Moor Farm

19.5.36. The Applicant referred to paragraphs 5.2.2.1 to 5.2.2.5 of the Statement of Reasons [REP4-009] and confirmed its response [REP1-122] to our question (Q1.14.24 [PD-008]) that negotiations were continuing. Both alignments were shown on sheet 16 of the Onshore Land Plan [APP-011, REP4-103] In response to our questions the landowner's representative expressed the view that, should no agreement be reached, then the western option would be preferred [REP6-079].

Alternative site accesses at Norwich Road

19.5.37. The Applicant stated that negotiations continued in respect of the options referred to in paragraphs 5.2.3.1 to 5.2.3.4 of the Statement of Reasons [REP4-009]. The landowner had to date refused to allow access for surveys to determine the better option [REP1-122]. Both accesses were

shown on sheet 30 of the Onshore Land Plan [APP-011, REP4-104]. In response to our questions the landowner's representative expressed the view that, should no agreement be reached, then the western option would be preferred. This view was without prejudice to the landowner's objection in principle to the cables crossing his land [REP6-012, REP6-069].

Impacts on farming land and interests

- 19.5.38. NFU and LIG were invited to set out the outstanding issues following the Relevant Representations and subsequent submissions, particularly those following the earlier OFH and ISH [RR-146, REP1-066, REP3-104, REP3-105, REP3-106, REP3-109]. These related to:
- phasing;
 - agricultural liaison officer;
 - field drainage; and
 - soil storage and reinstatement.
- 19.5.39. The main points of difference on phasing related to the uncertainty of timescales (and consequent need for haul road security) and the different approach being taken by the Applicant in relation to Hornsea Project 4, where a single construction phase was being proposed [REP6-079]. The Applicant replied that phasing proposals for Hornsea Project 4 were not yet fixed and that the two projects should not be compared [REP6-012].
- 19.5.40. NFU/LIG asked what the Agricultural Liaison Officer's responsibilities would be and wanted to see more detail in the Outline Code of Construction Practice (CoCP), particularly in respect of experience from similar projects and helpline availability. NFU/LIG considered that the Agricultural Liaison Officer should be involved in access to severed land. Following the hearing, wording was agreed with the Applicant for inclusion in the revised Outline CoCP [REP6-079].
- 19.5.41. NFU/LIG considered that field drainage would be a major issue once the cables were laid and that more detail was required in the Outline CoCP. Following the hearing, wording was agreed with the Applicant for inclusion in the revised Outline CoCP [REP6-079].
- 19.5.42. NFU/LIG stated that, although the Outline CoCP submitted at Deadline 4 [REP4-023] contained more detail about soil storage and reinstatement, they remained concerned. They explained that the methodology would be important to ensure that the soil can be restored to agricultural use as soon as possible. NFU/LIG argued for the soil to be replaced in the cable trenches as the duct laying progressed, so as to return the land to productive use as soon as possible and hence minimise the impact on farming operations. They explained that this methodology was used on the Triton Knoll project and will also be used for Hornsea Project One. NFU/LIG provided details of their preferred methodology for the Applicant's consideration [REP6-079].
- 19.5.43. The Applicant agreed to consider this for inclusion in the Outline CoCP [REP6-012]. However, in response to our questions at the CAH, the

Applicant stated that cable testing had to be done over the entire length of each cable. Failures could occur anywhere along the route, both at joints and in the cable itself. Replacing soils as soon as the ducts were laid might mean having to return and dig up the land again in order to fix faults. Even if a failure were at a joint, vehicular access would still be required which would mean driving over reinstated soil. This would be counterproductive [REP6-012, REP6-045].

- 19.5.44. There were no further comments from any of the other parties present on impacts on farming land and interests.

Temporary use of land

- 19.5.45. We sought clarification of the Applicant's response [REP1-122] to our question (Q1.14.22) [PD-008] about any mitigation works that may be needed in relation to temporary use of land for maintenance. The Applicant responded that such land would be reinstated in accordance with Article 27, so no specific mitigation was envisaged [REP6-012].

- 19.5.46. The Applicant referred to the Communication Plan Framework set out in the Outline CoCP [REP4-023]. Appendix A to the Outline CoCP requires notification of the extent of land required 4 months in advance of construction.

Alternative means of access

- 19.5.47. We asked whether the alternative means of access to the main construction compound at Oulton airfield, proposed by Oulton Parish Council, was still being actively considered. (This matter is also discussed in Chapter 10). The Applicant explained that Norfolk County Council was content with its proposals for improvement works to the proposed access [REP4-019] and that, in any event, it had not been possible to obtain consent from all the landowners for the alternative access [REP6-012].

North Norfolk Railway

- 19.5.48. We asked whether the 120m corridor width needed to separate HVAC cables for safety/subsidence reasons would still be needed for HVDC cables. The Applicant confirmed that 120m would be sufficient width for either transmission system and suggested that HVDC cables, although fewer, might need to be spaced further apart.

Crossing with Norfolk Vanguard/Boreas cables

- 19.5.49. Following up on the Applicant's responses [REP1-122] to our written questions (Q1.14.43 and Q1.14.44), we asked which project's cables would be installed by horizontal directional drilling and which by open cut methods at the crossing point. The Applicant explained that both installation methods were included in the design envelope because it was not known when the cables would be installed. It was likely that the first project would install cables by open cut methods and the second project would install cables by horizontal directional drilling. The Applicant stated that there would be reciprocal protective provisions together with a cooperation agreement between the projects [REP6-012]. The proposed

protective provisions form Parts 8 and 9 of Schedule 9 to the Applicant's final draft DCO [REP10-041].

Alternative sources of funding

- 19.5.50. In response to our questions, the Applicant explained how power purchase agreements could work as an alternative to CfD as funding sources to deliver the project. The Applicant advised that no further updates to the Funding Statement [REP1-229] were anticipated and that the anticipated form of guarantee was a parent company guarantee [REP6-012].

Statutory Undertakers

- 19.5.51. There were no Statutory Undertakers present at the hearing. In response to our questions, the Applicant confirmed that negotiations were continuing and that:
- agreement had been reached with all parties except for Cadent Gas, NGET, NGG, Eastern Power Networks and NR;
 - agreement with Cadent Gas, NGET, NGG and Eastern Power Networks was expected before the end of the Examination; and
 - it might not be possible to reach agreement with NR before the end of the Examination.

Request to change the application and include additional land

- 19.5.52. The Applicant submitted proposed changes to the application [REP4-008] which related to the access to the proposed onshore booster station at Little Barningham and to the cable route at the John Innes field. The changes are described more fully in Chapter 2. The change request included a request for CA of additional land as defined in Regulation 2(1) of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (as amended).
- 19.5.53. The ExA decided to accept the proposed changes and provision for the CA of additional land as part of the application [PD-013]. The changes were duly publicised, and no relevant representations made. A further CAH was held [EV-032] at which questions were put to the Applicant about the changes to the application and other parties present were also invited to make representations.
- 19.5.54. The Applicant explained why it considers that the additional land is required and why there is a compelling case in the public interest that the additional land be acquired compulsorily [REP10-036]. The Applicant also explained that section 4 of the application for additional land [REP4-008] sets out how the requirements of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (as amended) are met. The Applicant confirmed that certificates had been submitted in accordance with Regulation 9 certifying compliance with Regulations 7 and 8 of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (as amended).

- 19.5.55. We invited any affected persons and/or interested parties to make oral representations on matters relating to the proposed CA of additional land. There were no persons present wishing to be heard.

Matters that were outstanding at the end of the Examination

- 19.5.56. At the CAH the Applicant stated that NGG [REP7-096], Cadent Gas [REP7-098] and UK Power Networks on behalf of Eastern Power Networks [REP7-099] had withdrawn their objections. Subsequently, NGET also withdrew its objection [REP10-005].
- 19.5.57. At the end of the Examination, the choice of alternative cable alignments at Moor Farm and the choice of alternative accesses at Norwich Road, both of which had been explored at the CAH, had been agreed. The BoR, land plans and SoR were updated to reflect the options removed at Moor Farm and Norwich Road [REP9-008, REP9-017, REP9-011]. We note that there is a typographical error in paragraph 5.2.3.2 of the Statement of Reasons [REP9-011] where the word "East" should read "West" as it is plainly the western access option at Norwich Road which has been chosen.
- 19.5.58. There is no SoCG between the Applicant and LIG, nor any final representation from LIG confirming the matters it is in agreement or disagreement with. However, our understanding is that most of the detailed matters of disagreement between the Applicant and LIG have been resolved, including through the additions outlined above to the Outline CoCP. The main remaining matters of disagreement appear to be LIG's concerns regarding soil reinstatement and construction over two phases, leading to greater impacts on farm businesses.
- 19.5.59. In addition to the outstanding objections from members of LIG, the following CA objections remained outstanding:
- Gerald Bullimore and Sherrill Bullimore;
 - Martin Kemp; and
 - Saltcarr Farms Limited.
- 19.5.60. The following Examination issues also remained unresolved:
- Consent had been obtained from TCE but this was conditional on specific wording of Article 41;
 - Consent had not been obtained from the Ministry of Defence; and
 - Network Rail had not withdrawn its objection.

Article 41 - Crown rights

- 19.5.61. Rights over Crown land are sought from the Queen's Most Excellent Majesty In Right Of Her Crown over land on the foreshore (plots 1-001, 1-002, 1-003). As discussed further in Chapter 20, TCE's submission at Deadline 10 [REP10-010] gives its consent for the purposes of section 135(1) and/or section 135(2) of PA2008 subject to the inclusion of specific wording for Article 41 including the following:

(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-

(a) to take, use, enter upon 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)

- 19.5.62. The ExA's schedule of changes to the draft DCO [PD-017] suggested deletion of the word "take" on the basis that it is not possible to "take" Crown land. Whilst we remain of the view that the word "take" is unnecessary, we are mindful that the consent of the Crown Estate under section 135 is conditional upon its preferred wording being used. This wording is very similar to the wording put forward by the Applicant at Deadline 6 [REP6-003]. We therefore recommend that Article 41 is amended to adopt the wording preferred by TCE.

Ministry of Defence

- 19.5.63. The Applicant has been unable to secure the consent required under section 135 of PA2008 in relation to Crown land at Weybourne Military Camp (plots 1-005 to 1-014, 1-017, 1-018) and land west of Cantley Lane (plots 30-029, 30-030). We comment further on this matter below.

Network Rail

- 19.5.64. The Applicant and NR did not reach agreement by the end of the Examination and each submitted their preferred protective provisions [REP10-039, REP10-016]. Since NR submitted its original written representation [REP1-251], the Applicant had revised the protective provisions [REP4-003] and added paragraphs on the transfer of the benefit of the Order (paragraph 20) and arbitration (paragraph 21).
- 19.5.65. In its final submissions [REP9-084, REP10-016] NR states that it cannot withdraw its representation. The amendments it is seeking to the Applicant's proposed protective provisions relate to:
- Paragraph 4 (compulsory acquisition powers);
 - Paragraph 15 (indemnity);
 - Paragraph 20 (transfer of the benefit of the Order); and
 - Paragraph 21 (arbitration).
- 19.5.66. Paragraph 4 was deleted from the draft DCO [REP9-003] (see below) so the disputed paragraphs in the Applicant's preferred draft DCO are:
- Paragraph 14 (indemnity);
 - Paragraph 19 (transfer of the benefit of the Order); and
 - Paragraph 20 (arbitration).
- 19.5.67. Paragraph 4 of NR's suggested protective provisions would require the Applicant to obtain NR's express consent before exercising its powers in respect of NR property. NR regards this as crucial because of its statutory duty to operate, maintain and renew a safe national rail network and comply with its network licence. NR submits that the rights and restrictions sought by the Applicant would interfere with its statutory

duty. Consequently, in respect of the test at s127(6) of PA2008, NR submits that the rights and restrictions sought cannot be created without serious detriment to NR's undertaking and that no land is available to NR to make good any detriment caused.

- 19.5.68. In response, the Applicant argues that in order to ensure deliverability of Hornsea Three it cannot agree to restrict the use of CA powers unless and until there is a voluntary agreement in place. The Applicant advises that, although Heads of Terms are agreed, there is as yet no voluntary agreement in place. The Applicant deleted paragraph 4 from its protective provisions, arguing that paragraph 5 (now 4) of the protective provisions requires any works to be approved by Network Rail and therefore there will be no serious detriment to NR's undertaking [REP10-042]. As this submission was made at the end of the Examination, NR did not have an opportunity to respond.
- 19.5.69. NR argues that paragraph 15 (now 14) of the Applicant's protective provisions would not provide an indemnity to NR in respect of indirect or consequential losses. NR's suggested protective provisions include a standard indemnity in respect of delays caused to train operators. This would enable NR to recover relevant costs and other consequential losses. NR also submits that it should not be required to provide advance details of agreements with train operators as this would create an unnecessary administrative burden and risk invalidating the indemnity. In response, the Applicant argues that it does not seek full details of any such agreements. However, it would need details of the relevant terms in order to be able to understand the extent of its potential liability and to be able to obtain insurance cover. The Applicant considers that its suggested protective provisions would provide sufficient protection.
- 19.5.70. Paragraph 19 of the Applicant's protective provisions would give NR 14 days to consider any proposed transfer of the benefit of the Order, whereas NR argues that it requires 28 days. The Applicant argues that 14 days would be sufficient as it would be for the SoS, rather than NR, to decide whether the proposed transferee is suitable.
- 19.5.71. Paragraph 20 of NR's protective provisions would require the arbitrator (as well as the undertaker) to agree to any extension of time (for example if there was a dispute about approval of engineering details) where NR can demonstrate that it is unable to comply with the time limit. The Applicant argues that it is unnecessary to include the arbitrator as paragraph 5(3) of the Arbitration Rules at Schedule 13 to the draft DCO already requires the arbitrator to approve any extensions of time provided that they are reasonable.

Gerald Bullimore and Sherrill Bullimore

- 19.5.72. Gerald Bullimore and Sherrill Bullimore [RR-002, RR-003] objected to the use of CA powers in relation to a smallholding near Kelling at the northern end of the onshore cable corridor and suggested an alternative route.

Martin Kemp

- 19.5.73. Martin Kemp [RR-051] objected to the cable route coming through his farm at Norwich Road, which he considers to be earmarked for future development. His concern is that development would be sterilised. As noted above, the issue of alternative access routes to Mr Kemp's land was discussed in the Examination and was resolved, without prejudice to Mr Kemp's overall objection to the use of CA powers in respect of his land.

Saltcarr Farms Limited

- 19.5.74. The Applicant seeks temporary possession of land at Oulton airfield for the main construction compound. The representation from Saltcarr Farms Limited [RR-104] did not object to this in principle and stated that negotiations would continue with a view to reaching a satisfactory agreement. However, it raised the issue of the impact of the Applicant's proposals on the Saltcarr Farms Limited's pig operation and on a solar farm nearby. Access to the solar farm passes through land that would be subject to TP. No further submissions were made on these matters, so it is not known whether any agreement was reached.

Human Rights

- 19.5.75. Human rights were considered at the CAH with reference to:
- Article 1 of the First Protocol to the European Convention on Human Rights (ECHR);
 - Article 6 of the ECHR;
 - Article 8 of the ECHR;
 - the degree of importance to be attributed to the existing uses of the land which is to be acquired; and
 - the weighing of any potential loss of ECHR rights against the public benefit.
- 19.5.76. The Applicant explained its position with respect to the ECHR by reference to section 7.8 of the Statement of Reasons [REP4-009], arguing that any infringement of ECHR rights would be proportionate and legitimate, that the provisions in the draft DCO strike a fair balance between the public interest in the development going ahead and the interference with the rights of those affected, and that any interference would be in accordance with the law.

Public Sector Equality Duty

- 19.5.77. In respect of the Public Sector Equality Duty (PSED), the Applicant referred to the Equalities Impact Assessment [REP3-013] which stated that:

the assessment concludes that no differentiated or disproportionate impacts on groups with protected characteristics under the Equalities Act are predicted as a result of any phase of Hornsea Three

- 19.5.78. There were no representations made by any parties in respect of the Equalities Impact Assessment or the PSED.

19.6. CONCLUSIONS

General consideration of the Applicant's case

- 19.6.1. We conclude elsewhere in this report that development consent should not be granted. Consequently, the compelling case in the public interest for the land to be acquired compulsorily has not been made out. However, we are mindful that the SoS may conclude that development consent ought to be granted. We have examined the case for CA and TP on that basis and our conclusions are set out below.
- 19.6.2. We have examined all the relevant application documents and documents submitted by the Applicant during the Examination and find that they meet the requirements of the relevant regulations and guidance.
- 19.6.3. In respect of the change to the application, we are satisfied that the requirements of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (as amended) are met.
- 19.6.4. As the Applicant seeks CA powers within the draft DCO [APP-027] for both land and rights over land, the requirements of section 123(2) of PA2008 are satisfied.
- 19.6.5. We have considered carefully both the case put by the Applicant in the Statement of Reasons and the Relevant Representations from Affected Persons. We have also given careful consideration to the responses to our written questions and to submissions made at the CA hearings, both by the Applicant and by Affected Persons.
- 19.6.6. We note that the Applicant has engaged in extensive discussions with landowners, including through the LIG, with a view to reaching agreement where possible. We consider that the Applicant has explored reasonable alternatives to CA, and that CA would be exercised only over the land required.
- 19.6.7. We acknowledge that the amount of land required would depend upon the final choice of transmission system. In Chapter 5 we have concluded that the Applicant has explained its reasons for seeking design flexibility in respect of the transmission system and has justified the approach it has taken to these matters and to design flexibility generally. On that basis we are satisfied that the Applicant has a clear idea of how the land which is to be acquired is to be used and that all the land is reasonably required in order to deliver the project.
- 19.6.8. Elsewhere in this report, we have considered and weighed the merits of the project against policy objectives, notably EN-1 and EN-3. We conclude that the Proposed Development would make a substantial contribution to the delivery of renewable energy. To this extent it would support the objectives of EN-1 and EN-3. Accordingly, we attach substantial weight to the contribution it would make towards meeting the national need demonstrated by EN-1.

- 19.6.9. We recognise that the Applicant's approach to design flexibility and phasing would lead to some uncertainty for landowners in respect of the amount of land required and the timing of the exercise of compulsory powers. On the other hand, we consider that the Communication Plan Framework set out in Appendix A to the Outline CoCP would mitigate the effects of uncertainty on landowners.
- 19.6.10. Having regard to the effects of the project on Affected Persons overall and having taken into consideration the mitigation proposed by the Applicant, we find that (if the SoS is minded to grant development consent) there would be a compelling case in the public interest for this nationally significant infrastructure project to go ahead. The public benefit would outweigh the private loss which would result.
- 19.6.11. Accordingly, we are satisfied that, if the SoS concludes that development consent should be granted, the relevant statutory tests and guidance would be met, both in respect of the original application and the changes to it. Having concluded on the general case, we next consider individual objections before reaching our final conclusion on CA and TP matters.

Consideration of individual objections and issues

- 19.6.12. There were 55 Relevant Representations and 3 Written Representations relating to CA and TP matters. Of these, 53 were submitted by NFU/LIG and related to shared concerns about impacts on farming operations. The other representations were from:
- Gerald Bullimore and Sherrill Bullimore (two representations);
 - Martin Kemp;
 - Saltcarr Farms Limited; and
 - TCE in respect of Crown land.

Land Interest Group

- 19.6.13. LIG represents 53 landowners who have submitted objections to CA and/or TP powers. The case for these landowners was put collectively by NFU/LIG. The Applicant has engaged with NFU/LIG on generic issues and, at the same time, has sought to negotiate with individual landowners with a view to securing the necessary rights by agreement. The Applicant's CA Schedule [REP9-014] sets out, for each owner or occupier, the plot numbers, the nature of the rights sought and the status of negotiations by the close of the Examination. The names of the landowners represented by LIG, and the relevant plots numbers, are set out in Appendix D. The comments that follow apply to all the plots listed in Appendix D.
- 19.6.14. We note that discussions are underway with most of the landowners and that many have reached the stage of agreeing heads of terms and instructing solicitors. This demonstrates that the Applicant is seeking to acquire the necessary land and interests by agreement where possible.
- 19.6.15. The Applicant has sought to respond to the concerns raised by NFU/LIG, primarily through discussions on the Outline CoCP which continued throughout the Examination. As noted in Chapter 9, our understanding is

that most of the detailed matters of disagreement between the Applicant and LIG have been resolved. The remaining matters of disagreement appear to be soil reinstatement and the potential for two phases of construction.

- 19.6.16. With regard to soil reinstatement, we conclude in Chapter 9 that we are generally satisfied that the Applicant has proposed reasonable measures to deal with soil management during and after the construction process.
- 19.6.17. The issue of phasing is reported on in Chapter 5 where we conclude that the ability to implement the Proposed Development on a phased basis is justified on the basis that it would improve the prospects for delivery of the NSIP. This issue is closely aligned with the proposed variation of the time limit for the exercise of CA powers from five years to seven years. Drawing on our conclusions in Chapter 5, we consider that varying the time limit as proposed would be beneficial because of the flexibility it would permit in respect of the linked issues of phasing, emerging technology, the CfD process and overall land take. Our findings on the Applicant's general case with regard to mitigating the effects of uncertainty are pertinent to the landowners represented by NFU/LIG.
- 19.6.18. We have examined the arguments put by the Applicant and by others in respect of the inclusion of certain provisions of NPA2017 related to the temporary possession of land. At present there is uncertainty as to how these provisions would be applied in respect of NSIPs. We note that other projects have disapplied these provisions and we consider that it would be reasonable to disapply them here. We therefore conclude that the Applicant's wording of Article 6(b) is acceptable.
- 19.6.19. In respect of the landowners represented by NFU/LIG, we conclude that, if the SoS concludes that development consent should be granted, acquisition of the powers sought over the plots listed in Appendix D would be proportionate and justified by the public interest in facilitating the Proposed Development.

Gerald Bullimore and Sherrill Bullimore

- 19.6.20. The Applicant seeks new connection works rights over plot 3-012, described as grassland and smallholding, and temporary use of land at plots 3-010 and 3-013 described as grassland and access track. Gerald Bullimore and Sherrill Bullimore [RR-002, RR-003] object to the use of CA powers in respect of their smallholding near Kelling at the northern end of the onshore cable corridor. They have suggested an alternative route which would avoid the smallholding.
- 19.6.21. In response, the Applicant argues that the suggested alternative route would involve crossing the North Norfolk Railway on a bend rather than on a straight section. It would also require a greater length of horizontal directional drilling (HDD) and the creation of a new access route. The Applicant draws attention to the many factors and constraints taken into account in its site selection process. Measures to mitigate impacts on residential receptors would be secured through the CoCP. The Applicant proposes to use HDD to cross the group of smallholdings and paddocks of

which the objectors' property forms a part. This would minimise impacts on amenity uses and ecological receptors.

- 19.6.22. In Chapter 5 we noted that the crossing schedule at Appendix E to the Outline Code of Construction Practice [REP9-063] shows that HDD would be used at this location. In our view this would minimise the impacts on the smallholdings near Kelling Heath. We are satisfied that the Applicant has carried out a reasonable route refinement process taking account of a wide range of constraints and has provided reasons for the choices that it has made. We conclude that, if the SoS concludes that development consent should be granted, acquisition of the powers sought over plots 3-010, 3-012 and 3-013 would be proportionate and justified by the public interest in facilitating the Proposed Development.

Martin Kemp

- 19.6.23. The Applicant seeks new connection works rights over plot 29-016, described as public road and verge, and plot 29-017, described as agricultural land and woodland. New access rights are sought over plot 30-003 which is described as agricultural land and hedgerow. Martin Kemp [RR-051] objects to the cable route coming through his land at Thickthorn Farm, north of Norwich Road. He states that he has been promoting the land for development for 30 years and considers that the land would be sterilized by the cable corridor.
- 19.6.24. In response, the Applicant draws attention to the many factors and constraints taken into account in its site selection process which is described in the ES [APP-059]. The Applicant notes that the objector's land appears to have no development allocation, nor was it submitted as part of a recent call for sites by South Norfolk Council. Where land with genuine development potential has been identified along the onshore cable corridor route the Applicant is seeking to enter into voluntary agreements that make provision for future development [REP1-131].
- 19.6.25. Potential residential development sites are discussed in Chapter 9 where we conclude that, in general, the Proposed Development would not unreasonably fetter future housing development proposals or allocations. There is no evidence before us to show that there are any development proposals for the objector's land which are sufficiently advanced to carry weight in this Examination. In the event that the land was subsequently deemed to have development value, that would be a matter for compensation which is not within our remit. We conclude that, if the SoS concludes that development consent should be granted, acquisition of the powers sought over plots 29-016, 29-017 and 30-003 would be proportionate and justified by the public interest in facilitating the Proposed Development.

Saltcarr Farms Limited

- 19.6.26. The Applicant seeks temporary use of land at plots 35-001, 35-002, and 35-003, described as access roads and hardstandings, and plot 35-004 which is described as public road, access track and verge. This land,

which is at Oulton airfield, would be used as the main construction compound.

- 19.6.27. Saltcarr Farms Limited's representation did not object to this in principle and stated that negotiations would continue with a view to reaching a satisfactory agreement [RR-104]. However, the representation raised concerns about biosecurity in relation to a pig breeding unit on land adjacent to the access road and hardstandings. That operation may have to be relocated if satisfactory risk control measures cannot be agreed. The representation also stated that the operator of an adjacent solar farm has access rights over an access road within the land that would be subject to temporary use. Those rights would need to be maintained.
- 19.6.28. In response, the Applicant states that it continues to discuss a voluntary agreement with Saltcarr Farms Limited and will ensure that provisions are put in place to maintain access during construction [REP1-131].
- 19.6.29. As there is no evidence of an agreement before us, we have treated this as an outstanding objection. In respect of the pig breeding unit, we note that the Outline CoCP [REP9-063] states that appropriate construction practices would be implemented to ensure that the potential risks of the spread of animal and plant diseases is reduced as far as practicable. There is no evidence that the pig breeding unit itself would be subject to CA powers.
- 19.6.30. In respect of the solar farm, we have no reason to think that those with interests in the Order Land (which would include rights of access) are not correctly identified in the Book of Reference. Any such parties would have had the opportunity to make representations to this Examination and any interference with such rights would be subject to compensation. We conclude that, if the SoS concludes that development consent should be granted, acquisition of the powers sought over plots 35-001, 35-002, 35-003 and 35-004 would be proportionate and justified by the public interest in facilitating the Proposed Development.

Funding

- 19.6.31. We have examined the Applicant's Funding Statement [REP1-229] through written questions and in hearings. Although the project company is a special purpose vehicle, it is financed through its shareholders on a rolling budget basis. This has been the case for other offshore wind farm projects. In this case Article 43 of the Applicant's final draft DCO would require a funding guarantee, or alternative form of security, to be approved by the SoS before any CA powers could be exercised. We consider that this would be an effective mechanism to ensure that sufficient funds would be available to meet CA compensation costs.
- 19.6.32. NFU/LIG queried whether, in the light of the Applicant's case on the need for phasing, there could be sufficient confidence that funding would be available for a second phase. In Chapter 5 we concluded that, whilst alternative sources of funding are potentially available, the probability is that the CfD process will impact on the delivery timetable. Whilst there can be no certainty as to the outcome of any future CfD process, a

scenario whereby the Proposed Development achieves CfD funding on a phased basis appears to us to be realistic. The potential for alternative sources of funding, such as power purchase mechanisms, does however add some confidence that funding would be available.

- 19.6.33. The Applicant revised its estimate of contingent liabilities during the course of the Examination [REP1-229, REP1-137]. No party has challenged the Applicant's evidence on this matter. Overall, we are satisfied that the Applicant has demonstrated that there is a reasonable prospect of the requisite funds for acquisition becoming available, and that adequate funding is likely to be available within the necessary timescale, to meet all financial liabilities arising from the exercise of the CA and TP powers sought. We do not see any reason why both phases of the project cannot be funded should that be the way the project is eventually delivered.

Statutory undertakers (sections 127 and 138)

- 19.6.34. The Applicant has negotiated with statutory undertakers and others throughout the Examination and provided regular updates on progress in the Statement of Reasons.
- 19.6.35. With the exception of NR, all representations made by statutory undertakers have been withdrawn [REP7-096, REP7-098, REP7-099, REP10-005] because agreement has been reached in respect of land (section 127(6), PA2008) and the extinguishment of rights and removal of apparatus (section 138(4), PA2008).
- 19.6.36. We have considered the need for extinguishment of rights and removal of apparatus under section 138(4) in respect of all statutory undertakers, whether or not they have made representations. All third party rights which are proposed to be extinguished, suspended or interfered with are detailed in Part 3 of the Book of Reference. Interference with these rights would be subject to the protective provisions set out in Schedule 9 of the draft DCO. We are satisfied that extinguishing such rights and removal of apparatus would be necessary for the purpose of carrying out the Proposed Development. We therefore conclude that the requirements of section 138(4) of PA2008 are satisfied.

Network Rail

- 19.6.37. The Applicant seeks new connection works rights over plot 30-028, described as railway, works and public footpath. The Applicant proposes to route the cables under the railway using horizontal directional drilling.
- 19.6.38. We have examined the arguments advanced by both the Applicant and NR in respect of the outstanding issues [REP10-016, REP10-039]. In particular, we note that the Applicant's preferred protective provisions would require full engineering details of any works carried out by the undertaker within 15m of any railway property to be approved by NR. We consider that this is an important point when assessing whether there would be serious detriment to NR's undertaking [REP10-041].

- 19.6.39. We consider it reasonable that the Applicant should be in receipt of sufficient information in respect of any agreements between Network Rail and third parties, such as train operators, to be able to understand the extent of its potential liability and to obtain insurance cover.
- 19.6.40. With regard to the transfer of the benefit of the Order, we accept that ultimately it would be for the SoS to decide whether the proposed transferee is suitable rather than NR. We therefore consider that the timescale suggested by the Applicant is appropriate.
- 19.6.41. In the event of arbitration being required, paragraph 20 of NR's protective provisions would require the arbitrator to agree to any extension of time where NR could demonstrate that it was unable to comply with a time limit. However, we consider that this is not necessary because paragraph 5(3) of the Arbitration Rules at Schedule 13 to the draft DCO already requires the arbitrator to approve any extensions of time.
- 19.6.42. In respect of the issues outstanding between the Applicant and NR, we conclude that:
- The rights sought are no more than would be necessary to deliver the Proposed Development, are proportionate, and can be purchased without serious detriment to NR's undertaking.
 - The Applicant's proposed protective provisions would provide an adequate indemnity to NR in respect of indirect or consequential losses.
 - Fourteen days is adequate for NR to be consulted on any proposed transfer of the benefit of the Order.
 - The Arbitration Rules would require the arbitrator to approve any extensions of time, so it is unnecessary to refer to this within the protective provisions.
- 19.6.43. In summary, we consider that that the Applicant's preferred protective provisions would be sufficient to ensure that the exercise of CA powers in respect of plot 30-028 would not result in serious detriment to NR's undertaking.

Conclusion on statutory undertakers

- 19.6.44. We conclude that the tests in section 127(6) and section 138 of PA2008 are satisfied.

Public open space (section 132)

- 19.6.45. The Applicant has set out its reasons for concluding that the open space land, if burdened with the rights sought in the Order, would be no less advantageous to the public than it was before. During the Examination no party sought to disagree with the Applicant's case on this matter.
- 19.6.46. The main issues in respect of interference with public open space relate to proposed beach closures for construction of the landfall works near Weybourne and to the proposed cable crossings at Bodham Wood and the Marriotts Way heritage trail.

- 19.6.47. With respect to the landfall works, we note in Chapter 9 that the main impacts would be on recreational users. The design envelope includes the potential for the cables to be installed by open cut techniques at the landfall, which would necessitate beach closures. However, any such beach closures would be temporary and relatively short term. There would be footpath diversions in place for users of the Norfolk Coast Path. The Outline CoCP [REP9-063] makes provision for Public Rights of Way Management Plans to be approved by the relevant planning authority as part of detailed CoCPs pursuant to Requirement 17.
- 19.6.48. With respect to Bodham Wood and Marriotts Way, we note that, whereas Marriotts Way is a well-used heritage trail, Bodham Wood is not a public right of way. The proposed closure of Bodham Wood would be temporary and short term. The Applicant proposes to use horizontal directional drilling to cross the Marriotts Way heritage trail, so closure would not be required and the enjoyment of this public open space would not be harmed.
- 19.6.49. Taking all these matters into account, we have considered the effects on public open space and find that the land in question would be no less advantageous than it was before. We therefore conclude that the requirements of PA2008 section 132(3) are satisfied.

Crown land (section 135)

- 19.6.50. Consent has been granted by The Crown Estate under section 135(1) of PA2008 in respect of Crown land on the foreshore, subject to:
- TCE being consulted further if any variation to the DCO is proposed which could affect any other provisions of the Order which are subject to section 135(1) and/or section 135(2) of PA2008; and
 - the inclusion and continuing application of Article 41 as drafted by TCE.
- 19.6.51. TCE's drafting of Article 41 is very similar to the Applicant's drafting at Deadline 6. We note that TCE's drafting is a condition of TCE's consent. As discussed in Chapter 20, we conclude that TCE's drafting should be adopted.
- 19.6.52. Consent from the Ministry of Defence under section 135(1) would be required in respect of plots 1-005 to 1-014, 1-017, 1-018, 30-029 and 30-030. There is no evidence before us that such consent had been granted by the end of the Examination. The SoS may wish to seek evidence that consent has been granted. Alternatively, the relevant plots would have to be excluded from the CA authorised by Articles 18 and 20.

Human rights

- 19.6.53. We considered human rights with reference 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);

- Article 8 of the ECHR (respect for private and family life, home and correspondence);
- the degree of importance to be attributed to the existing uses of the land which is to be acquired; and
- the weighing of any potential loss of ECHR rights against the public benefit.

19.6.54. We have considered these matters in relation to the application as amended. We note that the Applicant followed the statutory procedures in respect of the preparation and examination of the application and conducted proper consultations. Those affected by the proposed project have had various opportunities to make representations and to be heard, including at Open Floor Hearings and Compulsory Acquisition Hearings. Consequently, we are satisfied that there has been no interference with Article 6 rights.

19.6.55. With regard to Article 8, we have considered the effects of traffic and construction works on the living conditions of local residents in Chapters 10 and 11 of this report. Whilst we have identified that there would be impacts on living conditions, we have found that such impacts would be controlled and mitigated through the requirements attached to the recommended DCO. We do not consider that the residual impacts would be such as to amount to an interference with Article 8 rights.

19.6.56. The exercise of CA and TP powers would amount to an interference with the right to peaceful enjoyment of possessions under Article 1 of the First Protocol to the ECHR which states that

No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.

19.6.57. We have concluded that there is a national need for the proposed development, which is demonstrated by EN-1. We are satisfied that the rights sought are the minimum necessary to facilitate the delivery of this NSIP. Those whose land is affected would be entitled to compensation in accordance with the law. The Applicant has committed to mitigate the effects of uncertainty through provision of good and timely information. This would be secured through the Communication Plan Framework attached to the Outline CoCP.

19.6.58. We therefore find that, if the SoS concludes that development consent should be granted and that compulsory acquisition is necessary to facilitate the NSIP,

- any infringement of ECHR rights would be proportionate and justified in the public interest;
- the provisions in the recommended DCO would strike a fair balance between the public interest in the development going ahead and the interference with the rights of those affected; and
- any interference would be in accordance with the law.

Public Sector Equality Duty

- 19.6.59. In respect of the Public Sector Equality Duty (PSED), the Applicant referred to the Equalities Impact Assessment [REP3-013] which stated that

the assessment concludes that no differentiated or disproportionate impacts on groups with protected characteristics under the Equalities Act are predicted as a result of any phase of Hornsea Three.

- 19.6.60. There were no representations made by any parties in respect of the Equalities Impact Assessment or the PSED. We see no reason to disagree with the findings of the assessment and conclude that there is no evidence of any differentiated or disproportionate impacts on groups with protected characteristics.

19.7. OVERALL CONCLUSION IN RESPECT OF CA AND TP

- 19.7.1. Our overall recommendation is that development consent should not be granted, for reasons given elsewhere in this report. It follows that, if that recommendation is accepted, the compelling case in the public interest which is required to justify CA and TP powers has not been made out.
- 19.7.2. Nevertheless, we are mindful that the SoS may conclude that development consent ought to be granted and we have examined the case for CA and TP on that basis.
- 19.7.3. We conclude that relevant regulations and guidance relating to CA and TP have been followed by the Applicant. If the SoS concludes that development consent should be granted, then there would be a compelling case in the public interest to grant CA and TP powers to facilitate the NSIP.
- 19.7.4. There is no evidence before us that the consent required from the Secretary of State for Defence under section 135(1) of PA2008 in respect of plots 1-005 to 1-014, 1-017, 1-018, 30-029 and 30-030 has been granted. The SoS may wish to seek evidence that consent has been granted. Alternatively, the relevant plots would have to be excluded from the CA powers in Articles 18 and 20.

20. DRAFT DEVELOPMENT CONSENT ORDER AND RELATED MATTERS

20.1. INTRODUCTION

20.1.1. This section of the report describes the Development Consent Order (DCO) as applied for and the changes made to it during the Examination. It also describes matters that remained in dispute at the end of the Examination, our recommendations on those matters and the changes to the draft DCO that would result. The content of the DCO was a principal issue in our initial assessment [PD-006, Annex B].

20.1.2. For reasons related to the Habitats Regulations Assessment, which is considered in Chapter 17, we are unable to recommend to the Secretary of State (SoS) that development consent should be granted. Nevertheless, we are mindful of the fact that the SoS may conclude that development consent should be granted, perhaps following further consultations on matters pertaining to the Habitats Regulations Assessment and/ or other matters. If the SoS considers that development consent should be granted, then we would recommend that it be granted in the form set out at Appendix E. We use the term 'recommended DCO' in that context. This chapter sets out our reasoning in support of the recommended DCO at Appendix E.

20.1.3. This section is organised as follows:

- The examination of the DCO;
- The DCO as applied for;
- Changes during the Examination;
- Discussion of outstanding matters;
- Other consents;
- Nuisance; and
- Conclusion

20.2. THE EXAMINATION OF THE DCO

20.2.1. The Applicant submitted a draft DCO including two draft Deemed Marine Licences (DML) with the application [APP-027]. An Explanatory Memorandum to the DCO was also submitted [APP-028].

20.2.2. The Applicant submitted 6 iterations of the draft DCO during the course of the Examination. These sought to respond to matters raised in written and oral questions from the Examining Authority (ExA) and in written and oral submissions from other parties. Versions of the draft DCO were submitted as follows:

- Deadline 1 [REP1-133]
- Deadline 4 [REP4-003]
- Deadline 6 [REP6-003]
- Deadline 7 [REP7-003]
- Deadline 9 [REP9-003]
- Deadline 10 [REP10-041]

- 20.2.3. At each stage the Applicant provided a tracked changes version against the previous version together with a schedule of changes to the DCO and DMLs. A revised Explanatory Memorandum was submitted at Deadline 9 [REP9-005]. The Deadline 10 submissions included a final version of the schedule of changes [REP10-042] and a comparison version of the Applicant's final draft DCO against the application version [REP10-047].
- 20.2.4. We asked about the content of the draft DCO and the justification for the various provisions it contains at the following ISHs:
- ISH3, 6 December 2018 [EV-014]
 - ISH6, 30 January 2019 [EV-022]
 - ISH9, (Part 2), 8 March 2019 [EV-029]
- 20.2.5. We also sought information about the draft DCO in written questions:
- Written questions [PD-008]
 - Further written questions [PD-012]
 - Request for further information under Rule 17 [PD-026]
- 20.2.6. On 26 February 2019 the ExA issued a schedule of suggested changes to the draft DCO [PD-017]. Comments on the schedule were invited by Deadline 7.
- 20.2.7. Throughout the Examination written submissions were received which included comments on the draft DCO. In addition, several of the final SoCG recorded agreements and disagreements over the content of the draft DCO. We have taken account of all of these submissions, together with the information gained in the ways set out above, in reaching our recommendations on the DCO.

20.3. THE DCO AS APPLIED FOR

- 20.3.1. The draft DCO [APP-027] included a number of provisions to enable the construction, operation and maintenance of the Proposed Development. The structure of the DCO as originally applied for was as follows:
- Part 1: Article 1 sets out what the DCO may be cited as and when it would come into force. Article 2 sets out the meaning of various terms;
 - Part 2: Articles 3 and 4 provide development consent for the Proposed Development and allow it to be constructed and maintained. Article 5 sets out who has the benefit of the powers of the DCO and how those powers can be transferred. Articles 6 and 7 relate to the application and modification of legislative provisions and defence to proceedings in respect of statutory nuisance;
 - Part 3: Articles 8 to 13 provide powers in relation to street works. These include the ability for the undertaker to be able to carry out works to and within streets, create or improve accesses, temporarily stop up streets and to be able to divert and temporarily stop up public rights of way;

- Part 4: Articles 14 to 16 set out supplemental powers relating to discharge of water, protective works to buildings and authority to survey and investigate land onshore;
- Part 5: Articles 17 to 28 provide for the undertaker to be able to compulsorily acquire the Order land and rights over it and to be able to temporarily use parts of the Order land for the construction or maintenance of the Proposed Development. Provision is made for compensation to affected persons where that is not already secured elsewhere. These articles also provide for powers in relation to equipment of statutory undertakers;
- Part 6: Articles 29 and 30 provide powers for the operation of the generating station and the provision of the DMLs in Schedules 11 and 12 of the DCO; and
- Part 7: Articles 31 to 42 include various general provisions in relation to the Order:
 - Articles 31 to 40 include provisions such as application of statutes relating to leases, that the Order land will be operational land, felling and lopping of trees and removal of hedgerows, certification of documents relevant to the DCO, arbitration in case of disagreements under the DCO, an ability to use the appeal mechanism in section 78 of the 1990 Act where a consent required under a requirement of the DCO is refused, abatement of works abandoned or decayed, saving provisions for Trinity House and a provision in respect of Crown land and rights;
 - Article 41 provides protection for statutory undertakers through the protective provisions; and
 - Article 42 provides a requirement for the undertaker to put into place a guarantee or alternative form of security in advance of exercising powers under Part 5 of the Order.

20.3.2. There are 13 Schedules to the DCO, providing for:

- the description of the Authorised Project and ancillary works (Parts 1 and 2 of Schedule 1);
- the requirements applying to it (Part 3 of Schedule 1);
- matters in relation to streets and public rights of way (Schedules 2 to 5);
- land in which new rights may be acquired (Schedule 6);
- amendments to statutes to ensure appropriate compensation is payable where new rights over land are acquired (Schedule 7);
- land which may be used temporarily for the Authorised Project (Schedule 8);
- provisions protecting statutory undertakers and their apparatus (Schedule 9);
- list of hedgerows that may be removed pursuant to Article 33 (Schedule 10)
- the DMLs (Schedules 11 and 12): and
- arbitration rules (Schedule 13).

20.3.3. Although there were numerous changes to the draft DCO during the Examination, described in more detail below, this broad structure did not

change.

20.4. CHANGES DURING THE EXAMINATION

- 20.4.1. This section of the report sets out the main ways in which the draft DCO changed during the Examination. There were also many minor changes, corrections and drafting improvements. These are recorded in the Applicants schedule of changes [REP10-042] and can be seen in the various track changes versions of the draft DCO. It is not necessary to record them all here.
- 20.4.2. Table 2 sets out the most significant changes which were made during the course of the Examination, as reflected in the Applicant's final draft DCO [REP10-041]. There have been changes to the numbering of articles, requirements and conditions of the DMLs in the various iterations of the DCO. In the rest of this chapter we have used numbering from the recommended DCO (as attached at Appendix E) unless indicated otherwise.
- 20.4.3. The changes set out in Table 2 generally flowed from discussions at hearings, responses to our questions and submissions from other parties. We are satisfied that these changes are justified by the evidence we have heard and we recommend that they be included in the DCO if the SoS concludes that development consent should be granted.

Table 2: Changes made by the Applicant during the Examination

Provision	Change	ExA comment
Article 2 Interpretation	<i>Deadline 1</i> Removal of offshore site preparation works from the definition of "commence"	Responds to Marine Management Organisation (MMO), Natural England (NE) and ExA (Q1.13.5) [PD-008] and ensures that works such as sandwave clearance would be within the scope of the DML conditions
Article 2 Interpretation	<i>Deadline 1</i> New definition of "In principle Hornsea Three Southern North Sea Site of Community Importance Site Integrity plan"	Responds to NE and provides mitigation for impacts on marine mammals An amendment to this definition is recommended in the following section

Provision	Change	ExA comment
Article 2 Interpretation	<i>Deadline 4</i> Amended definitions of "joint bay" and "link box"	Responds to ExA request for greater clarity at ISH3
Article 14 Alter layout of streets	<i>Deadline 4</i> New article providing powers to lay out passing places in highways	Proposed by the Applicant to deliver mitigation in relation to construction traffic
Articles 22, 23 and 24 Powers of acquisition	<i>Deadline 1</i> Drafting amendments to align with wording used in recently made DCOs	Proposed by the Applicant to reflect the approach of recently made DCOs
Schedule 1, Part 1 – Authorised project		
Work No 8	<i>Deadline 1</i> Addition of "up to 440 joint bays"	Responds to a question from the ExA (Q1.13.36) [PD-008]
Schedule 1, Part 3 - Requirements		
R2 Detailed offshore design parameters	<i>Deadline 1</i> New limit of 9km ² for total rotor swept area in place of parameters for alternative types of turbine that may be used	The ExA had asked whether the original drafting covered the range of turbines that may be used (Q1.13.38) [PD-008]. The change responds to that question
R5 Detailed offshore design parameters	<i>Deadline 4</i> New limit on the number of cable crossings which is not to exceed 44	Responds to NE
R6 Phasing	<i>Deadline 4</i> Addition to limit the number of phases of	Responds to a question from the ExA following

Provision	Change	ExA comment
	construction to two, save that each phase may be undertaken in any number of stages	discussion of phasing at ISH1 and ISH3
R7 Detailed design approval onshore	<i>Deadline 1</i> Inclusion of materials <i>Deadline 4</i> Amendment to ensure design would be substantially in accordance with Design Objectives and Principles	Responds to North Norfolk District Council (NNDC) Proposed by the Applicant
R8 Landscaping	<i>Deadline 4</i> Amendment to ensure that tree and hedgerow surveys are done and a landscape plan has been approved before onshore site preparation works are commenced <i>Deadline 7</i> More detailed specification of the content of the landscape plan	Responds to local authorities Responds to discussions with local authorities at and following ISH6
R10 Ecological Management Plan	<i>Deadline 1</i> Amendment requires plan to be approved before onshore site preparation works commence	Responds to question from the ExA (Q1.13.8) [PD-008]
R11 Highway accesses	<i>Deadline 4</i> Amendment to ensure that visibility splays are secured	Responds to North Norfolk County Council (NCC)
R13 Surface and foul water drainage	<i>Deadline 4</i> Reference to NCC as lead local flood authority	Responds to NCC

Provision	Change	ExA comment
R15 Surface water	<i>Deadline 4</i> Specification of the content of the surface water scheme (further drafting changes at Deadline 6)	Responds to NCC
R16 Onshore archaeology	<i>Deadline 1</i> Amendment to ensure that the written scheme of investigation is approved before site preparation works commence	Responds to a question from the ExA (Q1.13.8) [PD-008]
R17 Code of Construction Practice	<i>Deadlines 1, 4 and 7</i> Addition of implementation clause, commencement to include onshore site preparation works, provision for consultation with Statutory Nature Conservation Body	Responds to ExA and local authorities
R18 Construction traffic management plan	<i>Deadlines 1 and 4</i> Addition of implementation clause, commencement to include onshore site preparation works	Responds to ExA and local authorities
R21 Noise (operational phase)	<i>Deadline 4</i> Amendment to include noise monitoring and methodology for measurement	Responds to local authorities, particularly in relation to potential for tonal noise and hum
R22 Local skills and employment	<i>Deadline 4</i> Amendment to clarify determining authorities for skills and employment plan, which may relate to Norfolk and/or Humber	Responds to question from the ExA (Q2.13.10) [PD-012]
R23	<i>Deadlines 4, 6 and 7</i>	Responds to questions from the ExA and

Provision	Change	ExA comment
Onshore Decomm- issioning	Amendments to timescales and to avoid pre-judging the decision of the planning authority	comments from local authorities at hearings
R24 Notification of generation of power	<i>Deadlines 4 and 9</i> New requirement to notify the MMO and the relevant planning authority upon first generation of power from each phase	Responds to requests from NE and NNDC to provide clarity on the completion of the construction phases (or phases)
Schedule 7 – Modification of compensation and compulsory purchase enactments for creation of new rights		
Paragraphs 2 to 10	<i>Deadline 1</i> Modified to align with wording set out in recently made DCOs	Changes either proposed by the Applicant or made in response to question from the ExA (Q1.13.59) [PD-008]
Schedule 9 – Protective provisions		
Part 2 National Grid	<i>Deadline 6</i> Amended drafting agreed with National Grid	Responds to National Grid
Part 3 Cadent Gas	<i>Deadline 6</i> Amended drafting agreed with Cadent Gas	Responds to Cadent Gas
Part 5 Network Rail	<i>Deadlines 4 and 9</i> Changes as a result of ongoing discussions with Network Rail	Responds to Network Rail (Note – see below for unresolved matters relating to Network Rail)
Schedule 11 – Deemed Marine Licence (generation assets)		
Article 1 Interpretation	<i>Deadline 1</i> Removal of offshore site preparation works from the definition of “commence”	Responds to MMO, NE and ExA (Q1.13.60) [PD-008] and ensures that works such as sandwave clearance would be within

Provision	Change	ExA comment
		the scope of the DML conditions
Article 1 Interpretation	<i>Deadline 6</i> Definition of Development Principles added	Proposed by the Applicant
Article 1 Interpretation	<i>Deadline 1</i> New definition of "In principle Hornsea Three Southern North Sea Site of Community Importance Site Integrity plan"	Responds to NE and provides mitigation for impacts on marine mammals An amendment to this definition is recommended in the following section
Article 2 Details of licensed marine activities	<i>Deadline 1</i> Amended to clarify that material from sandwave clearance would be deposited within the Order limits	Responds to NE
Condition 1 Design parameters	<i>Deadline 1</i> New limit of 9km ² for total rotor swept area in place of parameters for alternative types of turbine that may be used	The ExA had asked whether the original drafting covered the range of turbines that may be used (Q1.13.38) [PD-008]. The change responds to that question
Condition 2(8) Design parameters	<i>Deadline 4</i> New limit on the number of cable crossings which is not to exceed 44	Responds to MMO, NE and ExA question (Q2.13.13) [PD-012]
Condition 2(9) Design parameters	<i>Deadline 4</i> Limits on the amount of infrastructure to be located in the Markham's Triangle recommended MCZ in the event that it is designated as an MCZ	Responds to stakeholders regarding securing the commitment to reduce infrastructure in Markham's Triangle (should it be designated)

Provision	Change	ExA comment
Condition 3(1) Design parameters	<i>Deadline 1</i> Amendment clarifies that the volume of cable protection does not include cable crossings	Responds to MMO concern regarding consistency between ES and DCO/DMLs
Condition 3(3) Design parameters	<i>Deadline 9</i> Addition to ensure that no more than 10% of the length of cables in any marine protected area is subject to cable protection	Responds to a suggestion from the ExA (F3.4) [PD-020] seeking to secure the position assessed in the ES
Condition 3(4) Design parameters	<i>Deadline 10</i> Addition to ensure that any cable protection authorised by the DML must be deployed within 15 years	Responds to a suggestion by MMO
Condition 4 Phasing	<i>Deadlines 1 and 4</i> New condition, amended at Deadline 4 to limit the number of phases to two, save that each phase may be undertaken in stages	Consistent with the change to DCO Requirement 6
Condition 6 Extension of time periods	<i>Deadline 1</i> New condition to enable time periods for MMO approvals under the DML to be extended by agreement	Seeks to respond to MMO's concern regarding the 4 month period for approval of pre-commencement plans and documents
Condition 7(11) Notifications	<i>Deadlines 7 and 10</i> Amendment seeks to mitigate safety risks to fishing operations from cable exposures	Responds to a suggestion from the ExA at ISH9 following concerns expressed by the NFFO
Condition 10 Aviation safety	<i>Deadline 4</i> Amendment requiring provision of aviation safety lighting	Responds to the Defence Infrastructure Organisation

Provision	Change	ExA comment
Condition 13 Pre-construction plans and documents	<i>Deadline 4</i> Trinity House and MCA added as consultees	Responds to Trinity House and MCA
Condition 13(1)(a) Pre-construction plans and documents	<i>Deadline 4</i> Deletion of a provision whereby MMO approval for design plan would not have been needed if the design plan was in accordance with the development principles	Reflects agreement between the Applicant and MMO
Condition 13(1)(h) Pre-construction plans and documents	<i>Deadline 4</i> Amendments requiring approval of a sandwave clearance plan, a cable protection plan for designated sites, and details of areas/volumes of cable protection at cable crossings <i>Deadline 10</i> Amendment to reflect that cable protection must be deployed within 15 years of the grant of the Order	Reflects discussions between NE and the Applicant and between MMO and the Applicant Reflects discussions with MMO
Condition 13(1)(h) Pre-construction plans and documents	<i>Deadline 1</i> Amendment to require additional mitigation where cable protection exceeds 5% of navigable depth	Responds to a question from the ExA (Q1.5.3) [PD-008]
Condition 13(1)(k) and 13(1)(l) Pre-construction	<i>Deadline 1</i> Amendment to require plans for marine mammal monitoring and ornithological monitoring	Follows discussions between the Applicant and MMO

Provision	Change	ExA comment
plans and documents		
Condition 13(5) Pre-construction plans and documents	<i>Deadline 1</i> Amendment to require a Site Integrity Plan to avoid adversely affecting the integrity of the Southern North Sea candidate Special Area of Conservation in the event that driven pile foundations are used. Amendment to limit hammer energy for pile driving to that assessed in the ES	Follows discussions between the Applicant and NE and between the Applicant and MMO Amendments following designation of the Special Area of Conservation are recommended in the following section
Condition 14(5) Pre-construction plans and documents	<i>Deadline 1</i> Time period for MMO approval under Condition 13 changed from 8 weeks to 4 months	Proposed by the Applicant following discussions with MMO and NE, both of which suggest a period of 6 months
Conditions 17, 18, 19, 20 and 21 Monitoring	<i>Deadlines 1, 4, 6, 7</i> Additional wording regarding requirements for monitoring pre-construction, during construction and post-construction, timing of monitoring report and updating of cable monitoring plan	Updated to reflect discussions between the Applicant, MMO, NE, Trinity House and Historic England
Condition 22 Reporting of impact pile driving	<i>Deadline 1</i> New requirement to report noise in accordance with the UK Marine Strategy	Condition requested by MMO
Condition 23	<i>Deadline 1</i> New requirement to report location and	Condition recommended by NE

Provision	Change	ExA comment
Reporting of cable protection	volume of cable protection deployed	
Condition 24 Decomm- issioning of cable protection in marine protected areas	<i>Deadline 10</i> New requirement to submit surveys and a method statement for the recovery of cable protection within marine protected areas, including consideration of the appropriate extent of removal	Proposed by the Applicant to provide for decommissioning in marine protected areas, having regard to any new removal techniques available at that time
Schedule 12 – Deemed Marine Licence (transmission assets) Note – there are changes within Schedule 12 which reflect changes to equivalent provisions in Schedule 11. These are not recorded separately here but are detailed in [REP10-042]		
Schedule 13 – Arbitration rules Note – The primary position of MMO and NE was that their decisions under the DMLs should not be subject to arbitration. Nevertheless, MMO and NE commented on Schedule 13 and the Applicant made some changes in response.		
Rule 1	<i>Deadline 4</i> Requirement to settle disputes through negotiation in first instance	Seeks to respond to MMO (Note – MMO does not consider that this is necessary. This is a matter discussed below)
Rules 2, 3 and 4	<i>Deadline 7</i> Amendments to time periods	Responds to MMO and NE
Rule 6	<i>Deadlines 4 and 6</i> Amendment to provision for costs such that each party should generally bear its own costs	Responds to NE
Rule 7	<i>Deadline 1</i>	Responds to MMO and NE

Provision	Change	ExA comment
	Provision for arbitration process to be open and accessible to the public unless otherwise directed by the arbitrator (subject to any legal requirements for disclosure)	

20.5. DISCUSSION OF OUTSTANDING MATTERS

20.5.1. This section of the report discusses matters which had not been agreed by the end of the Examination. Table 3 sets out the provisions in respect of which the ExA has recommended changes to the Applicant's final draft DCO [REP10-041]. The ExA's recommended DCO is at Appendix E.

Article 5 – Arbitration in respect of decisions by the Secretary of State

20.5.2. Article 5 would provide for the transfer of the benefit of the Order. Subject to certain exceptions, any transfer would require the approval of the SoS. Article 5(5) would require the SoS to determine an application to transfer within 8 weeks. If the application were not determined in that timescale, or if the SoS were minded to refuse it, the Applicant could refer the matter to arbitration in accordance with Article 37. The Explanatory Memorandum [REP9-005] states that this approach is notprecedented but has been developed by the Applicant and its advisors on the basis of experience on other projects. It is said to be necessary to provide certainty in the absence of any other statutory procedure for obtaining consent. We thought it was important to explore the Applicant's justification for this approach, in particular whether it would impose an arbitration procedure which would inappropriately fetter the discretion of the SoS.

20.5.3. The Model Provisions⁶⁷ included an article to the effect that any difference under any provision of the Order may be settled by arbitration. Similar wording has been included in made DCOs such as the East Anglia 3 Offshore Wind Farm Order 2017⁶⁸. In response to our question (Q1.13.14 [PD-008]), the Applicant stated that the Model Provisions would apply to all parties, including the SoS, and that the proposed drafting would provide clarity by adding a process. The Applicant also pointed out that the submission of disputes to arbitration is included in the matters prescribed by section 120 of PA2008 as permissible to include in a DCO [REP1-122].

⁶⁷ The Model Provisions are no longer in force so applicants are not required to follow them or justify any divergence from them

⁶⁸ Article 33

20.5.4. At ISH3 [EV-014] we explored the Applicant's suggestion that the SoS would be subject to arbitration under the Model Provisions (or similar provisions based on them) in any event. It appeared to us that the term "*any difference under any provision*" applies in circumstances where parties who are required to agree something fail to do so. An example of that might be a requirement to agree in the context of protective provisions. We questioned whether, if the SoS were to withhold consent for the transfer of the benefit of the Order, that should properly be characterised as a "*difference*". No party was aware of any legal authority on this point although the Applicant submitted that the ordinary meaning of the term could include a difference between the Applicant and the SoS in relation to a decision by the SoS [REP3-005].

20.5.5. We also asked whether there had ever been any dispute, delay or difficulty in relation to transfer of benefit provisions in made DCOs. The Applicant advised that there have been examples of the benefit of DCOs being transferred, for example to Offshore Transmission Owners. However, neither the Applicant nor any other party was aware of circumstances where delay or difficulty had arisen. Nevertheless, the Applicant argued that if there were to be a dispute the only option available to it (in the absence of an arbitration provision) would be judicial review. That could take up to 3 years to resolve causing unacceptable delay to the Nationally Significant Infrastructure Project (NSIP) [REP3-005].

20.5.6. In responding to our written question (Q1.13.14 [PD-008]) the Applicant [REP1-122] draws attention to paragraph 7.3 of the Triton Knoll Offshore Wind Farm decision letter where the SoS states:

The Panel also asked the Secretary of State to consider whether SNCBs should be removed from the provisions for arbitration covered by Article 12 of the draft Order at Appendix E (headed "Arbitration") [ER 5.11.20]. To maintain consistency with other offshore wind farms approved under the Planning Act 2008 since the close of the Panel's Examination, the Secretary of State has decided that the arbitration provisions should apply to SNCBs and has therefore modified the article in the Order accordingly.

20.5.7. The Applicant goes on to highlight the reference to this matter at paragraph 7.45 of the ExA's report on the Burbo Bank Extension Offshore Wind Farm:

This draft article provides for the appointment of an arbitrator if a dispute arises in respect of any provision of the DCO. Early draft DCOs excluded NE from the operation of the provision, pursuant to an opinion provided by NE to the Triton Knoll Offshore Wind Farm Examining Authority that the exercise of its statutory powers should not be subject to arbitration and should only be adjudicated upon by the court. However, the Secretary of State in the Triton Knoll decision decided not to exclude NE from the arbitration provision in that DCO, on the basis that all issues and parties should be equally subject to arbitration on the same basis.

- 20.5.8. Whilst we note that the SoS accepted the ExA's reasoning on Burbo Bank Extension, it is important that the above extract is read in its full context. The decision that the Burbo Bank Extension ExA was looking back to was specifically addressing the application of arbitration provisions to SNCBs.
- 20.5.9. Drawing all this together, we are not aware of any legal authority on the question of whether decisions of the SoS on an application to transfer the benefit of the Order would be caught by the standard arbitration article derived from the Model Provisions. That is a matter of interpretation which we make no finding on. However, it is clear that the express application of an arbitration provision to the SoS in relation to a transfer of benefit provision is notprecedented. Moreover, we are not aware of previous transfer of benefit provisions in made DCOs leading to any delays or difficulties so there is no evidence that it is necessary. The SoS's role in approving requests to transfer the benefit of the Order is an important one, not least because transfer of the benefit of the Order could confer rights of compulsory acquisition and temporary possession. We are concerned that the Applicant's approach would inappropriately fetter the discretion of the SoS and we conclude that the case for applying arbitration to a decision of the SoS on whether to approve a request to transfer the benefit of the Order has not been made out. For the same reasons, we see no reason to impose time periods on the SoS.
- 20.5.10. Accordingly, we recommend that Articles 5(5) and 5(6) be deleted and that Article 5(3) be amended to delete a time period. We also consider that it would also be beneficial, for the avoidance of doubt, to amend Article 37 to make clear that any decision by the SoS on an application for his consent or approval under the Order would not be subject to arbitration.

Article 27 – Time period for maintenance of landscaping

- 20.5.11. Article 27 covers the temporary use of land for maintaining the authorised development. The maintenance period is defined as 5 years from the first export of electricity from any phase. The Applicant has proposed alternative drafting in the event that the SoS concludes that the maintenance period for trees and landscaping should be 10 years. The merits of that point have been discussed in Chapter 12 where we concluded that a 10 year period would be appropriate.
- 20.5.12. As discussed in Chapter 12, NNDC proposes a start time for the management period of all new and replacement planting to be set at the first generation of power. The Applicant considers it appropriate to start the management period following the completion of planting within each local authority area. It has included a measure in the Outline LP to link the notification that planting is complete with the commencement of the management period. We agree with the Applicant on this matter and consider that it is important for the management period to begin as soon as possible after planting.
- 20.5.13. We therefore recommend that the Applicant's alternative drafting in relation to the maintenance period is included in the DCO. It would also be necessary to amend Requirement 9 to reflect the 10 year period.

Article 36 – Certification of plans and documents

- 20.5.14. As noted in Chapter 17, during the course of the Examination the Southern North Sea Site of Community Importance was designated as the Southern North Sea Special Area of Conservation. In the Applicant's final draft DCO the Southern North Sea Site of Community Importance Site Integrity Plan would be a certified document under Article 36. It is also referred to in Condition 13(5) of Schedule 11 and Condition 14(5) of Schedule 12.
- 20.5.15. We therefore recommend that Article 36, Condition 13(5) of Schedule 11 and Condition 14(5) of Schedule 12 are amended to refer to the correct designation. The same amendment is needed in Article 2, Paragraph 1 of Schedule 11 and paragraph 1 of Schedule 12.
- 20.5.16. The Southern North Sea Site of Community Importance Site Integrity Plan submitted at Deadline 4 [REP4-066] is out of date in that it refers to the former designation both in the title and in the body of the text. We recommend that the Applicant is invited to submit a revised version referring to the correct designation. As noted in Chapter 17, this would not affect the assessments or our recommendations in respect of this marine protected area.

Articles 37 and 38 – Arbitration and dispute resolution in respect of decisions by MMO and others

Arbitration in relation to decisions of the MMO under the DMLs

- 20.5.17. This matter was explored at ISH3 [EV-014]. The MMO argued that Parliament has vested public law functions, such as discharging marine licence conditions, upon the MMO. Transferring this decision-making function to a private arbitration process would be inconsistent with the MMO's legal function, powers and responsibilities. MMO is bound by the Marine and Coastal Access Act 2009 (MCAA) to achieve certain environmental objectives. An arbitrator would not be bound in the same way. Moreover, Annex B of PINS Advice Note 11 states that:

The MMO will seek to ensure wherever possible that any deemed licence is generally consistent with those issued independently by the MMO.

If the DMLs were granted in the terms sought, they would be inconsistent with those granted by the MMO directly [REP3-092].

- 20.5.18. Following on from the discussion about Article 5 at ISH3, the MMO submitted that the discharge of conditions under a DML would not amount to a "difference" on a point on which parties are supposed to agree. When discharging a condition, the MMO is making a decision in response to an application, taking account of its statutory responsibilities. The Maritime and Coastguard Agency (MCA) [REP10-021] and Trinity House [REP9-025] support the MMO on this matter. With regard to the made DCOs referred to by the Applicant, MMO argued that no party had identified a decision which contained a reasoned discussion of the issue where MMO would be subject to arbitration provisions [REP3-092]. This changed later in the Examination with the MMO drawing attention (at

Deadline 9) to The Port of Tilbury (Expansion) Order 2019 which is discussed below.

- 20.5.19. NE also supported the submissions made by the MMO, including the points made about a MMO decision not constituting a “*difference*” under a DML. NE submitted that Parliament’s intention is that the expert regulatory and advisory bodies it gave functions to should be the bodies which make decisions in the carrying out of those functions. This should not be circumvented by arbitration. Whilst noting the made DCOs referred to by the Applicant, it is NE’s view that neither decision provided a reasoned justification for causing NE to be subject to arbitration. The provision was included on the basis of consistency. Whilst that is a factor, the ExA and SoS should look at this issue on its merits [REP3-078].
- 20.5.20. The Applicant’s response reiterates the points discussed above in connection with Article 5. As an analogy, the Applicant points to the example of a local planning authority agreeing to be bound by arbitration under the terms of a section 106 Agreement. The MMO has not justified its assertion that the provision would be contrary to the intentions of Parliament underlying the MCAA. In any event, PA2008 permits the modification of other legislation. With regard to NE, the Applicant points out that the Triton Knoll and Burbo Bank Extension examples referred to above have already decided that statutory nature conservation bodies should be subject to the arbitration provisions [REP3-005].
- 20.5.21. At Deadline 9 the MMO drew our attention to the decision of the SoS in respect of the Tilbury 2 application [REP9-082]. In that case the ExA recommended the deletion of a provision (paragraph 27) in the draft DML which would have made decisions of the MMO subject to arbitration. The SoS accepted that recommendation and the provision is not included in The Port of Tilbury (Expansion) Order 2019.
- 20.5.22. Similar to the position in relation to Article 5, we are not aware of any legal authority on the question of whether the MMO would be bound by arbitration clauses in the Model Provisions or by similar provisions in made DCOs. Nevertheless, as the Applicant’s preferred DCO would expressly subject decisions of the MMO to arbitration we have considered that proposal on its merits. Whilst we have taken account of the Triton Knoll and Burbo Bank Extension examples, neither of those decisions addresses the specific role of the MMO.
- 20.5.23. For reasons discussed in Chapter 5, the design envelope for this application leaves considerable scope for important matters to be resolved post-consent. We consider that the Applicant’s approach to the design envelope is justified, for the reasons we have given. Nevertheless, it has implications for the subsequent approvals that will be needed. In our view the scale and complexity of the matters to be approved under the DMLs is a strong indicator that those matters should be determined by the appropriate statutory body (the MMO) rather than through an arbitration process. Moreover, we are mindful of Advice Note 11 which states that the MMO will seek to ensure that any deemed licence is generally consistent with those issued by the MMO. If decisions on DML

conditions were subject to arbitration, the effect would be that these DMLs would be very different to other licences granted by MMO.

- 20.5.24. We take account of the Applicant's concern about potential delay to the NSIP. However, for all the above reasons we recommend that decisions of the MMO relating to consents or approvals under the terms of the DCO and DMLs should not be subject to arbitration. This recommendation is consistent with the SoS's recent decision in respect of The Port of Tilbury (Expansion) Order 2019. It would require the deletion of paragraph 10 and Condition 14(6) of Schedule 11 and paragraph 10 and Condition 15(6) of Schedule 12. These paragraphs and conditions apply the arbitration provisions to the DMLs. It would also be beneficial, for the avoidance of doubt, to amend Article 37 to make clear that any decision by the MMO on application for consent or approval under the Order would not be subject to arbitration.

Alternative dispute resolution methods in relation to decisions of the MMO under conditions of the DMLs

- 20.5.25. The version of the draft DCO submitted at Deadline 6 [REP6-003] included alternative drafting, without prejudice to the Applicant's primary position which is that arbitration should apply. Articles 38(4) and 38(5) would have the effect of incorporating into the DCO the appeals mechanism set out in the Marine Licensing (Licence Application Appeals) Regulations 2011. That mechanism provides for appeals against marine licensing decisions, rather than appeals relating to decisions under conditions of a marine licence. The Applicant's drafting would incorporate the necessary modifications.
- 20.5.26. The MMO questions the need to extend an appeal route which is not intended to apply to decisions under conditions of marine licences. Moreover, it considers that the amended appeals process is unnecessary because there is an established route (judicial review) by which such decisions can be challenged. In practice such a route has not been required for the discharge of pre-construction documentation [REP6-072].
- 20.5.27. We agree with the MMO on this point. The process set out in the Marine Licensing (Licence Application Appeals) Regulations 2011 does not cover appeals against decisions relating to conditions. Whilst it would be possible to amend those regulations under PA2008, the result would be to create a DML which would be different to other marine licences granted by the MMO. We recommend that the Applicant's alternative drafting in Articles 38(4) and 38(5) is not included in the DCO. As a consequence of that, the reference to the Marine Licensing (Licence Application Appeals) Regulations 2011 in Article 2 is no longer needed and should be deleted.
- 20.5.28. The version of the draft DCO submitted at Deadline 9 included further alternative drafting, without prejudice to the Applicant's primary position. Condition 14 of Schedule 11 (and Condition 15 of Schedule 12) would be amended to include the following alternative to arbitration:

Save in respect of any plan which secures mitigation to avoid adversely affecting the integrity of a European site, where the MMO fails to determine the application for approval under condition 13 within the period referred to in sub-paragraph (1), the programme, statement, plan, protocol or scheme is deemed to be approved by the MMO.

- 20.5.29. We have commented above that the scale and complexity of the matters to be approved under the DMLs is a strong indicator that those matters should be determined by the appropriate statutory body (the MMO). In our view an approach whereby matters of this magnitude would be deemed to be approved as a result of a time period being exceeded would be wholly inappropriate. Notwithstanding the exclusion of European sites, this approach would pose unacceptable risks to the marine environment and navigational safety. We recommend that the Applicant's alternative drafting is not included in the DCO.

Natural England and Trinity House

- 20.5.30. As discussed above, NE does not consider that it should be subject to arbitration [REP3-078]. At ISH9 [EV-029] Trinity House expressed a general objection to the arbitration provisions for similar reasons to MMO. Trinity House proposed that the ExA's suggested amendment to Article 37 should be further amended as follows (additional wording underlined):

(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 or any matter relating to Trinity House in the exercise of its Statutory functions shall not be subject to arbitration.

The ExA drew attention to the saving provisions for Trinity House set out at Article 40 of the draft DCO. However, Trinity House submitted that it needs to be expressly stated in the DCO that the arbitration provisions would not apply to Trinity House [REP7-101].

- 20.5.31. Trinity House would not have approval or consenting powers under the draft DCO. However, it would have powers of direction (for example under Conditions 8 and 9 of Schedule 11 in relation to aids to navigation) and it would be a consultee in respect of various matters to be approved by MMO under conditions of the DMLs. Similarly, NE would not have approval or consenting powers although it too would be a consultee.
- 20.5.32. Given that NE and Trinity House would not have approval or consenting powers under the Order, in our view it is not necessary for there to be any specific exclusion for those bodies.

Article 41 – Crown rights

- 20.5.33. Our written question (Q1.13.33 [PD-008]) noted that Article 40 (as it then was), which dealt with Crown rights, did not reflect recently approved drafting, for example in Article 37 of the East Anglia Three Offshore Wind Farm Order 2017. We asked the Applicant to review this drafting and we understand that discussions have continued with the Crown Estate during the Examination.

- 20.5.34. As discussed in Chapter 19, the Crown Estate's submission at Deadline 10 [REP10-010] gives its consent for the purposes of section 135(1) and/or section 135(2) of PA2008 subject to the inclusion of specific wording for Article 41 including the following:
- (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-*
- (a) to take, use, enter upon 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)*
- 20.5.35. The ExA's schedule of changes to the draft DCO [PD-017] suggested deletion of the word "take" on the basis that it is not possible to "take" Crown land. We suggested that the word is superfluous. The Applicant's response was to seek to clarify the position by including the wording "take possession of" and this is the wording that appears in the Applicant's final draft DCO.
- 20.5.36. Whilst we remain of the view that the word "take" is unnecessary, we are mindful that the consent of the Crown Estate under section 135 is conditional upon its preferred wording being used. This wording is very similar to the wording put forward by the Applicant at Deadline 6 [REP6-003]. We therefore recommend that Article 41 is amended to adopt the wording preferred by the Crown Estate.

Schedule 1, Part 1 – the Authorised Development

- 20.5.37. The description of the Authorised Development set out in Schedule 1 does not include any limit on generating capacity. The Relevant Representation from the MMO [RR-085] stated that the maximum capacity described in the ES should provide a generating output limit as part of the Rochdale Envelope approach. In response to our question (Q1.13.35 [PD-008]) the Applicant states that generating output is not relevant to the assessments in the ES. The proposed requirements and conditions in the DCO and DMLs would limit impacts to those assessed regardless of the generating output [REP1-122].
- 20.5.38. At ISH3 the Applicant gave the example of a software update to the wind turbine generators which might increase generating capacity without the need for personnel to visit the site. If a generating capacity limit were set in the DCO, this could result in unnecessary non-material change applications. If technological improvements were to deliver increased renewable energy within the same environmental parameters that would be a beneficial outcome, consistent with national policy [REP3-005]. At ISH3 the MMO indicated a preference for including a capacity limit in the DCO but confirmed that it was content to leave this matter for the SoS to determine [EV-014].
- 20.5.39. We are satisfied that the parameters secured in the DCO and DMLs would limit the impacts of the Proposed Development to those assessed in the ES. We have not identified any benefit from the addition of a limit on

generating capacity. Accordingly, we do not recommend any change to Part 1 of Schedule 1.

Schedule 1, Part 3, Requirement 7 – choice of HVAC or HVDC

- 20.5.40. The inclusion of HVAC and HVDC in the design envelope is discussed in Chapter 5. We have concluded that it would be appropriate to include a requirement for the undertaker to provide an explanation for the choice of transmission system either before or at the same time as the submission of onshore design details. At Deadline 7 the Applicant provided drafting for an addition to Requirement 7 [REP7-003], without prejudice to its position that this is not necessary. That position was unchanged at the end of the Examination [REP10-042]. For the reasons given in Chapter 5, we consider that this drafting is necessary. However, as the required drafting is already included in the Applicant's final draft DCO, we do not need to recommend any changes.

Schedule 9, Part 5 – protective provisions for Network Rail

- 20.5.41. The Written Representation from Network Rail [REP1-251] set out a number of changes that it wished to see to the protective provisions in Part 5 of Schedule 9. Discussions with the Applicant continued during the Examination. Whilst some matters were resolved by agreement there were matters which were unresolved at the end of the Examination. The Applicant [REP10-039] and Network Rail [REP10-016] submitted their respective final position statements at Deadline 10.
- 20.5.42. For reasons discussed more fully in Chapter 19, we consider that the Applicant's protective provisions are to be preferred. Accordingly, we recommend no change to Part 5 of Schedule 9.

Schedule 9, Part 10 – protective provisions for Spirit Energy

- 20.5.43. The Applicant and Spirit Energy put forward alternative protective provisions for Spirit Energy. These are discussed in Chapter 7 where we conclude that the protective provisions suggested by the Applicant should be included. We recommend accordingly.
- 20.5.44. As a consequence of that, we recommend that the protective provisions plan referred to in the Applicant's suggested provisions should become a certified document and that a definition for "protective provisions plan" should be added to Article 2. The protective provisions plan is attached at Appendix F.

Schedule 11, Condition 7 – Notifications and inspections

- 20.5.45. Condition 7(11) of Schedule 11 deals with notification of damage to or decay of the Proposed Development, for example subsea cables which may become exposed due to mobile sediments. Trinity House considers that, together with MCA, it should be added to the list of bodies to be notified in these circumstances [REP10-065].
- 20.5.46. We note that Trinity House and MCA were included in the Deadline 6 version of the draft DCO [REP6-003]. Given that it may be necessary for

Trinity House to make directions, for example in relation to aids to navigation in the vicinity of a hazard to navigation, we consider that it should be included. Having regard to MCA's remit in respect of navigational safety we agree with Trinity House that MCA should also be notified directly.

- 20.5.47. We therefore recommend that Condition 7(11) of Schedule 11 and Condition 8(11) of Schedule 12 (which is in identical terms) be amended to include reference to Trinity House and MCA.

Schedule 11, Condition 13 – Pre-construction plans and documentation

- 20.5.48. Condition 13(1)(h)(iii) in Schedule 11 requires the submission of a cable laying plan for approval by MMO. In the event that any cable protection exceeds 5% of the navigable depth then further measures to ensure the safety of navigation may be required. These steps would be approved by MMO in consultation with MCA. Trinity House considers that it too should be consulted [REP10-065]. Given that the further measures could well include aids to navigation within the remit of Trinity House, that appears to us to be an appropriate addition.

- 20.5.49. We therefore recommend that Condition 13(1)(h)(iii) of Schedule 11 and Condition 14(1)(h)(iii) of Schedule 12 (which is in identical terms) be amended to include reference to Trinity House as a consultee.

Schedule 11, Condition 14 – Timescale for decisions by MMO

- 20.5.50. In the draft DCO submitted with the application [APP-027] Condition 12 (as it then was) set a timetable of 8 weeks for the MMO to approve applications for consent under the DML. We asked whether that would be reasonable having regard to the scale and complexity of the project (Q1.13.70 [PD-008]). In response to MMO's concerns the Applicant changed the period to 4 months. Condition 14(5) of Schedule 11 in the Applicant's final draft DCO is as follows:

The MMO shall determine an application for approval made under condition 13 within a period of four months commencing on the date the application is received by the MMO, unless otherwise agreed in writing with the undertaker.

- 20.5.51. There was further discussion at ISH3 at which MMO argued that the 4 month pre-construction submission date provided for in Condition 14(1) was unrealistic and did not account for the multiple rounds of consultation likely to be required to address stakeholders' concerns. The MMO recommends that the dates for pre-commencement submission and for approval by MMO should both be set at 6 months [REP3-092].
- 20.5.52. The Applicant's position is that 4 months as proposed is adequate as there would be pre-submission consultation. Four months is therefore a sensible compromise to ensure that the project programme is abided by but also to give the MMO adequate time to review any final changes since consultation occurred [REP10-045].

- 20.5.53. We note that pre-submission consultation would be in the interests of the undertaker as it would improve the prospects of the pre-commencement plans and documents being agreed in a timely manner. It is also important to note that the condition has been amended to allow for discussion of an alternative timetable if circumstances dictate that to be necessary. Moreover, we are recommending that any problems with the time period should not trigger either an arbitration process or a deemed approval. Having regard to all those matters we do not recommend any changes to Condition 14(1) or 14(5). For the same reasons we do not recommend any changes to Condition 15(1) and 15(5) of Schedule 12 which are the equivalent provisions in that schedule.

Schedule 11, Condition 18 – vessel tracking monitoring

- 20.5.54. Condition 18(2)(c) and 18 (2)(d) of Schedule 11 require details of vessel traffic monitoring to be reported to the MMO and the MCA during the construction phase. Condition 19(2)(d) requires details of vessel traffic monitoring during the operational phase to be reported to the same bodies.
- 20.5.55. In Schedule 12, Condition 19(2) requires details of vessel traffic monitoring to be reported to the MMO and the MCA during the construction phase. Condition 20(2)(d) requires details of vessel traffic monitoring during the operational phase to be reported to the MMO, the MCA and Trinity House. Trinity House considers that it should receive the reports under all of these conditions [REP10-065].
- 20.5.56. We consider that having an understanding of vessel traffic during the construction and operational phases is pertinent to the functions of Trinity House and we therefore recommend that it is referred to in all of the above conditions. That would also be a consistent approach. Condition 18 (2)(d) duplicates 18(2)(c) and we recommend that it is deleted.
- 20.5.57. As these suggestions were made at Deadline 10 the Applicant has not had an opportunity to comment. However, the substance of the commitments to monitor and report would not be changed by the addition of Trinity House as a recipient so we do not think there would be any prejudice.

Schedule 11, Condition 18 – monitoring of piling noise

- 20.5.58. Condition 18(2) provides for construction monitoring, to include monitoring of underwater noise from piling. The MMO [REP5-029] (supported by NE) suggested an amendment to the effect that, if monitoring shows significantly different impacts to those assessed in the ES, piling activity should cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- 20.5.59. The Applicant considers that it has already committed to the monitoring and reporting proposed by the MMO at Condition 18 (2(a) and 18(3)). The Applicant argues that the enforcement tail-piece would be an

unnecessary addition to the DCO as the MMO already has those enforcement powers under the MCAA [REP10-045].

- 20.5.60. The draft DCO submitted at Deadline 6 [REP6-003] included alternative drafting to give effect to the MMO's suggestion if the SoS were to consider that to be necessary. The suggested alternative wording was as follows:

The results of the initial noise measurements monitored in accordance with condition 18(2)(a) 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 impact to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the MMMP and further monitoring requirements have been agreed.

- 20.5.61. We included this alternative wording in our schedule of changes to the draft DCO [PD-017].
- 20.5.62. We discuss the merits of this matter in Chapter 17 where we note that the Applicant's preferred drafting has a monitoring provision for underwater noise and that the MMO has enforcement powers under the MCAA. Nevertheless, we are concerned that there would be an unacceptable lag between reporting any exceedance of the noise threshold assessed in the ES and the cessation of piling activity. During such time it is possible that significant negative impacts could occur that would lead to adverse effects on the harbour porpoise feature of the Southern North Sea Special Area of Conservation.
- 20.5.63. Consequently, we consider that the alternative wording set out above should be included in the recommended DCO. The reference to Natural England should be changed to 'the relevant statutory nature conservation body' for consistency with other parts of Condition 18 and marine mammal mitigation protocol should be set out in full because MMMP is not a defined term. There is a consequential change to 18(4).

Schedule 13 – arbitration rules

- 20.5.64. MMO and NE have objections to the principle of arbitration which have been reported above. Nevertheless, both bodies engaged in discussions with the Applicant on the detail of the arbitration rules in Schedule 13 without prejudice to their primary position. As recorded in Table 2 above, a number of changes have been made in response to matters raised by MMO and NE.
- 20.5.65. Paragraph 1(2) states that the parties will attempt to resolve any dispute amicably before resorting to arbitration. MMO does not consider that this is necessary as it is merely a statement of current practice [REP6-072]. Nevertheless, the arbitration rules would cover other bodies, such as those with protective provisions, whose approach to these matters is unknown. We do not see the need to make changes to Paragraph 1(2).

The ExA's proposals for changes to the Applicant's final draft DCO

- 20.5.66. Table 3 draws together all of the substantive changes that we recommend to the Applicant's final draft DCO [REP10-041]. They are reflected in the ExA's recommended DCO which is at Appendix E.
- 20.5.67. We have identified some minor/ typographical amendments which are also reflected in the recommended DCO. These are:
- Page 4, second paragraph, line 2 – delete "to the" (repeated wording), delete "the" before "terms" and insert "that" after "terms";
 - Article 4 - title should read "to maintain the authorised project" to be consistent with Article 26;
 - Article 5(8)(a)(iii) - delete "and" at the end;
 - Article 7(1)(b)(i), line 3 - delete "with is being used" (redundant wording);
 - Article 14(1), line 3 - add comma after "development";
 - Article 14(1)(a) - add "and" at the end;
 - Article 27 - title should read "for maintaining the authorised project" to be consistent with Article 26;
 - Article 29 (2) - delete "sewerage" and insert "sewage";
 - Schedule 9, part 5, paragraph 14(2) - delete "the" and insert "The";
 - Schedule 11, Condition 23(1) – delete "constriction" and insert "construction"; and
 - Schedule 12, Condition 23(1) - delete "constriction" and insert "construction".

Table 3: DCO Provisions Recommended to be Changed

Provision	Amendment proposed by the ExA	ExA comments
Note – text which is recommended to be deleted from the Applicant’s final draft DCO [REP10-041] is struck through (~~like this~~) and text which is recommended to be added is underlined (<u>like this</u>)		
Article 2	~~the “2011 Regulations” means the Marine Licensing (Licence Application Appeals) Regulations 2011~~	See this chapter for ExA’s reasons
Article 2	“in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area for Conservation</u> Site Integrity Plan” means the document certified as the in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area of Conservation</u> Site Integrity Plan	See this chapter for ExA’s reasons
Article 2	<u>“protective provisions plan” means the plan certified by the Secretary of State as the protective provisions plan for the purposes of Part 10 of Schedule 9 to this Order under article 36 (certification of plans and documents etc);</u>	See this chapter for ExA’s reasons
Article 5(3) to 5(6)	(3) The undertaker shall 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 shall provide a response within four weeks of receipt of the notice.~~ (4) The Secretary of State shall consult the MMO before giving consent to the transfer or grant to another person of the whole	See this chapter for ExA’s reasons There would be some consequential amendments to paragraph numbering which are included in the recommended DCO at Appendix E

Provision	Amendment proposed by the ExA	ExA comments
	or part of the benefit of the provisions of the deemed marine licences. ~~(5) The Secretary of State shall 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.~~ ~~(6) Where the Secretary of State is minded to refuse an application for consent made under this article and notifies the undertaker accordingly, or the Secretary of State fails to determine the application for consent under this article within the period prescribed in paragraph (5), the undertaker may refer the matter for determination in accordance with article 37 (arbitration).~~	
Article 27(11)	The Applicant's alternative drafting should be included at the end of Article 27(11): except where the authorised development consists of the maintenance of any tree or shrub pursuant to requirement 9 where "the maintenance period" means a period of 10 years beginning with the date on which that tree or shrub is first planted	See Chapter 12 for ExA's reasons Remove square brackets denoting alternative drafting
Article 36(1)(y)	the in principle Hornsea Three Southern North Sea ~~Site of Community Importance Special~~	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
	<u>Area of Conservation Site Integrity Plan</u>	
Article 36(1)(z)	<u>the protective provisions plan.</u>	See this chapter for ExA's reasons
Article 37	(1) Any difference under any provision of this Order, unless otherwise provided for, shall be referred to and settled in arbitration in accordance with the rules at Schedule 13 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) Where the referral to arbitration under paragraph (1) relates to a difference with the Secretary of State, in the event that the parties cannot agree upon a single arbitrator within the specified time period stipulated in paragraph (1), either party may refer to the Centre for Effective Dispute Resolution for appointment of an arbitrator. For the avoidance of doubt, 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,	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
	the referring party may refer to the Centre for Effective Dispute Resolution for appointment of an arbitrator.	
Article 38(4) and 38(5)	The alternative drafting in 38(4) and 38(5) of the Applicant's preferred DCO (which would apply elements of the Marine Licensing (Licence Application Appeals) Regulations 2011) should not be included	See this chapter for ExA reasons
Article 41	(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- ~~(a)~~ to take possession of, use, enter upon 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 i)~~ 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 ii)~~ 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 iii)~~ belonging to a government department or held in trust for Her Majesty for the	Wording preferred by The Crown Estate

Provision	Amendment proposed by the ExA	ExA comments
	purposes of a government department without the consent in writing of that government department.	
Schedule 1, Part 3, Requirement 9	(2) Any tree or shrub planted as part of an approved landscape plan that, within a period of ~~five~~ <u>ten</u> years after planting, is removed by the undertaker, 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 otherwise approved in writing by the relevant planning authority	See chapter 12 for ExA's reasons
Schedule 9	New Part 10 to include the protective provisions for Oil and Gas Licensee (Spirit Energy) suggested by the Applicant	See chapter 7 for ExA's reasons
Schedule 11, Paragraph 1	in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area of Conservation</u> Site Integrity Plan" means the document certified as the in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area for Conservation</u> Site Integrity Plan	See this chapter for ExA's reasons
Schedule 11, Paragraph 10	Whole paragraph (relating to arbitration) deleted	See this chapter for ExA's reasons
Schedule 11, Condition 7(11)	(11) In case of damage to, or destruction or decay of, the authorised project seaward of	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
	MHWS or any part thereof the undertaker must as soon as possible and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, <u>MCA, Trinity House</u>, the Kingfisher Information Service of Seafish and the UK Hydrographic Office. In case of the development of a cable exposure deemed by the undertaker to present a risk to fishing activity, the undertaker must notify the MMO and the Kingfisher Information Service within three working days following the undertaker becoming aware of it	
Schedule 11, Condition 13(1)(h)(iii)	in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA and <u>Trinity House</u>) to be taken to ensure existing and future safe navigation is not compromised	See this chapter for ExA's reasons
Schedule 11, Condition 13(5)	In the event that driven or part-driven pile foundations are proposed to be used, the licenced activities, or any phase of those activities must not commence until a Site Integrity Plan which accords with the principles set out in the in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area of Conservation</u> Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that where the plan assesses that mitigation is necessary to avoid adversely	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
	affecting the integrity (within the meaning of the 2017 Regulations) of the Southern North Sea candidate Special Area of Conservation, it provides for such mitigation, to the extent that harbour porpoise are a protected feature of that site.	
Schedule 11, Condition 14(2)	The Applicant's alternative drafting in 14(2) (relating to deemed approval if the period for decision expires) should not be included	See this chapter for ExA's reasons There would be some consequential amendments to paragraph numbering which are included in the recommended DCO at Appendix E
Schedule 11, Condition 14(6)	Whole of part (6) of the condition (relating to arbitration) deleted	See this chapter for ExA's reasons
Schedule 11, Condition 18(2)	(b) a plan for monitoring of the duration of piling activity; <u>and</u> (c) details of vessel traffic monitoring by automatic identification system for the duration of the construction period including obligations to report annually to the MMO, <u>Trinity House</u> and the MCA during the construction phase of the authorised development. ~~and~~ ~~(d) vessel traffic monitoring by automatic identification system for the duration of the construction period, including~~	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
	annual reporting to the MMO and MCA;	
Schedule 11, Condition 18(3)	The results of the initial noise measurements generated in accordance with condition 18(2)(a) must be provided to the MMO within 6 weeks of the completion of installation of the fourth foundation of each foundation type for the MMO to determine whether any further noise monitoring shall be required. The results of the initial noise measurements monitored in accordance with condition 18(2)(a) 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 the relevant statutory nature conservation body, 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.	See this chapter and Chapter 17 for ExA's reasons
Schedule 11, Condition 18(4)	The undertaker must carry out the surveys specified within the construction monitoring plan or plans in accordance with that plan or plans, including any further noise monitoring required in writing by the MMO under condition 18(3), unless	Consequential change following change to 18(3)

Provision	Amendment proposed by the ExA	ExA comments
	otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.	
Schedule 11, Condition 19(2)(d)	(d) details of vessel traffic monitoring by automatic identification system, for a period of 28 individual days taking account seasonal variations in traffic patterns over the course of one year to be submitted to the MMO, <u>Trinity House</u> and the MCA no later than one year following completion of the construction phase of the authorised development;	See this chapter for ExA's reasons
Schedule 12, Paragraph 1	in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area of Conservation</u> Site Integrity Plan" means the document certified as the in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area for Conservation</u> Site Integrity Plan	See this chapter for ExA's reasons
Schedule 12, Paragraph 10	Whole paragraph (relating to arbitration) deleted	See this chapter for ExA's reasons
Schedule 12, Condition 8(11)	(11) In case of damage to, or destruction or decay of, the authorised project seaward of MHWS or any part thereof including the exposure of cables the undertaker must as soon as possible and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, <u>MCA</u> , <u>Trinity House</u> , the Kingfisher	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
	Information Service of Seafish and the UK Hydrographic Office. In case of the development of a cable exposure deemed by the undertaker to present a risk to fishing activity, the undertaker must notify the MMO and the Kingfisher Information Service within three working days following the undertaker becoming aware of it.	
Schedule 12, Condition 14(1)(h)(iii)	in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA <u>and</u> <u>Trinity House</u>) to be taken to ensure existing and future safe navigation is not compromised	See this chapter for ExA's reasons
Schedule 12, Condition 14(5)	In the event that driven or part-driven pile foundations are proposed to be used, the licenced activities, or any phase of those activities must not commence until a site integrity plan which accords with the principles set out in the in principle Hornsea Three Southern North Sea ~~Site of Community Importance~~ <u>Special Area of Conservation</u> Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that the plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.	See this chapter for ExA's reasons

Provision	Amendment proposed by the ExA	ExA comments
Schedule 12, Condition 15(2)	The Applicant's alternative drafting in 15(2) (relating to deemed approval if the period for decision expires) should not be included	See this chapter for ExA's reasons There would be some consequential amendments to paragraph numbering which are included in the recommended DCO at Appendix E
Schedule 12, Condition 15(6)	Whole of part (6) of the condition (relating to arbitration) deleted	See this chapter for ExA's reasons
Schedule 12, Condition 19(2)	(2) Subject to receipt from the undertaker of specific proposals pursuant to this condition the construction monitoring plan must include in outline details of vessel traffic monitoring by automatic identification system for the duration of the construction period including obligations to report annually to the MMO, <u>Trinity House</u> and the MCA during the construction phase of the authorised development	See this chapter for ExA's reasons

20.6. OTHER CONSENTS

- 20.6.1. There are no planning obligations pursuant to the Town and Country Planning Act 1990 or equivalent undertakings or agreements which the SoS needs to take into account.
- 20.6.2. A number of commercial agreements have been concluded between the Applicant and the owners of other infrastructure that may be affected by the proposed development. These are covered in Chapter 19, to the extent that they are relevant to the Examination.
- 20.6.3. Section 1.8 of this Report records the other consents to which the Proposed Development is subject, in addition to the need for a DCO. The implications of these consents have been considered. Without prejudice to the exercise of discretion by other decision-makers, there are no obvious impediments to the delivery of the Proposed Development arising from these consents.

20.7. NUISANCE

- 20.7.1. Article 7 of the Applicant's final draft DCO [REP10-041] proposes to provide a defence to proceedings in respect of statutory nuisance. The application was accompanied by a Statutory Nuisance Statement which identifies the matters set out in Section 79(1) of the Environmental Protection Act 1990 in respect of statutory nuisance and considers whether the Proposed Development could cause a statutory nuisance [APP-174]. The statement concludes that, with the proposed mitigation in place, it is not expected that there would be a breach of Section 79(1) during construction, operation or decommissioning.
- 20.7.2. The Statutory Nuisance Statement did not attract any comments from other parties and did not need to be updated during the Examination. Article 7 was explored at ISH3 [EV-014]. At the end of the Examination no party expressed any outstanding concerns in relation to this matter.
- 20.7.3. The defence to proceedings in respect of statutory nuisance in Article 7 is of a type that is commonly provided for in DCOs. We are satisfied that necessary steps have been taken to reduce the risk of nuisance events occurring. We consider that this is an appropriate provision for circumstances where unforeseen but unavoidable nuisance occurs. We recommend Article 7 without changes.

20.8. CONCLUSIONS

- 20.8.1. We have considered all of the iterations of the draft DCO submitted by the Applicant. We have noted the significant number of changes made during the course of the Examination, as detailed in Table 2, and we are in agreement with those changes. A number of matters were unresolved at the end of the Examination. We have discussed those in this chapter, signposting reasoning in other chapters where relevant. Our recommendations on those matters are summarised in Table 3.

- 20.8.2. Taking all matters raised in this chapter into account, and having regard to all matters relevant to the DCO raised in the remainder of this report, we conclude that, if the SoS is minded to make the DCO, it is recommended to be made in the form set out in Appendix E.

21. SUMMARY OF FINDINGS AND CONCLUSIONS

21.1. CONSIDERATION OF FINDINGS AND CONCLUSIONS

- 21.1.1. In relation to section 104 of the Planning Act 2008 (PA2008) the Examining Authority (ExA) concludes:
- that making the recommended Development Consent Order (DCO) would be in accordance with the Overarching National Policy Statement for Energy (EN-1), the National Policy Statement for Renewable Energy Infrastructure (EN-3) and the National Policy Statement for Electricity Networks (EN-5), the Marine Policy Statement and the East Inshore and East Offshore Marine Plans;
 - that matters arising from the Local Impact Reports from Norfolk County Council, North Norfolk District Council, Broadland District Council and South Norfolk Council have been taken into account;
 - with regard to all other matters and representations received, there are no important and relevant matters that would individually or collectively lead to a different recommendation to that below; and
 - there are reasons to indicate that the application should be decided other than in accordance with the relevant NPSs, to which we now turn.
- 21.1.2. Whilst the SoS is the Competent Authority under the Habitats Regulations, our conclusion is that we cannot be satisfied that the Proposed Development would not adversely affect the integrity of European sites and that the tests in the Habitats Regulations have been met. In the absence of any evidence on site-specific compensatory measures for the affected Special Areas of Conservation, we cannot be assured that determining the application in accordance with the relevant NPS would not lead to the UK being in breach of international obligations under the Habitats Directive. Mindful of section 104(4) of PA2008 we must therefore recommend that development consent is not granted.
- 21.1.3. Having reached that conclusion, it is not necessary for us to conclude on the balance of adverse impacts and benefits. Nevertheless, we have summarised the adverse impacts and benefits as we see them in Chapter 18.
- 21.1.4. Should the SoS agree with our conclusions on adverse effects on the integrity of European sites, it would then be necessary to consider the case for alternative solutions, imperative reasons of overriding public importance and compensatory measures or to refuse to grant development consent. If the SoS wishes to consider the case for alternative solutions, imperative reasons of overriding public importance and compensatory measures we recommend that further information is sought from the Applicant and the relevant statutory nature conservation bodies.
- 21.1.5. If the SoS is minded to grant development consent, we recommend that:

- further information is sought in relation to the Cromer Shoal Chalk Beds Marine Conservation Zone and the requirements of section 126(7) of the Marine and Coastal Access Act 2009;
- in the event that Markham's Triangle is designated as a Marine Conservation Zone before the application is determined there would need to be a Stage II assessment for that site in accordance with section 126(7) of the Marine and Coastal Access Act 2009; and
- the Applicant be invited to submit an In Principle Southern North Sea Special Area for Conservation Site Integrity Plan.

21.1.6. We have considered the case for Compulsory Acquisition (CA) and Temporary Possession (TP) of the land and rights required in order to implement the Proposed Development, as reported on in Chapter 19. The objections to CA and TP have been considered but would not give rise to a fundamental barrier to the granting of the powers sought if the SoS were to conclude that the matters referred to above can be resolved such that the recommended DCO could be made.

21.1.7. There is no evidence before us that the consent required from the Secretary of State for Defence under section 135(1) of PA2008 in respect of plots 1-005 to 1-014, 1-017, 1-018, 30-029 and 30-030 has been granted. The SoS may wish to seek evidence that consent has been granted. Alternatively, the relevant plots would have to be excluded from the CA powers in Articles 18 and 20.

21.1.8. We have had regard to the provisions of the Human Rights Act 1998 as reported on Chapter 19. The exercise of CA and TP powers would amount to an interference with the right to peaceful enjoyment of possessions under Article 1 of the First Protocol to the European Convention on Human Rights (ECHR). If the SoS concludes that development consent should be granted and that compulsory acquisition is necessary to facilitate the NSIP, then we are satisfied that:

- any infringement of ECHR rights would be proportionate and justified in the public interest;
- the provisions in the recommended DCO would strike a fair balance between the public interest in the development going ahead and the interference with the rights of those affected; and
- any interference would be in accordance with the law.

21.1.9. We have had regard to the Public Sector Equality Duty as reported on in Chapter 19. There is no evidence that the Proposed Development would harm the interests of persons who share a protected characteristic or have any adverse effect on the relationships between such persons and persons who do not share a protected characteristic.

21.1.10. As required by Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, we have had regard to the desirability of preserving the listed buildings described in Chapter 13 or their settings or any features of special architectural or historic interest which they possess. We have also had regard to the desirability of preserving other designated heritage assets and, where appropriate, their settings. The Proposed Development would not affect the features of any of the

relevant designated heritage assets. However, as reported on in Chapter 13, the Proposed Development would not preserve the settings of some relevant listed buildings or the Scheduled Monument of Venta Icenorum.

- 21.1.11. Where we have found that there would be harm to the significance of designated heritage assets, we consider that this would be less than substantial harm in each instance. In Chapter 18 we conclude that, taking account of the public benefits of the Proposed Development, there is clear and convincing justification for the harm that would result, both individually and collectively, upon designated heritage assets. We have not identified harm in relation to the character or appearance of any conservation area.
- 21.1.12. Having regard to the duties under Regulation 3 of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, we are satisfied that no activities associated with the Proposed Development would result in deterioration of surface water status or groundwater status. Granting development consent would be consistent with the duties under Regulation 3.
- 21.1.13. In our view the Proposed Development does not meet the tests in section 104 of PA2008, specifically in relation to section 104(4). However, if the SoS is minded to grant the Order we recommend that it is made in the form proposed in Appendix E.

21.2. RECOMMENDATION

- 21.2.1. For all the above reasons and in the light of our findings and conclusions on important and relevant matters set out in this report, the Examining Authority (ExA) recommends that the Secretary of State for Business, Energy and Industrial Strategy (SoS) should not make an Order granting development consent for the Proposed Development.
- 21.2.2. However, if the SoS is minded to make the Hornsea Three Offshore Wind Farm Order, the ExA recommends that it be made in the form of the draft attached at Appendix E.
- 21.2.3. Should the SoS wish to consider the case for alternative solutions, imperative reasons of overriding public importance and compensatory measures for European sites then the ExA recommends that it would first be necessary to seek further information from the Applicant and the relevant statutory nature conservation bodies.
- 21.2.4. If the SoS is minded to make the Hornsea Three Offshore Wind Farm Order, the ExA recommends that:
- further information is sought in relation to the Cromer Shoal Chalk Beds Marine Conservation Zone and the requirements of section 126(7) of the Marine and Coastal Access Act 2009;
 - in the event that Markham's Triangle is designated as a Marine Conservation Zone before the application is determined, there would

need to be a further assessment for that site in accordance with section 126(7) of the Marine and Coastal Access Act 2009; and

- the Applicant be invited to submit an In Principle Southern North Sea Special Area for Conservation Site Integrity Plan.

21.2.5. If the SoS is minded to make the Hornsea Three Offshore Wind Farm Order, the ExA recommends that the SoS can be satisfied that there is a compelling case in the public interest for the compulsory acquisition and other powers sought in respect of the land shown on the Land plans. In respect of compulsory acquisition, the proposal would comply with section 122(3) of PA2008.

21.2.6. The SoS may wish to seek evidence that the Secretary of State for Defence has granted the consent required under section 135(1) of PA2008 in respect of plots 1-005 to 1-014, 1-017, 1-018, 30-029 and 30-030. Alternatively, the ExA recommends that the relevant plots would have to be excluded from the compulsory acquisition powers in Articles 18 and 20.

APPENDICES

Appendix A – the Examination events

Appendix B – the Examination library

Appendix C – list of abbreviations

Appendix D – landowners represented by the Land Interest Group

Appendix E - the recommended DCO

Appendix F – the protective provisions plan

APPENDIX A: THE EXAMINATION EVENTS

The table below lists the main events that occurred during the Examination and the procedural decisions taken by the Examining Authority (ExA)

Date	Examination Event
2 October 2018	Preliminary Meeting
9 October 2018	Procedural Decision 1 Issue by the ExA of: • Examination Timetable • The ExA's Written Questions
7 November 2018	Deadline 1 Deadline for receipt of: • Applicant's revised draft Development Consent Order (DCO) • Applicant's Guide to the Application • Applicant's Statement of Commonality of Statements of Common Ground (SoCG) • Applicant's Compulsory Acquisition (CA) schedule • 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 • Responses to the ExA's Written Questions • Comments on updated application documents

APPENDIX A: THE EXAMINATION

	• 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 an Open Floor Hearing (OFH) • Notification of wish to make oral representations at an Issue Specific Hearing • Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications • Notification of wish to have future correspondence electronically
21 November 2018	Deadline 2 Deadline for receipt by the ExA of: • Comments on WRs and responses to comments on RRs • Comments on Local Impact Reports • Comments on responses to the ExA's Written Questions • Responses to further information requested by the ExA
3 December 2018	Open Floor Hearing 1 Open Floor Hearing in Norwich
4 December 2018	Issue Specific Hearing 1 Alternatives/design flexibility (offshore and onshore); onshore ecology; navigation/other offshore operations
5 December 2018	Issue Specific Hearing 2

	Offshore ecology
6 December 2018	Issue Specific Hearing 3 The draft DCO
7 December 2018	Issue Specific Hearing 4 Other onshore matters
14 December 2018	Deadline 3 Deadline for receipt by the ExA of: • Post hearing submissions including written submissions of oral cases • Comments on revised draft DCO • Responses to further information requested by the ExA
20 December 2018	Procedural Decision 2 Publication by ExA of: • The ExA's further Written Questions
15 January 2019	Deadline 4 Deadline for receipt of: • Applicant's revised draft DCO • Applicant's updated Guide to the Application • Applicant's updated Statement of Commonality of SoCG • Responses to the ExA's further Written Questions • Updated SoCG • Responses to further information requested by the ExA
23 January 2019	Deadline 5 Deadline for receipt of:

APPENDIX A: THE EXAMINATION

	• Comments on responses to ExA's further Written Questions • Responses to further information requested by the ExA
28 January 2019	Accompanied Site Inspection 1
28 January 2019	Open Floor Hearing 2 Open Floor Hearing in Cromer
29 January 2019	Issue Specific Hearing 5 Environmental matters
30 January 2019	Issue Specific Hearing 6 The draft DCO
31 January 2019	Compulsory Acquisition Hearing
8 February 2019	Deadline 6 Deadline for receipt of: • Post hearing submissions including written submissions of oral cases • Responses to further information requested by the ExA
21 February 2019	Procedural Decision 3 Publication by the ExA of: • Report on the Implications for European Sites (RIES)
26 February 2019	Issue by the ExA of: Request for Further Information - Rule 17 – Maritime and Coastguard Agency
26 February 2019	Procedural Decision 4 Publication by the ExA of: • The ExA's schedule of changes to the draft DCO
1 March 2019	Procedural Decision 5 Publication by the ExA of: Variation to Timetable - Rule 8(3) , Rule 13 - Notification of Hearings

4 March 2019	Unaccompanied Site Inspection
5 March 2019	Unaccompanied Site Inspection
5 March 2019	Accompanied Site Inspection 2
6 March 2019	Issue by the ExA of: Request for Further Information - Rule 17 – Natural England
6 March 2019	Issue Specific Hearing 7 Offshore ecology
7 March 2019	Issue Specific Hearing 8 Aviation, shipping and effects on oil and gas operations
8 March 2019	Issue Specific Hearing 9 Part 1 – cumulative traffic impacts and related mitigation Part 2 – the draft DCO
13 March 2019	Unaccompanied Site Inspection
14 March 2019	Deadline 7 Deadline for receipt of: • Applicant's updated Guide to the Application • Applicant's updated Statement of Commonality of SoCGs • Comments on the ExA's draft DCO schedule of changes • Comments on the RIES • Updated SoCGs • Responses to further information requested by the ExA • Post hearing submissions
19 March 2019	Issue by the ExA of:

APPENDIX A: THE EXAMINATION

	Request for Further Information - Rule 17 – Natural England
19 March 2019	Issue by the ExA of: Request for Further Information - Rule 17 - Ørsted Hornsea Project Three (UK) Ltd
19 March 2019	Issue by the ExA of: Request for Further Information - Rule 17 – Norfolk County Council
21 March 2019	Issue by the ExA of: Request for Further Information - Rule 17 – Natural England
22 March 2019	Deadline 8 Deadline for receipt of: • Written Representations • Notification of wish to be heard at a Compulsory Acquisition Hearing or Open Floor Hearing
25 March 2019	Further Open Floor Hearing The further Open Floor Hearing was held in Norwich
26 March 2019	Further Issue Specific Hearing and further Compulsory Acquisition Hearing
26 March 2019	Deadline 9 Deadline for receipt of: • Applicant's updated Guide to the Application • Applicant's final CA Schedule • Applicant's updated version of the Book of Reference • Applicant's updated Statement of Commonality of SoCGs • Responses to comments on the ExA's draft DCO schedule of changes

APPENDIX A: THE EXAMINATION

	• Responses to comments on the RIES • Updated and Final SoCGs • Responses to further information requested by the ExA
29 March 2019	Issue by the ExA of: Request for Further Information - Rule 17 - Ørsted Hornsea Project Three (UK) Ltd
1 April 2019	Deadline 10 Deadline for receipt of: • Comments on Written Representations • Summary of Oral Submissions at Hearings and post hearing submissions accepted at the discretion of the ExA • Applicant's final Guide to the Application • Applicant's final draft DCO • Applicant's final version of the Book of Reference • Applicant's final Statement of Commonality of SoCGs • Final SoCGs, joint statements and summary position statements • Applicant's final legal submissions and statement of case • Applicant's final Statement of Commonality of SoCGs • Responses to further information requested by the ExA • Other final submissions
2 April 2019	Examination closed

APPENDIX B: EXAMINATION LIBRARY

Hornsea Project Three Offshore Wind Farm

Examination Library

Updated – 08 May 2019

This Examination Library relates to the Hornsea Project Three 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:

- 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.

EN010080 - Hornsea Project Three Offshore Wind Farm Examination Library - Index	
Category	Reference
Application Documents As submitted and amended versions received before the PM. Any amended versions received during the Examination are included under the Deadline when they were received	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, section 55, and post acceptance section 51	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

Appendix B

Deadline 5	REP5-xxx
Deadline 6	REP6-xxx
Deadline 7	REP7-xxx
Deadline 8	REP8-xxx
Deadline 9	REP9-xxx
Deadline 10	REP10-xxx
Other Documents Includes section 127/131/138 information, section 56, section 58 and section 59 certificates and transboundary documents	OD-xxx

EN010080 - Hornsea Project Three Offshore Wind Farm	
Examination Library	
Application Documents	
APP-001	Orsted Hornsea Project Three (UK) Ltd 1.1 Covering letter for Hornsea Project Three
APP-002	Orsted Hornsea Project Three (UK) Ltd 1.2 Application Index - Application documents list for Hornsea Project Three
APP-003	Orsted Hornsea Project Three (UK) Ltd 1.3 Draft Section 55 check list for Hornsea Project Three
APP-004	Orsted Hornsea Project Three (UK) Ltd 1.4 Application Form
APP-005	Orsted Hornsea Project Three (UK) Ltd 1.5 Newspaper Notices
APP-006	Orsted Hornsea Project Three (UK) Ltd 2.1.1 Location Plan Offshore and Onshore
APP-007	Orsted Hornsea Project Three (UK) Ltd 2.1.2 Location Plan (Offshore)
APP-008	Orsted Hornsea Project Three (UK) Ltd 2.1.3 Location Plan (Onshore)
APP-009	Orsted Hornsea Project Three (UK) Ltd 2.2.1 Order Limits and Grid Coordinates Plan (Offshore)
APP-010	Orsted Hornsea Project Three (UK) Ltd 2.2.2 Order Limits and Grid Coordinates Plan (Onshore)
APP-011	Orsted Hornsea Project Three (UK) Ltd 2.3 Land Plan (Onshore)
APP-012	Orsted Hornsea Project Three (UK) Ltd 2.4.1 Works Plan (Offshore)
APP-013	Orsted Hornsea Project Three (UK) Ltd 2.4.2 Works Plan (Onshore)
APP-014	Orsted Hornsea Project Three (UK) Ltd 2.5 Access to Works Plan (Onshore)
APP-015	Orsted Hornsea Project Three (UK) Ltd 2.6 Streets Plan
APP-016	Orsted Hornsea Project Three (UK) Ltd

	2.7 Public Rights of Way Plan (Onshore)
APP-017	Orsted Hornsea Project Three (UK) Ltd 2.8.1 Offshore Historic Environment Plan
APP-018	Orsted Hornsea Project Three (UK) Ltd 2.8.2 Historic or Scheduled Monument Sites Plan (Onshore)
APP-019	Orsted Hornsea Project Three (UK) Ltd 2.9.1 Statutory and Non-Statutory Nature Conservation Sites (Onshore)
APP-020	Orsted Hornsea Project Three (UK) Ltd 2.9.2 Statutory and Non-Statutory Nature Conservation Sites (Offshore)
APP-021	Orsted Hornsea Project Three (UK) Ltd 2.10 Tree Preservation Order and Hedgerow Plan
APP-022	Orsted Hornsea Project Three (UK) Ltd 2.11.1 Crown land Plan (Onshore and Offshore)
APP-023	Orsted Hornsea Project Three (UK) Ltd 2.11.2 Special Category Land Plan (Onshore)
APP-024	Orsted Hornsea Project Three (UK) Ltd 2.12.1 Indicative Extent of Marine Licences (Spatial)
APP-025	Orsted Hornsea Project Three (UK) Ltd 2.12.2 Indicative Extent of DCO and DMLs (cross sectional)
APP-026	Orsted Hornsea Project Three (UK) Ltd 2.13.1 Onshore Limits of Deviation Plan
APP-027	Orsted Hornsea Project Three (UK) Ltd 3.1 Draft Development Consent Order including draft Deemed Marine Licences
APP-028	Orsted Hornsea Project Three (UK) Ltd 3.2 Explanatory Memorandum to Development Consent Order
APP-029	Orsted Hornsea Project Three (UK) Ltd 4.1 Funding Statement
APP-030	Orsted Hornsea Project Three (UK) Ltd 4.1.1 Annex 1 to the Funding Statement - Dalcour Maclaren Letter
APP-031	Orsted Hornsea Project Three (UK) Ltd 4.1.2 Annex 2 to the Funding Statement - Orsted Annual Report

APP-032	Orsted Hornsea Project Three (UK) Ltd 4.2 Statement of Reasons
APP-033	Orsted Hornsea Project Three (UK) Ltd 4.3 Book of Reference
APP-034	Orsted Hornsea Project Three (UK) Ltd 5.1 Consultation Report
APP-035	Orsted Hornsea Project Three (UK) Ltd 5.1.1 Consultation Report Annex 1 - Evidence Plan
APP-036	Orsted Hornsea Project Three (UK) Ltd 5.1.2 Consultation Report Annex 2 - Consultation Compliance Checklist
APP-037	Orsted Hornsea Project Three (UK) Ltd 5.1.3 Consultation Report Annex 3 - Consultee List
APP-038	Orsted Hornsea Project Three (UK) Ltd 5.1.4 Consultation Report Annex 4 - Regulation 6 Notification
APP-039	Orsted Hornsea Project Three (UK) Ltd 5.1.5 Consultation Report Annex 5 - EIA Regulation 24 Notice
APP-040	Orsted Hornsea Project Three (UK) Ltd 5.1.6 Consultation Report Annex 6 - Section 42 Notification
APP-041	Orsted Hornsea Project Three (UK) Ltd 5.1.7 Consultation Report Annex 7 - Section 44
APP-042	Orsted Hornsea Project Three (UK) Ltd 5.1.8 Consultation Report Annex 8 - Section 46
APP-043	Orsted Hornsea Project Three (UK) Ltd 5.1.9 Consultation Report Annex 9 - Section 48
APP-044	Orsted Hornsea Project Three (UK) Ltd 5.1.10 Consultation Report Annex 10 - Statement of Community Consultation
APP-045	Orsted Hornsea Project Three (UK) Ltd 5.1.11 Consultation Report Annex 11 - Section 47 Phase 1.A Consultation Materials
APP-046	Orsted Hornsea Project Three (UK) Ltd 5.1.12 Consultation Report Annex 12 - Section 47 Phase 1.B Consultation Materials
APP-047	Orsted Hornsea Project Three (UK) Ltd

	5.1.13 Consultation Report Annex 13 - Section 47 Phase 1 Responses
APP-048	Orsted Hornsea Project Three (UK) Ltd 5.1.14 Consultation Report Annex 14 - Section 47 Phase 2 Consultation Materials
APP-049	Orsted Hornsea Project Three (UK) Ltd 5.1.15 Consultation Report Annex 15 - Phase 2 Responses
APP-050	Orsted Hornsea Project Three (UK) Ltd 5.1.16 Consultation Report Annex 16 - Newsletters
APP-051	Orsted Hornsea Project Three (UK) Ltd 5.2 Report to Inform Appropriate Assessment
APP-052	Orsted Hornsea Project Three (UK) Ltd 5.2.1 Report to Inform Appropriate Assessment Annex 1 - HRA Screening Report
APP-053	Orsted Hornsea Project Three (UK) Ltd 5.2.2 Report to Inform Appropriate Assessment Annex 2 - Additional SPA Screening
APP-054	Orsted Hornsea Project Three (UK) Ltd 5.2.3 Report to Inform Appropriate Assessment Annex 3 - Phenology, Connectivity and Apportioning
APP-055	Orsted Hornsea Project Three (UK) Ltd 6 ES Non-Technical Summary
APP-056	Orsted Hornsea Project Three (UK) Ltd 6.1.1 ES Volume 1 - Ch 1 - Introduction and Overarching Glossary
APP-057	Orsted Hornsea Project Three (UK) Ltd 6.1.2 ES Volume 1 - Ch 2 - Policy and Legislation
APP-058	Orsted Hornsea Project Three (UK) Ltd 6.1.3 ES Volume 1 - Ch 3 - Project Description
APP-059	Orsted Hornsea Project Three (UK) Ltd 6.1.4 ES Volume 1 - Ch 4 - Site Selection and Consideration of Alternatives
APP-060	Orsted Hornsea Project Three (UK) Ltd 6.1.5 ES Volume 1 - Ch 5 - Environmental Impact Assessment Methodology
APP-061	Orsted Hornsea Project Three (UK) Ltd 6.2.1 ES Volume 2 - Ch 1 - Marine Processes
APP-062	Orsted Hornsea Project Three (UK) Ltd 6.2.2 ES Volume 2 - Ch 2 - Benthic Ecology

Appendix B

APP-063	Orsted Hornsea Project Three (UK) Ltd 6.2.3 ES Volume 2 - Ch 3 - Fish and Shellfish Ecology
APP-064	Orsted Hornsea Project Three (UK) Ltd 6.2.4 ES Volume 2 - Ch 4 - Marine Mammals
APP-065	Orsted Hornsea Project Three (UK) Ltd 6.2.5 ES Volume 2 - Ch 5 - Offshore Ornithology
APP-066	Orsted Hornsea Project Three (UK) Ltd 6.2.6 ES Volume 2 - Ch 6 - Commercial Fisheries
APP-067	Orsted Hornsea Project Three (UK) Ltd 6.2.7 ES Volume 2 - Ch 7 - Shipping and Navigation
APP-068	Orsted Hornsea Project Three (UK) Ltd 6.2.8 ES Volume 2 - Ch 8 - Aviation, Military and Communication
APP-069	Orsted Hornsea Project Three (UK) Ltd 6.2.9 ES Volume 2 - Ch 9 - Marine Archaeology
APP-070	Optimus Wind Limited and Breesea Limited 6.2.10 ES Volume 2 - Ch 10 - Seascape and Visual Resources
APP-071	Orsted Hornsea Project Three (UK) Ltd 6.2.11 ES Volume 2 - Ch 11 - Infrastructure and Other Users
APP-072	Orsted Hornsea Project Three (UK) Ltd 6.2.12 ES Volume 2 - Ch 12 - Inter-related Effects (Offshore)
APP-073	Orsted Hornsea Project Three (UK) Ltd 6.3.1 ES Volume 3 - Ch 1 - Geology and Ground Conditions
APP-074	Orsted Hornsea Project Three (UK) Ltd 6.3.2 ES Volume 3 - Ch 2 - Hydrology and Flood Risk
APP-075	Orsted Hornsea Project Three (UK) Ltd 6.3.3 ES Volume 3 - Ch 3 - Ecology and Nature Conservation
APP-076	Orsted Hornsea Project Three (UK) Ltd 6.3.4 ES Volume 3 - Ch 4 - Landscape and Visual Resources
APP-077	Orsted Hornsea Project Three (UK) Ltd 6.3.5 ES Volume 3 - Ch 5 - Historic Environment
APP-078	Orsted Hornsea Project Three (UK) Ltd 6.3.6 ES Volume 3 - Ch 6 - Land Use and Recreation
APP-079	Orsted Hornsea Project Three (UK) Ltd 6.3.7 ES Volume 3 - Ch 7 - Traffic and Transport

Appendix B

APP-080	Orsted Hornsea Project Three (UK) Ltd 6.3.8 ES Volume 3 - Ch 8 - Noise and Vibration
APP-081	Orsted Hornsea Project Three (UK) Ltd 6.3.9 ES Volume 3 - Ch 9 - Air Quality
APP-082	Orsted Hornsea Project Three (UK) Ltd 6.3.10 ES Volume 3 - Ch 10 - Socio-economics
APP-083	Orsted Hornsea Project Three (UK) Ltd 6.3.11 ES Volume 3 - Ch 11 - Inter-related Effects (Onshore)
APP-084	Orsted Hornsea Project Three (UK) Ltd 6.4.1.1 ES Volume 4 - 1.1 - Hornsea Project One and Hornsea Project Two Consultation of Relevance to Hornsea Three
APP-085	Orsted Hornsea Project Three (UK) Ltd 6.4.3.1 ES Volume 4 - 3.1 - Subsea Noise Technical Report
APP-086	Orsted Hornsea Project Three (UK) Ltd 6.4.3.2 ES Volume 4 - 3.2 - Dredging and Disposal; Site Characterisation
APP-087	Orsted Hornsea Project Three (UK) Ltd 6.4.3.3 ES Volume 4 - 3.3 - EMF Compliance Statement
APP-088	Orsted Hornsea Project Three (UK) Ltd 6.4.3.4 ES Volume 4 - 3.4 - Site Waste Management Plan
APP-089	Orsted Hornsea Project Three (UK) Ltd 6.4.3.5 ES Volume 4 - 3.5 - Onshore Crossing Schedule
APP-090	Orsted Hornsea Project Three (UK) Ltd 6.4.3.6 ES Volume 4 - 3.6 - Offshore Operation and Maintenance Licensable Activities
APP-091	Orsted Hornsea Project Three (UK) Ltd 6.4.3.7 ES Volume 4 - 3.7 - Layout Development Principles
APP-092	Orsted Hornsea Project Three (UK) Ltd 6.4.4.1 ES Volume 4 - 4.1 - Grid Connection and Refinement of the Cable Landfall
APP-093	Orsted Hornsea Project Three (UK) Ltd 6.4.4.2 ES Volume 4 - 4.2 - Selection and Refinement of the Offshore ECR and HVAC Booster Station
APP-094	Orsted Hornsea Project Three (UK) Ltd 6.4.4.3 ES Volume 4 - 4.3 - Refinement of the Onshore Cable Corridor and Associated Infrastructure (Stages 5 -7 Scoping to PEIR)

APP-095	Orsted Hornsea Project Three (UK) Ltd 6.4.4.4 ES Volume 4 - 4.4 - Post PEIR Changes (Stages 8-9)
APP-096	Orsted Hornsea Project Three (UK) Ltd 6.4.5.1 ES Volume 4 - 5.1 - Enhancement, Mitigation and Monitoring Commitments
APP-097	Orsted Hornsea Project Three (UK) Ltd 6.4.5.2 ES Volume 4 - 5.2- Cumulative Effects Screening Matrix
APP-098	Orsted Hornsea Project Three (UK) Ltd 6.4.5.3 ES Volume 4 - 5.3 - Location of Cumulative Schemes
APP-099	Orsted Hornsea Project Three (UK) Ltd 6.4.5.4 ES Volume 4 - 5.4 - Transboundary Impacts Screening
APP-100	Orsted Hornsea Project Three (UK) Ltd 6.4.5.5 ES Volume 4 - 5.5 - Scoping Report and Secretary of State's Scoping Opinion
APP-101	Orsted Hornsea Project Three (UK) Ltd 6.5.1.1 ES Volume 5 - 1.1 - Marine Processes Technical Report
APP-102	Orsted Hornsea Project Three (UK) Ltd 6.5.2.1 ES Volume 5 - 2.1 - Benthic Ecology Technical Report
APP-103	Orsted Hornsea Project Three (UK) Ltd 6.5.2.2 ES Volume 5 - 2.2 - Water Framework Directive Assessment
APP-104	Orsted Hornsea Project Three (UK) Ltd 6.5.2.3 ES Volume 5 - 2.3 - Marine Conservation Zone Assessment
APP-105	Orsted Hornsea Project Three (UK) Ltd 6.5.3.1 ES Volume 5 - 3.1 - Fish and Shellfish Ecology Technical Report
APP-106	Orsted Hornsea Project Three (UK) Ltd 6.5.4.1 ES Volume 5 - 4.1 - Marine Mammal Technical Report
APP-107	Orsted Hornsea Project Three (UK) Ltd 6.5.5.1 ES Volume 5 - 5.1 - Baseline Characterisation Report
APP-108	Orsted Hornsea Project Three (UK) Ltd 6.5.5.2 ES Volume 5 - 5.2 - Analysis of Displacement Impacts on Seabirds
APP-109	Orsted Hornsea Project Three (UK) Ltd 6.5.5.3 ES Volume 5 - 5.3 - Collision Risk Modelling

APP-110	Orsted Hornsea Project Three (UK) Ltd 6.5.5.4 ES Volume 5 - 5.4 - Data Hierarchy Report
APP-111	Orsted Hornsea Project Three (UK) Ltd 6.5.6.1 ES Volume 5 - 6.1 - Commercial Fisheries Technical Report
APP-112	Orsted Hornsea Project Three (UK) Ltd 6.5.7.1 ES Volume 5 - 7.1 - Navigational Risk Assessment
APP-113	Orsted Hornsea Project Three (UK) Ltd 6.5.8.1 ES Volume 5 - 8.1 - Aviation, Military and Communication Technical Report
APP-114	Orsted Hornsea Project Three (UK) Ltd 6.5.9.1 ES Volume 5 - 9.1 - Marine Archaeology Technical Report
APP-115	Orsted Hornsea Project Three (UK) Ltd 6.5.9.2 ES Volume 5 - 9.2 - Outline Written Scheme of Investigation
APP-116	Orsted Hornsea Project Three (UK) Ltd 6.5.10.1 ES Volume 5 - 10.1 - Seascape and Visual Resources Technical Report
APP-117	Orsted Hornsea Project Three (UK) Ltd 6.5.10.2 ES Volume 5 - 10.2 - Seascape and Visual Resources Wirelines
APP-118	Orsted Hornsea Project Three (UK) Ltd 6.5.10.3 ES Volume 5 - 10.3 - Seascape and Visual Resources Cumulative Wirelines
APP-119	Orsted Hornsea Project Three (UK) Ltd 6.5.11.1 ES Volume 5 - 11.1 - Radar Early Warning Technical Report
APP-120	Orsted Hornsea Project Three (UK) Ltd 6.6.1.1 ES Volume 6 - 1.1 - Borehole Logs
APP-121	Orsted Hornsea Project Three (UK) Ltd 6.6.1.2 ES Volume 6 - 1.2 - Abstraction Licences and Source Protection Zones
APP-122	Orsted Hornsea Project Three (UK) Ltd 6.6.1.3 ES Volume 6 - 1.3 - Discharge Consents and Permits
APP-123	Orsted Hornsea Project Three (UK) Ltd 6.6.1.4 ES Volume 6 - 1.4 - Water Framework Directive Groundwater Assessment

Appendix B

APP-124	Orsted Hornsea Project Three (UK) Ltd 6.6.2.1 ES Volume 6 - 2.1 - Onshore Infrastructure Flood Risk Assessments
APP-125	Orsted Hornsea Project Three (UK) Ltd 6.6.2.2 ES Volume 6 - 2.2 - Environment Agency and Internal Drainage Board Watercourses and Flood Zones
APP-126	Orsted Hornsea Project Three (UK) Ltd 6.6.2.3 ES Volume 6 - 2.3 - Surface Water Abstraction Licences, Discharge Consents and Pollution Incidents
APP-127	Orsted Hornsea Project Three (UK) Ltd 6.6.2.4 ES Volume 6 - 2.4 - Hydrological Characterisation report
APP-128	Orsted Hornsea Project Three (UK) Ltd 6.6.2.5 ES Volume 6 - 2.5 - Water Framework Directive Surface Water Assessment
APP-129	Orsted Hornsea Project Three (UK) Ltd 6.6.3.1 ES Volume 6 - 3.1 - Desk Study and Phase 1 Habitat Survey
APP-130	Orsted Hornsea Project Three (UK) Ltd 6.6.3.2 ES Volume 6 - 3.2 - Hedgerow Survey
APP-131	Orsted Hornsea Project Three (UK) Ltd 6.6.3.3 ES Volume 6 - 3.3 - Desmoulin's Whorl Snail Survey
APP-132	Orsted Hornsea Project Three (UK) Ltd 6.6.3.4 ES Volume 6 - 3.4 - White-Clawed Crayfish Survey
APP-133	Orsted Hornsea Project Three (UK) Ltd 6.6.3.5 ES Volume 6 - 3.5 - Great Crested Newt Survey
APP-134	Orsted Hornsea Project Three (UK) Ltd 6.6.3.6 ES Volume 6 - 3.6 - Reptile Survey
APP-135	Orsted Hornsea Project Three (UK) Ltd 6.6.3.7 ES Volume 6 - 3.7 - Water Vole Survey
APP-136	Orsted Hornsea Project Three (UK) Ltd 6.6.3.8 ES Volume 6 - 3.8 - Bat Surveys
APP-137	Orsted Hornsea Project Three (UK) Ltd 6.6.3.9 ES Volume 6 - 3.9 - Onshore Ornithology - Wintering and Migratory Birds
APP-138	Orsted Hornsea Project Three (UK) Ltd

	6.6.3.10 ES Volume 6 - 3.10 - Onshore Ornithology - Breeding Birds
APP-139	Orsted Hornsea Project Three (UK) Ltd 6.6.3.11 Volume 6 - 3.11 - Otter Survey (non-confidential version)
APP-140	Orsted Hornsea Project Three (UK) Ltd 6.6.3.12 Volume 6 - 3.12 - Badger Survey (non-confidential version)
APP-141	Orsted Hornsea Project Three (UK) Ltd 6.6.3.13 ES Volume 6 - 3.13 - Hazel Dormouse, Red Squirrel and Freshwater Pearl Mussel Desk Study
APP-142	Orsted Hornsea Project Three (UK) Ltd 6.6.4.1 ES Volume 6 - 4.1 - Landscape and Visual Impact Assessment Methodology
APP-143	Orsted Hornsea Project Three (UK) Ltd 6.6.4.2 ES Volume 6 - 4.2 - Extracts from National Landscape Character Area Descriptions
APP-144	Orsted Hornsea Project Three (UK) Ltd 6.6.4.3 ES Volume 6 - 4.3 - Extracts from Local Landscape Character Area Descriptions
APP-145	Orsted Hornsea Project Three (UK) Ltd 6.6.4.4 ES Volume 6 - 4.4 - Qualities of Natural Beauty of the Norfolk Coast AONB
APP-146	Orsted Hornsea Project Three (UK) Ltd 6.6.4.5 ES Volume 6 - 4.5 - Photograph Panels, Wirelines and Photomontages
APP-147	Orsted Hornsea Project Three (UK) Ltd 6.6.4.6 ES Volume 6 - 4.6 - Residential Visual Amenity
APP-148	Orsted Hornsea Project Three (UK) Ltd 6.6.4.7 ES Volume 6 - 4.7 - Effects of the Offshore HVAC Booster Station
APP-149	Orsted Hornsea Project Three (UK) Ltd 6.6.5.1 ES Volume 6 - 5.1 - Desk Based Assessment
APP-150	Orsted Hornsea Project Three (UK) Ltd 6.6.5.2 ES Volume 6 - 5.2 - Fieldwalking Report
APP-151	Orsted Hornsea Project Three (UK) Ltd 6.6.5.3 ES Volume 6 - 5.3 - Site Gazetteer

APP-152	Orsted Hornsea Project Three (UK) Ltd 6.6.5.4 ES Volume 6 - 5.4 - Screening Assessment – Onshore HVDC Converter/HVAC Substation
APP-153	Orsted Hornsea Project Three (UK) Ltd 6.6.5.5 ES Volume 6 - 5.5 - Screening Assessment – Onshore HVAC Booster Station
APP-154	Orsted Hornsea Project Three (UK) Ltd 6.6.5.6 ES Volume 6 - 5.6 - Onshore Geophysical Survey Report
APP-155	Orsted Hornsea Project Three (UK) Ltd 6.6.5.7 ES Volume 6 - 5.7 - Historic Environmental Visualisations
APP-156	Orsted Hornsea Project Three (UK) Ltd 6.6.6.1 ES Volume 6 - 6.1 - Agricultural Land Classification Published Data
APP-157	Orsted Hornsea Project Three (UK) Ltd 6.6.6.2 ES Volume 6 - 6.2 - Soil Survey Data
APP-158	Orsted Hornsea Project Three (UK) Ltd 6.6.6.3 ES Volume 6 - 6.3 - Agricultural Land Classification and Farm Holdings Figures
APP-159	Orsted Hornsea Project Three (UK) Ltd 6.6.7.1 ES Volume 6 - 7.1 - Transport Assessment
APP-160	Orsted Hornsea Project Three (UK) Ltd 6.6.7.2 ES Volume 6 - 7.2 - Description of Network Links and Sensitivity
APP-161	Orsted Hornsea Project Three (UK) Ltd 6.6.7.3 ES Volume 6 - 7.3 - Base Traffic Flows
APP-162	Orsted Hornsea Project Three (UK) Ltd 6.6.7.4 ES Volume 6 - 7.4 - Personnel Injury Accident Locations
APP-163	Orsted Hornsea Project Three (UK) Ltd 6.6.7.5 ES Volume 6 - 7.5 - Public Transport Networks
APP-164	Orsted Hornsea Project Three (UK) Ltd 6.6.7.6 ES Volume 6 - 7.6 - Construction Vehicle Trip Generation Assumptions
APP-165	Orsted Hornsea Project Three (UK) Ltd 6.6.7.7 ES Volume 6 - 7.7 - Traffic Flows with Construction Traffic

Appendix B

APP-166	Orsted Hornsea Project Three (UK) Ltd 6.6.7.8 ES Volume 6 - 7.8 - Traffic and Transport Figures
APP-167	Orsted Hornsea Project Three (UK) Ltd 6.6.8.1 ES Volume 6 - 8.1 - Baseline Noise Survey
APP-168	Orsted Hornsea Project Three (UK) Ltd 6.6.8.2 ES Volume 6 - 8.2 - Construction Noise Model Output
APP-169	Orsted Hornsea Project Three (UK) Ltd 6.6.8.3 ES Volume 6 - 8.3 - Operational Noise Model Input
APP-170	Orsted Hornsea Project Three (UK) Ltd 6.6.8.4 ES Volume 6 - 8.4 - Operational Noise Model Output
APP-171	Orsted Hornsea Project Three (UK) Ltd 6.7 ES Volume 7 - Addendum: Land at Booton
APP-172	Orsted Hornsea Project Three (UK) Ltd 7.1 Safety Zone Statement
APP-173	Orsted Hornsea Project Three (UK) Ltd 7.2 Cable Statement
APP-174	Orsted Hornsea Project Three (UK) Ltd 7.3 Statutory Nuisance Statement
APP-175	Orsted Hornsea Project Three (UK) Ltd 7.4 Consents Management Plan
APP-176	Orsted Hornsea Project Three (UK) Ltd 8.2 Outline Construction Traffic Management Plan
APP-177	Orsted Hornsea Project Three (UK) Ltd 8.3 Planning Statement
APP-178	Orsted Hornsea Project Three (UK) Ltd 8.4 Hierarchy of Management Plans
APP-179	Orsted Hornsea Project Three (UK) Ltd 8.5 Outline Code of Construction Practice
APP-180	Orsted Hornsea Project Three (UK) Ltd 8.6 Outline Ecological Management Plan
APP-181	Orsted Hornsea Project Three (UK) Ltd 8.7 Outline Landscape Management Plan
APP-182	Orsted Hornsea Project Three (UK) Ltd 8.8 In Principle Monitoring Plan

APP-183	Orsted Hornsea Project Three (UK) Ltd 8.10 Outline Fisheries Coexistence and Liaison Plan
Adequacy of Consultation Responses	
AoC-001	Mid Suffolk District Council Adequacy of Consultation Representation
AoC-002	South Norfolk District Council Adequacy of Consultation Representation
AoC-003	Broadland District Council Adequacy of Consultation Representation
AoC-004	North Norfolk District Council Adequacy of Consultation Representation
AoC-005	Broads National Park Authority Adequacy of Consultation Representation
AoC-006	Norfolk County Council Adequacy of Consultation Representation
Relevant Representations	
RR-001	Sarah Griggs-Smith
RR-002	Gerald Frank Bullimore
RR-003	Sherrill Catherine Bullimore
RR-004	T Wright
RR-005	Robert Hannan
RR-006	Councillor Greg Peck (Reepham Division, Norfolk County Council)
RR-007	Mervyn Bibb
RR-008	Richard Perry
RR-009	The Crown Estate
RR-010	Lin Pateman
RR-011	Public Health England
RR-012	Annemarie Wharton
RR-013	J D Jennings
RR-014	National Federation of Fishermen's Organisations
RR-015	Wood Dalling Parish Council
RR-016	Whale and Dolphin Conservation
RR-017	Judith Holland
RR-018	Kelling Parish Council
RR-019	Ray Pearce
RR-020	The Corporation of Trinity House of Depford String
RR-021	J A Wright
RR-022	Samantha Neville
RR-023	Broads Authority
RR-024	Michael Wright

Appendix B

RR-025	Savills (UK) Ltd on behalf of Blue Sky Leisure
RR-026	N2RS (No to Relay Stations)
RR-027	Peter Scott
RR-028	Graham Everett
RR-029	Poringland Parish Council
RR-030	Peel Ports
RR-031	Plumstead Parish Council
RR-032	Equinor
RR-033	Stephen Wharton
RR-034	Oulton Parish Council
RR-035	Norfolk County Council
RR-036	ConocoPhillips (U.K) Limited
RR-037	CPRE Norfolk
RR-038	Clive Searson
RR-039	Jill Leigh
RR-040	Norwich City Council
RR-041	Peter Glenser
RR-042	Daisy Turville-Petre
RR-043	David Jackson
RR-044	Keith Reeves
RR-045	Norfolk Wildlife Trust
RR-046	Sarah Greaves
RR-047	The Wildlife Trusts
RR-048	Cadent Gas Limited
RR-049	Mulbarton Parish Council
RR-050	Edgefield Parish Council
RR-051	Martin Paul Kemp
RR-052	Natasha Hall
RR-053	Orsted Wind Power A/S
RR-054	South Norfolk Council
RR-055	Steven Hall
RR-056	The National Trust
RR-057	Broadland District Council
RR-058	William Horabin on behalf of Friends of North Norfolk
RR-059	Historical Railways Estate (representing the interests of structures belonging to the Secretary of State for Transport)
RR-060	Maritime and Coastguard Agency
RR-061	John Hurst on behalf of Morton on the Hill Parish Council
RR-062	National Grid Electricity Transmission PLC and National Grid Gas PLC
RR-063	Neptune E&P UK Ltd
RR-064	Nicola Tanner
RR-065	Andrew Hellewell
RR-066	Strutt and Parker on behalf of Beckhithe Farms Limited
RR-067	Bidwells on behalf of Carl Baker & David Baker
RR-068	Bidwells on behalf of Charles Watt
RR-069	Cllr. Georgina Perry-Warnes
RR-070	Eastern Inshore Fisheries and Conservation Authority
RR-071	Brown & Co on behalf of Ebony Holdings
RR-072	Edward Jones

Appendix B

RR-073	Environment Agency
RR-074	Gordon Fryett
RR-075	Bidwells on behalf of Graham Makintosh
RR-076	Bidwells on behalf of Great Melton Farms Limited
RR-077	Great Yarmouth Borough Council
RR-078	Historic England
RR-079	Brown & Co on behalf of Honingham Aktieselskab
RR-080	Irelands Arnolds Keys on behalf of John Innes Centre
RR-081	Brown & Co on behalf of Kelling Estate LLP
RR-082	Irelands Arnolds Keys on behalf of Lady M A Prince Smith
RR-083	Irelands Arnolds Keys on behalf of Little Melton Parochial Charity
RR-084	Bidwells on behalf of Marie Lofty
RR-085	Marine Management Organisation
RR-086	Ministry of Defence
RR-087	Irelands Arnolds Keys on behalf of Mr & Mrs S Carman
RR-088	Irelands Arnolds Keys on behalf of Mr B F Clark
RR-089	Irelands Arnolds Keys on behalf of Mr R Harrold
RR-090	Brown & Co on behalf of Mr Richard Gordon
RR-091	Brown & Co on behalf of Mr Richard Youngs
RR-092	Brown & Co on behalf of Mr Robin Buxton
RR-093	Irelands Arnolds Keys on behalf of Mr T Cooper
RR-094	Mrs S B Longe
RR-095	Brown & Co on behalf of Ms K Paul, Mr D Brown & Mr W Barr (Trustees of Gurloque Settlement)
RR-096	Brown & Co on behalf of Ms R Watkinson
RR-097	Natural England
RR-098	Strutt and Parker on behalf of Nethergate Farm Partnership
RR-099	Bidwells on behalf of Nicholas E Evans-Lombe
RR-100	Norfolk Boreas Ltd
RR-101	Norfolk Coast Partnership
RR-102	Norfolk Vanguard Limited
RR-103	Brown & Co on behalf of S H Back
RR-104	Carter Jonas LLP on behalf of Saltcarr Farms Limited
RR-105	ScottishPower Renewables
RR-106	Bidwells on behalf of Sir Edward Evans-Lombe
RR-107	Brodies LLP on behalf of Spirit Energy Nederland B.V.
RR-108	Brodies LLP on behalf of Spirit Energy North Sea Limited
RR-109	Brodies LLP on behalf of Spirit Energy Resources Limited
RR-110	Swannington, Alderford and Little Witchingham Parish Council
RR-111	Strutt and Parker on behalf of The Honourable Henry Thomas Unthank Darling
RR-112	Bidwells on behalf of The Rampton Property Trust C/o Matthew Rampton
RR-113	The Royal Society for the Protection of Birds
RR-114	Strutt and Parker on behalf of The Trustees of the BE Brooks 1983 Settlement
RR-115	Bidwells on behalf of The Trustees of the H G Back Settlement
RR-116	The Wash and North Norfolk Marine Partnership

Appendix B

RR-117	Brown & Co on behalf of Trustees of the Educational Foundation of Alderman John Norman
RR-118	UK Power Networks Plc
RR-119	Irelands Arnolds Keys on behalf of William Gaymer
RR-120	Brown & Co on behalf of William Young Dereham Limited
RR-121	Brown & Co on behalf of WJF Ross Limited
RR-122	Strutt and Parker on behalf of Woodlands Farm Partnership
RR-123	Savills (UK) Ltd on behalf of D N Gray & Co
RR-124	Cawston Parish Council
RR-125	David Brooks
RR-126	Savills (UK) Ltd on behalf of Diocese of Norwich
RR-127	Savills (UK) Ltd on behalf of Easton and Otley College
RR-128	Savills (UK) Ltd on behalf of H Jones (Farms) Ltd
RR-129	Savills (UK) Ltd on behalf of Mr and Mrs Nigel Darling
RR-130	Mr R H Peaver
RR-131	Savills (UK) Ltd on behalf of Mrs Julie Dacre
RR-132	Savills (UK) Ltd on behalf of Mrs S Bulwer-Long
RR-133	North Norfolk District Council
RR-134	Savills (UK) Ltd on behalf of Simon Moores
RR-135	Savills (UK) Ltd on behalf of Sir John White and Kyle White
RR-136	Savills (U.K.) Ltd on behalf of Trustees of J S Mott Will Trust being Lady Emma Suffield and William Edwards
RR-137	Savills (UK) Ltd on behalf of Trustees of Salle Park Trust being Sir David Chapman, Grant Pilcher, Michael Dewing and William Edwards
RR-138	Savills (UK) Ltd on behalf of Trustees of Sir Charles Mott Radcliffe Will Trust being Lady Emma Suffield and William Edwards
RR-139	Savills (UK) Ltd on behalf of Trustees of Stinton Hall Trust being Sir David Chapman, Grant Picher, Micheal Dewing and William Edwards
RR-140	Anglian Water Services Ltd
RR-141	Elizabeth Ward
RR-142	Sarah Butikofer on behalf of Holt County Division
RR-143	Mr C Carter
RR-144	Savills (UK) Ltd on behalf of Mrs C Barratt
RR-145	Mrs Susan N Lowther
RR-146	National Farmers Union
RR-147	Savills (UK) Ltd on behalf of Taylor Wimpey (East Anglian) Ltd
RR-148	Savills (UK) Ltd on behalf of The Trustess of the B E Bulwer-Long Settlement being Alexander G Lane and Mills and Reeve Trust Co. Ltd
RR-149	Highways England
RR-150	Shell U.K. Limited
Procedural Decisions and Notifications from the Examining Authority	
PD-001	Notification of Decision to Accept Application
PD-002	Section 55 Checklist

PD-003	Section 51 advice to the Applicant
PD-004	Rule 4 Appointment of Panel
PD-005	ExA Response to Request under s102A of the Planning Act 2008 - Laura Philpott
PD-006	Rule 6 - Notification of the Preliminary Meeting
PD-007	Rule 8 - Examination Timetable and Procedure and Notification of Hearing(s)
PD-008	Examining Authority's Written Questions
PD-009	Rule 13 - Notification of Hearings
PD-010	Letter to Scottish Natural Heritage inviting them to become an Other Person for the purpose of the examination.
PD-011	Rule 13 and Rule 16 - Notification of Hearings and Accompanied Site Inspection (ASI)
PD-012	Further Written Questions
PD-012a	Notification of Procedural Decision - Rule 9
PD-013	Notification of decision to accept the proposed provision for the Compulsory Acquisition of additional land as part of the application
PD-014	Proposed provisions checklist
PD-015	Rule 13 - Notification of Hearings and Rule 16 - Notification of Accompanied Site Inspection
PD-016	Notification of Procedural Decision Rule 17 - 26 February 2019 Request for further information from the Maritime and Coastguard Agency
PD-017	Notification of Procedural Decision The Examining Authority's schedule of changes to the draft Development Consent Order
PD-018	Variation to Timetable - Rule 8(3) , Rule 13 - Notification of Hearings
PD-019	Rule 17 - 6 March 2019 Request for further information to Natural England
PD-020	Rule 17 - 19 March 2019 Request for further information to Ørsted Hornsea Project Three (UK) Ltd
PD-021	Rule 17 - 19 March 2019 Request for further information to Natural England
PD-022	Rule 17 - 19 March 2019 Request for further information to Norfolk County Council
PD-023	Notification of completion of the Examining Authority's Examination
PD-024	Report on the Implications of European Sites (RIES) Issued by the Examining Authority - 21 February 2019
PD-025	Request for Further Information - Rule 17

PD-026	Rule 17 - 29 March 2019 Request for further information to Ørsted Hornsea Project Three (UK) Ltd
Additional Submissions	
AS-001	Ørsted Hornsea Project Three (UK) Ltd Covering Letter to Certificates and response to s51 advice
AS-002	Ørsted Hornsea Project Three (UK) Ltd 5.2 Report to Inform Appropriate Assessment
AS-003	Ørsted Hornsea Project Three (UK) Ltd Relationship Between Design Parameters Draft Development Consent Order and Environmental Statement
AS-004	Ørsted Hornsea Project Three (UK) Ltd HRA Screening Matrices - Additional submission accepted by the ExA
AS-005	Ørsted Hornsea Project Three (UK) Ltd BoR Schedule of Changes (between Submission and close of S56 Notification) - Additional submission accepted by the ExA
AS-006	Joseph Cook Additional Submission - Accepted at the discretion of the Examining Authority
AS-007	Amanda Cook Additional Submission - Accepted at the discretion of the Examining Authority
AS-008	The Coal Authority Additional Submission - Accepted at the discretion of the Examining Authority
AS-009	Richard Cubbitt Additional Submission - Accepted at the discretion of the Examining Authority
AS-010	Network Rail Objections to the grant of compulsory power affecting Network Rail Infrastructure Limited - Additional Submission - Accepted at the discretion of the Examining Authority.
AS-011	Ørsted Hornsea Project Three (UK) Ltd Suggested viewpoints submitted by the Applicant - Accepted at the discretion of the Examining Authority.
AS-012	Helen & Chris Monk Accepted at the discretion of the Examining Authority
AS-013	Longmans Software Accepted at the discretion of the Examining Authority

AS-014	Joanna Church on behalf of Richard Bacon MP Accepted at the discretion of the Examining Authority
AS-015	Scottish Natural Heritage Accepted at the discretion of the Examining Authority
AS-016	Joanna Church on behalf of Richard Bacon MP Additional Submission - Accepted at the discretion of the Examining Authority
AS-017	Ørsted Hornsea Project Three (UK) Ltd Additional Submission - Accepted at the discretion of the Examining Authority
Events and Hearings	
Preliminary Meeting	
EV-001	Recording of Preliminary Meeting
EV-002	Preliminary Meeting Note
EV-003	REFERENCE NOT IN USE
EV-004	REFERENCE NOT IN USE
Open Floor Hearings 3 December / Issue Specific Hearings 4-7 December 2018	
EV-005	Agenda for Open Floor Hearing 1 Agenda for Open Floor Hearing 1
EV-006	Agenda for Issue Specific Hearing 1 Agenda for Issue Specific Hearing 1: Alternatives/Design Flexibility; onshore ecology; navigation and other offshore operations
EV-007	Agenda for Issue Specific Hearing 2 Agenda for Issue Specific Hearing 2: Offshore ecology
EV-008	Agenda for Issue Specific Hearing 3 Agenda for Issue Specific Hearing 3: The draft Development Consent Order
EV-009	Agenda for Issue Specific Hearing 4 Agenda for Issue Specific Hearing 4: Other onshore matters
EV-010	Norfolk County Council Proposed Amendment to Requirement 15 (Surface Drainage)
EV-011	Recording of Open Floor Hearing - 03 December 2018
EV-012	Recording of Issue Specific Hearing 1 (ISH1) - 04 December 2018
EV-013	Recording of Issue Specific Hearing 2 (ISH2) - 05 December 2018
EV-014	Recording of Issue Specific Hearing 3 (ISH3) - 06 December 2018
EV-015	Recording of Issue Specific Hearing 4 (ISH4) 07 December 2018

Open Floor Hearings 28 January / Issue Specific Hearings 29 -31 January 2019 / Accompanied Site Inspection 28 January / Compulsory Acquisition Hearing 31 January	
EV-016	Hearing Agenda for Open Floor Hearing Open Floor Hearing - Monday 28 January 2019
EV-017	Itinerary for Accompanied Site Inspection (ASI) Itinerary for Accompanied Site Inspection (ASI) - Monday 28 January 2019
EV-018	Hearing Agenda for Issue Specific Hearing 5 Issue Specific Hearing 5: Offshore ecology - Tuesday 29 January 2019
EV-019	Hearing Agenda for Issue Specific Hearing 6 Issue Specific Hearing 6: The draft Development Consent Order - Wednesday 30 January 2019
EV-020	Hearing Agenda for Compulsory Acquisition Hearing Compulsory Acquisition Hearing - Thursday 31 January 2019
EV-020a	Recording of Open Floor Hearing 2 - 28 January 2019
EV-021	Recording of Issue Specific Hearing 5 (ISH5) - 29 January 2019
EV-022	Recording of Issue Specific Hearing 6 (ISH6) - 30 January 2019
EV-023	Recording of Compulsory Acquisition Hearing 1 (CAH1) - 31 January 2019
Accompanied Site Inspection 5 March / Issue Specific Hearings 6 – 8 March	
EV-024	Agenda for Issue Specific Hearing 7: Offshore ecology - Wednesday 6 March 2019
EV-025	Agenda for Issue Specific Hearing 8 : Aviation, shipping and effects on oil and gas operations - Thursday 7 March 2019
EV-026	Agenda for Issue Specific Hearing 9: Part 1 - Cumulative traffic impacts and related mitigation measures and Part 2 - The draft DCO - Friday 8 March
EV-027	Recording of Issue Specific Hearing 7 (ISH7) - 6 March 2019
EV-028	Recording of Issue Specific Hearing 8 (ISH8) - 7 March 2019
EV-029	Recording of Issue Specific Hearing 9 (ISH9) - 8 March 2019
EV-029a	Accompanied Site Inspection Itinerary - 5 March 2019
Open Floor Hearing 25 March / Issue Specific Hearing 26 March / Compulsory Acquisition Hearing 26 March	
EV-030	Agenda for Open Floor Hearing 3 – 25 March 2019
EV-031	Agenda for Further Issue Specific Hearing – 26 March 2019
EV-032	Agenda for Further Compulsory Acquisition Hearing – 26 March 2019
EV-033	Recording of Open Floor Hearing 3 - 25 March 2019
EV-034	Recording of Further Issue Specific Hearing - 26 March 2019
EV-035	Recording of Further Compulsory Acquisition Hearing - 26 March 2019
Unaccompanied Site Inspection 4, 5 and 13 March 2019	

EV-036	Note of Unaccompanied Site Inspection on 4, 5 and 13 March 2019
Deadline 1 • Applicant's revised draft Development Consent Order (DCO) • Applicant's Guide to the Application • Applicant's Statement of Commonality of Statements of Common Ground (SoCG) • Applicant's Compulsory Acquisition (CA) schedule • 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 • Responses to the ExA's Written Questions • Comments on updated application documents • 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 an Open Floor Hearing (OFH) • Notification of wish to make oral representations at an Issue Specific Hearing • Notification of wish to attend an Accompanied Site Inspection (ASI), suggested locations and justifications • Notification of wish to have future correspondence electronically	
REP1-001	Anglian Water Services Ltd Written Representation
REP1-002	Anglian Water Services Ltd Letter to The Planning Inspectorate
REP1-003	Sherrill Bullimore Written Representation
REP1-004	Cawston Parish Council Written Representation
REP1-005	Ørsted Hornsea Project Three (UK) Ltd Appendix 49 – Applicants Response to the Examining Authority's Written Questions
REP1-006	South Norfolk Council Development Management Plan
REP1-007	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Spirit Energy – Late Submission Accepted at the Discretion of the Examining Authority
REP1-008	Woodlands Farm Written Representation
REP1-009	Honingham Aktieselskab Written Representation
REP1-010	S H Back Written Representation
REP1-011	Easton Estate

Appendix B

	Written Statement
REP1-012	Wood Dalling Parish Council Written Representation
REP1-013	WJF Ross Ltd Written Representation
REP1-014	Swardeston Parish Council Notification of wish to attend an Accompanied Site Inspection (ASI)
REP1-015	Norfolk Vanguard and Norfolk Boreas Notification of Interest in Hearings and Accompanied Site Visit
REP1-016	Trustees of Salle Park Trust Written Representation
REP1-017	The Wildlife Trusts Response to the Examining Authority's Written Questions
REP1-018	Trustees of Stinton Hall Trust Written Representation
REP1-019	Trustees of Sir Charles Mott Radcliffe Will Trust Written Representation
REP1-020	Whale and Dolphin Conservation Response to the Examining Authority's Written Questions
REP1-021	Trustees of J S Mott Trust Written Representation
REP1-022	Whale and Dolphin Conservation Written Representation
REP1-023	The Wildlife Trusts Written Representation
REP1-024	Trinity House Response to the Examining Authority's Written Questions
REP1-025	Taylor Wimpey (East Anglian) Ltd Written Representation
REP1-026	The Trustees of the B E Brooks 1983 Settlement Written Representation
REP1-027	Spirit Energy Summary of Written Representation
REP1-028	The Rampton Property Trust Written Representation
REP1-029	The Trustees of the H G Back Settlement Written Representation
REP1-030	The Trustees of the B E Bulwer-Long Settlement Written Representation
REP1-031	Spirit Energy Cover Letter
REP1-032	Spirit Energy Annex to Written Representation
REP1-033	Sir Edward Evans-Lombe Written Representation
REP1-034	Spirit Energy White Paper on Offshore Wind Energy
REP1-035	Sir John White and Kyle White Written Representation
REP1-036	Simon Moores

Appendix B

	Written Representation
REP1-037	Spirit Energy Press Release
REP1-038	Sir Edward Evans-Lombe Notification of Wish to Speak at an Open Floor Hearing (OFH)
REP1-039	Brown & Co On Behalf Of S H Back Written Representation
REP1-040	East Anglia Two Limited and East Anglia One North Limited Written Representation
REP1-041	Spirit Energy Written Representation
REP1-042	Martin Paul Kemp Written Representation
REP1-043	Norfolk County Council Response to the Examining Authority's Written Questions
REP1-044	Brown & Co On Behalf Of S H Back Supporting Plans Proposed Cable Route
REP1-045	Michael Wright Written Representation
REP1-046	Oulton Parish Council Written Representation
REP1-047	Richard Gordon Written Representation
REP1-048	Brown & Co On Behalf Of Kelling Estate Written Representation
REP1-049	Brown & Co On Behalf Of Richard Gordon Written Representation
REP1-050	R Watkinson Written Representation
REP1-051	Brown & Co On Behalf of R Buxton Written Representation
REP1-052	Norfolk County Council S42 Comments
REP1-053	Broadland District Council Local Impact Report
REP1-054	Norfolk County Council S42 Comments Cable Route
REP1-055	North Norfolk District Council Response to the Examining Authority's Written Questions
REP1-056	Broadland District Council Response to the Examining Authority's Written Questions
REP1-057	Norfolk County Council Map 1 Offshore Location
REP1-058	Norfolk County Council Map 3 Onshore Booster Location
REP1-059	Norfolk County Council Response to the Examining Authority's Written Questions
REP1-060	Norfolk County Council S42 Additional Comments
REP1-061	Norfolk County Council Local Impact Report

Appendix B

REP1-062	North Norfolk District Council Local Impact Reports
REP1-063	Norfolk County Council Detailed Highway and Environment Comments
REP1-064	Norfolk County Council Map 4 Substation
REP1-065	Norfolk County Council Map 2 Onshore Infrastructure and Cable Route
REP1-066	National Farmers Union Written Representation
REP1-067	Reference Not In Use
REP1-068	Ebony Holdings Written Representation
REP1-069	Honingham Thorpe Farm Written Statement
REP1-070	National Grid Electricity Transmission Plc (NGET) Response to the Examining Authority's Written Questions
REP1-071	Nicholas Evans-Lombe Written Representation
REP1-072	R Buxton Written Representation
REP1-073	R Youngs Written Representation
REP1-074	The National Trust Written Representation
REP1-075	N2RS Written Representation
REP1-076	National Grid Written Representation
REP1-077	Nethergate Farms Partnership Written Representation
REP1-078	Trustees Educational Foundation of Alderman John Norman Written Representation
REP1-079	The National Trust Response to the Examining Authority's Written Questions
REP1-080	Reference Not In Use
REP1-081	Reference Not In Use
REP1-082	Mr and Mrs Darling Written Representation
REP1-083	Marine Management Organisation Summary Written Representation
REP1-084	Mrs C Barratt Written Representation
REP1-085	Mr and Mrs Hall Written Representation
REP1-086	Mrs S Bulwer-Long Written Representation
REP1-087	Mr and Mrs Pearce Written Representation
REP1-088	Mrs Julie Dacre Written Representation

Appendix B

REP1-089	Spirit Energy Navigational Safety Within Marine Spatial Planning
REP1-090	Spirit Energy Guidelines for the Ship/Installation Collision Avoidance
REP1-091	Spirit Energy Report on the investigation of collision between the offshore supply vessel Highland Pioneer and the DA jack-up rig of the Douglas Offshore installation in Liverpool Bay on 27 January 2000
REP1-092	Melton Harrold, Sharon Harrold and Penny Jane Oakes Written Representation
REP1-093	Maritime & Coastguard Agency Response to the Examining Authority's Written Questions
REP1-094	Marine Management Organisation Response to the Examining Authority's Written Questions
REP1-095	Marine Management Organisation Written Representation
REP1-096	Spirit Energy Markham ST-1 Decommissioning Programme
REP1-097	Corpusty & Saxthorpe Council and Edgefield Parish Council Joint Written Representation
REP1-098	Spirit Energy Ship/Platform collision report
REP1-099	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Broadland District Council
REP1-100	South Norfolk Council Local Import Report
REP1-101	Ørsted Hornsea Project Three (UK) Ltd Letter of Comfort between Hornsea Project Three (UK) Ltd and Neptune E&P UK Ltd
REP1-102	Spirit Energy Review of Marine Hazards
REP1-103	H Jones (Farms) Ltd Written Representation
REP1-104	Norfolk County Council Response To The Examining Authority's Written Questions (Onshore Archaeology)
REP1-105	Ørsted Hornsea Project Three (UK) Ltd Applicant's Guide to the Application
REP1-106	Great Yarmouth Borough Council Written Representation
REP1-107	Historic England Written Representation
REP1-108	Highways England Response to the Examining Authority's Written Questions
REP1-109	Great Melton Farm Limited Written Representation
REP1-110	H T Darling Written Representation
REP1-111	RSPB

Appendix B

	Response to the Examining Authority's Written Questions
REP1-112	Historic England Response to the Examining Authority's Written Questions
REP1-113	Environment Agency Response to the Examining Authority's Written Questions
REP1-114	Natural England Annex E: Natural England's Additional Detailed Comments On Marine Mammals
REP1-115	G.W. Harrold & Partners Written Representation
REP1-116	ConocoPhillips (UK) Ltd Response to the Examining Authority's Written Questions
REP1-117	Natural England Annex D7: Natural England Detailed Comments On ES Benthic Characterisation Of The Nearshore Cable Corridor
REP1-118	Eastern Inshore Fisheries Conservation Authority Written Representation
REP1-119	Reference not in use
REP1-120	Diocese of Norwich Written Representation
REP1-121	Ørsted Hornsea Project Three (UK) Ltd Applicant's Statement of Commonality of Statements of Common Ground (SoCG)
REP1-122	Ørsted Hornsea Project Three (UK) Ltd Applicant Responses to the Examining Authority's Written Questions
REP1-123	Ministry of Defence Response to The Examining Authority's Written Question
REP1-124	Eastern Inshore Fisheries Conservation Authority Summary Written Representation
REP1-125	Natural England Annex D6: NE and JNCC detailed comments on Vol. 5 Annex 2.3 - MCZ Assessment
REP1-126	Eastern Inshore Fisheries Conservation Authority Response to The Examining Authority's Written Question
REP1-127	Ørsted Hornsea Project Three (UK) Ltd DCO Tracked Changed
REP1-128	Easton and Otley College Written Representation
REP1-129	Ørsted Hornsea Project Three (UK) Ltd Schedule of Changes Development Consent Order and Deemed Marine Licences
REP1-130	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP1-131	Ørsted Hornsea Project Three (UK) Ltd Applicants Comments on Relevant Representations
REP1-132	Ørsted Hornsea Project Three (UK) Ltd Annex A - Schedule of Objection to Granting of Compulsory Acquisition Powers
REP1-133	Ørsted Hornsea Project Three (UK) Ltd Development Consent Order - Clean

Appendix B

REP1-134	Ørsted Hornsea Project Three (UK) Ltd Compulsory Acquisition Schedule
REP1-135	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 Population Viability Analysis
REP1-136	Ørsted Hornsea Project Three (UK) Ltd Appendix 52 Funding Statement Annex 1 Dalcour Maclaren Letter (Rev 1, track changed)
REP1-137	Ørsted Hornsea Project Three (UK) Ltd Appendix 53 Funding Statement Annex 1 Dalcour Maclaren Letter (Rev 1)
REP1-138	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 Cable Protection in Designated Sites
REP1-139	Ørsted Hornsea Project Three (UK) Ltd Appendix 7 Alternative approach to sourcing cumulative and in-combination collision risk estimates
REP1-140	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 The Wash and North Norfolk Coast SAC - Baseline and impacts of cable installation
REP1-141	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 Baseline Characterisation Sensitivity Testing
REP1-142	Ørsted Hornsea Project Three (UK) Ltd Appendix 44 Outline Code of Construction Practice (Rev 1)
REP1-143	Ørsted Hornsea Project Three (UK) Ltd Appendix 40 Paper by Furness R.W et al. (Environmental Impact Assessment Review 73, 2018, 1-6)
REP1-144	Ørsted Hornsea Project Three (UK) Ltd Appendix 42 Paper by Cleasby I.R. et al. (RSPB Research Report no. 63.)
REP1-145	Ørsted Hornsea Project Three (UK) Ltd Appendix 47 Outline Landscape Management Plan (Rev 1)
REP1-146	Ørsted Hornsea Project Three (UK) Ltd Appendix 45 Outline Construction Traffic Management Plan (Rev 1)
REP1-147	Ørsted Hornsea Project Three (UK) Ltd Appendix 46 Outline Ecological Management Plan (Rev 1)
REP1-148	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 Analysis of precaution in cumulative and in-combination assessments – as-built scenarios
REP1-149	Ørsted Hornsea Project Three (UK) Ltd Appendix 41 Paper by Skov H. et al. (ORJIP Bird Collision and Avoidance Study. Final report – April 2018)
REP1-150	Ørsted Hornsea Project Three (UK) Ltd Appendix 43 Paper by Trinder M. (The Crown Estate 2017)
REP1-151	Ørsted Hornsea Project Three (UK) Ltd Appendix 39 Ornithology Survey Data Coverage Figures
REP1-152	Ørsted Hornsea Project Three (UK) Ltd Figure 2: Historic Hedge
REP1-153	Ørsted Hornsea Project Three (UK) Ltd Appendix 35 Marine Navigation Figures and Tables
REP1-154	Ørsted Hornsea Project Three (UK) Ltd Appendix 36 Fisheries Coexistence and Liaison Plan (rev 1)

REP1-155	Ørsted Hornsea Project Three (UK) Ltd Figure 1: Important Hedgerow
REP1-156	Ørsted Hornsea Project Three (UK) Ltd Appendix 30 Permanent Access Note for Onshore HVAC Booster Station
REP1-157	Ørsted Hornsea Project Three (UK) Ltd Appendix 33 A140 / B1113 Junction Technical Note
REP1-158	Ørsted Hornsea Project Three (UK) Ltd Appendix 37 Q1.4.19 – Response
REP1-159	Ørsted Hornsea Project Three (UK) Ltd Appendix 34 Tree Preservation Order and Hedgerow Plan
REP1-160	Ørsted Hornsea Project Three (UK) Ltd Appendix 38 Important Hedgerows
REP1-161	Ørsted Hornsea Project Three (UK) Ltd Appendix 32 Transport Assessment Clarifications
REP1-162	Ørsted Hornsea Project Three (UK) Ltd Appendix 31 Transport Assessment
REP1-163	Ørsted Hornsea Project Three (UK) Ltd Appendix 28 Onshore HVDC Converter/HVAC Substation Historic Environment Screening Clarification Note
REP1-164	Ørsted Hornsea Project Three (UK) Ltd Appendix 22 Transmission System (HVAC/HVDC) Briefing Note
REP1-165	Ørsted Hornsea Project Three (UK) Ltd Appendix 24 Onshore Crossing Schedule
REP1-166	Ørsted Hornsea Project Three (UK) Ltd Appendix 27 Onshore HVAC Booster Station Historic Environment Screening Clarification Note
REP1-167	Ørsted Hornsea Project Three (UK) Ltd Appendix 23 Impacts on the Qualities of Natural Beauty of the Norfolk Coast AONB
REP1-168	Ørsted Hornsea Project Three (UK) Ltd Appendix 25 Onshore HVAC Booster Station Infiltration Report
REP1-169	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 Age class data Clarification Note
REP1-170	Ørsted Hornsea Project Three (UK) Ltd Appendix 21 Revised National Planning Policy Framework
REP1-171	Ørsted Hornsea Project Three (UK) Ltd Appendix 29 Permanent Access Note for HVDC converter/HVAC substation
REP1-172	Ørsted Hornsea Project Three (UK) Ltd Appendix 26 Onshore HVDC Converter/HVAC Substation Infiltration Report
REP1-173	Ørsted Hornsea Project Three (UK) Ltd Appendix 19 Vattenfall and Ørsted Circuit Crossing - EMF Information
REP1-174	Ørsted Hornsea Project Three (UK) Ltd Appendix 16 Applicant's Response to Examining Authority's Question Q1.15.3
REP1-175	Ørsted Hornsea Project Three (UK) Ltd Appendix 18 Errata to the Application Documentation
REP1-176	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 20 Main Construction Compound Briefing Note
REP1-177	Ørsted Hornsea Project Three (UK) Ltd Appendix 13 Racon and AIS Review J6A Platform Technical Note
REP1-178	Ørsted Hornsea Project Three (UK) Ltd Appendix 17 Applicant's Response to Examining Authority's Question Q1.2.103
REP1-179	Ørsted Hornsea Project Three (UK) Ltd Appendix 14 A review of precaution in the marine mammal assessment
REP1-180	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 In-Principle Monitoring Plan V2.0
REP1-181	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 In-Principle Southern North Sea SCI Site Integrity Plan
REP1-182	National Federation of Fishermen's Organisations Written Representation
REP1-183	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 Sandwave Clearance Clarification Note
REP1-184	Swardeston Parish Council Comments on RR-054
REP1-185	D N Gray & Co Written Representation
REP1-186	Spirit Energy Corporate Major Accident Prevention Policies
REP1-187	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 Habitats Regulations Assessment Screening and integrity matrices
REP1-188	Ørsted Hornsea Project Three (UK) Ltd Appendix 10 Collision risk modelling Updates to species-specific parameters – Clarification Note
REP1-189	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 Collision risk modelling – herring gull – Clarification Note
REP1-190	Swardeston Parish Council Comments on RR-052
REP1-191	Carl Baker and David Baker Notification of wish to speak at an Open Floor Hearing
REP1-192	Spirit Energy Flight Evaluation Report
REP1-193	Charles Watt Written Representation
REP1-194	Cllr Greg Peck Accompanied Site Inspection Request
REP1-195	Broadland District Council Boundaries of the Blickling Conservation Area
REP1-196	Spirit Energy Aviation Report
REP1-197	Cllr Graham Everett Notification of wish to speak at an Open Floor Hearing and an Issue Specific Hearing.

Appendix B

REP1-198	Cadent Gas Written Representation
REP1-199	Swardeston Parish Council Comments on RR-035
REP1-200	Beckhithe Farms Limited Written Representation
REP1-201	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Eastern Inshore Fisheries and Conservation Authority
REP1-202	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Great Yarmouth Borough Council
REP1-203	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Three Project (UK) Ltd and Environment Agency
REP1-204	Natural England Annex F: Documentation Submitted by the Applicant to Natural England Post Submission of the Relevant Representation
REP1-205	Natural England Annex G: Summary of Relevant Representations
REP1-206	Natural England Annex H: Response to Relevant Representations Submitted by Other Parties
REP1-207	Natural England Annex H: Summary of Written Representations
REP1-208	Natural England Natural England Offshore Wind Cabling: Ten Years Experience and Recommendations
REP1-209	Natural England Annex B: Natural England's Detailed Comments on the Development Consent Order and Deemed Marine Licenses
REP1-210	Natural England Annex D1: Natural England Advice on The Wash and North Norfolk Coast SAC Clarification Note
REP1-211	Natural England Annex C: Natural England Detailed Advice on Ornithology
REP1-212	Natural England Annex A: Schedule of Natural England's Responses to Examining Authority's First Round of Written Questions
REP1-213	Natural England Written Representation
REP1-214	Natural England Annex D5: NE and JNCC comments on the Benthic Sections of the HRA revised in light of further information
REP1-215	Natural England Annex D3: NE and JNCC Advice on Sandwave Clearance Clarification Note and Other Relevant Documentation on Sandwave Levelling
REP1-216	Natural England

	Annex D2: Natural England and the Joint Nature Conservation Committee (JNCC) Advice on the Cable Protection Clarification Note
REP1-217	Natural England Annex D4: JNCC and Natural England Advice on Offshore Benthic Ecology
REP1-218	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Natural England
REP1-219	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Whale and Dolphin Conservation
REP1-220	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and the NFFO and VisNed
REP1-221	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Maritime and Coastguard Agency
REP1-222	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Norfolk Vanguard Ltd and Norfolk Boreas
REP1-223	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and South Norfolk Council
REP1-224	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and the Marine Management Organisation
REP1-225	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Norwich City Council
REP1-226	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Highways England
REP1-227	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and The Wildlife Trusts and Norfolk Wildlife Trust
REP1-228	Ørsted Hornsea Project Three (UK) Ltd Appendix 50 Funding statement Rev 1, track changed
REP1-229	Ørsted Hornsea Project Three (UK) Ltd Appendix 51 Funding Statement (Rev 1)
REP1-230	Greater Norwich Development Partnership Joint Core Strategy Policy for Broadland, Norwich and South Norfolk
REP1-231	South Norfolk Council Response to Examining Authority's Written Questions
REP1-232	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Norfolk County Council
REP1-233	Spirit Energy Petroleum Act 1998 c. 17 - Part I Petroleum
REP1-234	Spirit Energy

	Offshore Installations and Pipeline Works (Management and Administration) Regulations 1995/738
REP1-235	Spirit Energy Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995/743
REP1-236	Spirit Energy The Maximising Economic Recovery Strategy For The UK
REP1-237	Spirit Energy Petroleum Act 1987 c. 12 - Part III
REP1-238	Spirit Energy Oil and Gas Clause in Crown Estate leases
REP1-239	Spirit Energy Overarching National Policy Statement for Energy (EN-1)
REP1-240	Spirit Energy National Policy Statement for Renewable Energy Infrastructure (EN-3)
REP1-241	Brown & Co On Behalf Of S H Back Proposed Cable Route Amendments
REP1-242	Spirit Energy Health and Safety Offshore Technology Report Effective Collision Risk Management for Offshore Installations
REP1-243	Spirit Energy Human Element Guidance - Part 1 - Fatigue and Fitness For Duty: Statutory Duties, Causes Of Fatigue And Guidance On Good Practice
REP1-245	Spirit Energy Safety of Navigation: Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response
REP1-246	Spirit Energy Guidelines for Offshore Marine Operations
REP1-247	Spirit Energy Letter - Major Accident Hazard - Potential for Structural Failure of Offshore Installations Due to Collision With Attending Vessels
REP1-248	Spirit Energy Health and Safety Offshore Technology Report
REP1-249	Brown & Co On Behalf Of Gurloque Estate Written Statement
REP1-250	Gurloque Estate Written Representation
REP1-251	Network Rail Written Representation
REP1-252	Spirit Energy Inventory of Supporting Documents For Written Representations
REP1-253	No to Relay Stations Deadline 1 Submission - Notification of wish to make oral representations at an Issue Specific Hearing
REP1-254	Kelling Estate Written Representation
REP1-255	Honingham Aktieselskab

	Written Representation
Deadline 2 • Comments on WRs and responses to comments on RRs • Comments on Local Impact Reports • Comments on responses to the ExA's Written Questions • Responses to further information requested by the ExA	
REP2-001	Ørsted Hornsea Project Three (UK) Ltd Covering Letter
REP2-002	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP2-003	Ørsted Hornsea Project Three (UK) Ltd Registered Interest Accompanied Site Inspection
REP2-004	Ørsted Hornsea Project Three (UK) Ltd Comments on Written Representations and Responses
REP2-005	Ørsted Hornsea Project Three (UK) Ltd Comments on Responses to the Examining Authority's Written Questions
REP2-006	Ørsted Hornsea Project Three (UK) Ltd Comments to Broadland District Council Local Impact Report
REP2-007	Ørsted Hornsea Project Three (UK) Ltd Comments to Norfolk County Council Local Impact Report
REP2-008	Ørsted Hornsea Project Three (UK) Ltd Comments to North Norfolk District Council Local Impact Report
REP2-009	Ørsted Hornsea Project Three (UK) Ltd Comments to South Norfolk Council Local Impact Report
REP2-010	Ørsted Hornsea Project Three (UK) Ltd Statement of Commonality of Statements of Common Ground
REP2-011	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and North Norfolk District Council
REP2-012	Ørsted Hornsea Project Three (UK) Ltd Draft Statement of Common Ground between Hornsea Project Three and the Royal Society for the Protection of Birds
REP2-013	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 Outline Travel Plan
REP2-014	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 Addendum to Appendix 29 (REP1-171): Permanent Access Note for HVDC converter/HVAC substation
REP2-015	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 Addendum to Appendix 30 (REP1-156): Permanent Access Note for Onshore HVAC Booster Station
REP2-016	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 Tree Plan
REP2-017	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 Seabird Flight Height Trial Report
REP2-018	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 Estimating Seabird Flight Height Using LiDAR
REP2-019	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 7 RSPB Seabird Tracking Study at the Flamborough and Filey Coast
REP2-020	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 Race Bank Sandwave Recovery Report
REP2-021	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 Response to Cromer Shoal MCZ Conservation Objectives
REP2-022	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 SAR Technical Note
REP2-023	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 Memorandum of Understanding between the Hornsea Project Two and Natural England
REP2-024	Ørsted Hornsea Project Three (UK) Ltd Applicant's Response to Highways England Briefing Note 01A
REP2-025	RSPB Comments on responses to the Examining Authority's Written Questions
REP2-026	RSPB Report on Seabird Tracking Fieldwork
REP2-027	Oulton Parish Council Comments on responses to the Examining Authority's Written Questions
REP2-028	Natural England Comments on Deadline 1 Responses
REP2-029	Highways England Comment on Further Written Representation
Deadline 3 • Post hearing submissions including written submissions of oral cases • Comments on revised draft DCO • Responses to further information requested by the ExA	
REP3-001	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP3-002	Ørsted Hornsea Project Three (UK) Ltd Responses to Additional Submissions by Interested Party at Deadline 1 and 2
REP3-003	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Issue Specific Hearing 1
REP3-004	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Issue Specific Hearing 2
REP3-005	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Issue Specific Hearing 3
REP3-006	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Written summary of Applicant's oral case put at Issue Specific Hearing 4
REP3-007	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three and the Royal Society for the Protection of Birds
REP3-008	Ørsted Hornsea Project Three (UK) Ltd Statement of Commonality of Statements of Common Ground
REP3-009	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP3-010	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 - Main Construction Compound Briefing Note
REP3-011	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 - Indicative HVDC cable corridor cross section
REP3-012	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 - Onshore Crossing Schedule
REP3-013	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 - Equalities Impact Assessment
REP3-014	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 - Adrian Judd, Cefas 2011
REP3-015	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 - Marine Monitoring Handbook
REP3-016	Ørsted Hornsea Project Three (UK) Ltd Appendix 7 - S. Gubbay JNCC 2007
REP3-017	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 - Ware S.J. & Kenny A.J. 2011
REP3-018	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 - McGregor et al 2018 Marine Scotland
REP3-019	Ørsted Hornsea Project Three (UK) Ltd Appendix 10 - JNCC Report no 548 - Parsons et al. 2015
REP3-020	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 -JNCC Report no 500 - Wilson et al. 2014
REP3-021	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 - Collision Risk Model Band 2012
REP3-022	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 13 - Figures to the Applicant's Response to Examining Authority's Question Q1.2.46 (REP1-122)
REP3-023	Ørsted Hornsea Project Three (UK) Ltd Appendix 14 - Markham's Triangle PM CZ Lifetime Effects Assessment
REP3-024	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 - The Wash and North Norfolk Coast SAC In-combination Assessment
REP3-025	Ørsted Hornsea Project Three (UK) Ltd Appendix 16 - Ornithology roadmap with Natural England for the examination phase
REP3-026	Ørsted Hornsea Project Three (UK) Ltd Appendix 17 - Age class data
REP3-027	Ørsted Hornsea Project Three (UK) Ltd Appendix 18 - Kuhn O et al - 2nd generation DC grid access for offshore wind farms-HVDC in an AC fashion (CIGRE 2016)
REP3-028	Ørsted Hornsea Project Three (UK) Ltd Appendix 19 Indicative Proposed Minor Amendments to Order Limits
REP3-029	Brodiess Solicitors on behalf of Spirit Energy Cover Letter
REP3-030	Brodiess Solicitors on behalf of Spirit Energy Post Issue Specific Hearing 1 Submissions
REP3-031	Brodiess Solicitors on behalf of Spirit Energy Post Issue Specific Hearing 1 Submissions - List of Appendices
REP3-032	Brodiess Solicitors on behalf of Spirit Energy Appendix A - Licence P.468 Dated 15 August 1983
REP3-033	Brodiess Solicitors on behalf of Spirit Energy Appendix C - Maritime and Coastguard Agency MGN 372
REP3-034	Brodiess Solicitors on behalf of Spirit Energy Appendix D - Infrastructure Planning Commission , Advice Note 9:Rochdale Envelope (February 2009)
REP3-035	Brodiess Solicitors on behalf of Spirit Energy Appendix E - UK Marine Policy Statement
REP3-036	Brodiess Solicitors on behalf of Spirit Energy Appendix F - The Exclusive Economic Zone Order 2013
REP3-037	Brodiess Solicitors on behalf of Spirit Energy

	Appendix G - Map of the UK Exclusive Economic Zone
REP3-038	Brodiess Solicitors on behalf of Spirit Energy Appendix H - MCA - Methodology for assessing the marine navigational safety & emergency response risks of offshore renewable energy installations
REP3-039	Brodiess Solicitors on behalf of Spirit Energy Appendix I - CAA CAP1145 Safety review of offshore public transport helicopter operations in support of oil and the exploitation of oil and gas
REP3-040	Brodiess Solicitors on behalf of Spirit Energy Appendix J - East Inshore and East offshore Marine Plan
REP3-041	Brodiess Solicitors on behalf of Spirit Energy Appendix K - Transport committee's second report on offshore helicopter safety
REP3-042	Brodiess Solicitors on behalf of Spirit Energy Appendix L - CAA CAP1234 Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas - Progress report
REP3-043	Brodiess Solicitors on behalf of Spirit Energy Appendix M - CAA CAP764 Policy and guidelines on wind turbines
REP3-044	Brodiess Solicitors on behalf of Spirit Energy Appendix N - Maritime and Coastguard Agency MGN 543
REP3-045	Brodiess Solicitors on behalf of Spirit Energy Appendix O - Oil and Gas authority the maximising economic recovery strategy for the UK
REP3-046	Brodiess Solicitors on behalf of Spirit Energy Appendix P - CAA CAP1386 Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas - Progress Report
REP3-047	Brodiess Solicitors on behalf of Spirit Energy Appendix Q - Hornsea two offshore wind farm order 2016 No. 0000 Article 6 (1) Schedule 12 parts 8 , 9 and 10
REP3-048	Brodiess Solicitors on behalf of Spirit Energy Appendix R – HeliOffshore safety proposals for offshore safety enhancements
REP3-049	Brodiess Solicitors on behalf of Spirit Energy

Appendix B

	Appendix S - East Anglia Three Offshore Wind Farm Order 2017 No. 826 Article 3 (1) Schedule 8 Part 7
REP3-050	Brodiés Solicitors on behalf of Spirit Energy Appendix T - Markham St - 1 Decommissioning programme
REP3-051	Brodiés Solicitors on behalf of Spirit Energy Appendix U - Marine Accident Investigation branch , report on the investigation of the collision between Sage Sky and Stema Barge II
REP3-052	Brodiés Solicitors on behalf of Spirit Energy Appendix V - Infrastructure Planning Commission , Advice Note 9:Rochdale Envelope (February 2009)
REP3-053	Brodiés Solicitors on behalf of Spirit Energy Appendix W - Noble detention Marine Services - Hornsea 3 wind farm review of Marine hazards
REP3-054	Brodiés Solicitors on behalf of Spirit Energy Appendix X - Letter from OGUK Oil and Gas Regulator
REP3-055	Brodiés Solicitors on behalf of Spirit Energy Appendix Y - AviateQ International Limited report
REP3-056	Brodiés Solicitors on behalf of Spirit Energy Appendix Z - CAA Operational manual extracts - Appendix 1 to the AviateQ International Limited Report
REP3-057	Brodiés Solicitors on behalf of Spirit Energy Appendix ZA - Written Representation
REP3-058	Brodiés Solicitors on behalf of Spirit Energy Appendix ZB - Spirit Energy Proposed protective provisions
REP3-059	Brodiés Solicitors on behalf of Spirit Energy Appendix ZC - Declaration - Chiswick Grove and J6A Safety Cases
REP3-060	Brodiés Solicitors on behalf of Spirit Energy Appendix ZD - Addendum to Noble Denton Marine Services Report to Spirit Energy report review of marine hazards
REP3-061	Brodiés Solicitors on behalf of Spirit Energy Appendix ZE - Addendum to AviateQ International Limited Report
REP3-062	Brodiés Solicitors on behalf of Spirit Energy Appendix ZF - Legislative Framework Summary
REP3-063	Brodiés Solicitors on behalf of Spirit Energy Appendix ZG - Technical Note

Appendix B

REP3-064	Brodiess Solicitors on behalf of Spirit Energy Appendix ZH - Map showing Spirit Energy's proposed protective provisions - Hornsea and all radii
REP3-065	Brodiess Solicitors on behalf of Spirit Energy Appendix ZI - Map showing Spirit Energy's proposed protective provisions -Hornsea and 2NM radius
REP3-066	Brodiess Solicitors on behalf of Spirit Energy Appendix ZJ - Map showing Spirit Energy's proposed protective provisions - Hornsea and 5NM radius
REP3-067	Brodiess Solicitors on behalf of Spirit Energy Appendix ZK - Map showing Spirit Energy's proposed protective provisions - Hornsea and 7.5NM radius
REP3-068	Brodiess Solicitors on behalf of Spirit Energy Appendix ZL- Map showing Spirit Energy's Proposed protective provisions -Composite of Spirit Energy and Orsted maps
REP3-069	Brodiess Solicitors on behalf of Spirit Energy Appendix ZM - Expert Assessment of flying conditions for Ara - Sample of weather forecasts at block J-West (1 October 2017 – 29 September 2018)
REP3-070	Brodiess Solicitors on behalf of Spirit Energy Appendix ZN - Comprehensive Analysis of Flying Conditions (Percentage Frequency Outcome) Based on 3-hourly Weather date for J6A (1 October 2017 – 29 September 2018)
REP3-071	Brodiess Solicitors on behalf of Spirit Energy Appendix ZO - Issue Specific Hearing 1 Summary of oral evidence
REP3-072	Natural England Overarching concerns with project timetables
REP3-073	Natural England Method statement for ornithological, marine mammal and marine mega fauna survey
REP3-074	Natural England Post hearing submissions including written submissions of oral cases - Issue Specific Hearing 1
REP3-075	Natural England Post hearing submissions including written submissions of oral cases - Issue Specific Hearing 2 Part 1 - Ornithology
REP3-076	Natural England

Appendix B

	Post hearing submissions including written submissions of oral cases - Issue Specific Hearing 2 Part 2 - Benthic
REP3-077	Natural England Post hearing submissions including written submissions of oral cases - Issue Specific Hearing 2 Part 2 - Benthic Annex 2 2B Response on REP2-004
REP3-078	Natural England Post hearing submissions including written submissions of oral cases - Issue Specific Hearing 3
REP3-079	Natural England Post hearing submissions including written submissions of oral cases - Issue Specific Hearing 4
REP3-080	Norfolk County Council Comments on revised draft DCO
REP3-081	Norfolk County Council Local Impact Report Amendments
REP3-082	Oulton Parish Council Post hearing submissions including written submissions of oral cases
REP3-083	Oulton Parish Council Post Hearing Submission
REP3-084	Maritime & Coastguard Agency Responses to further information requested by the ExA
REP3-085	Swardeston Parish Council Post hearing submissions
REP3-086	Mulbarton Parish Council Submissions of oral cases
REP3-087	Cawston Parish Council Post hearing submission
REP3-088	CPRE Norfolk Post Hearing Submission
REP3-089	National Federation of Fisherman's Organisation Post Hearing Submission
REP3-090	DLA Piper UK LLP on behalf of National Grid Comments on revised draft DCO
REP3-091	Trinity House

Appendix B

	Comments on revised draft DCO
REP3-092	Marine Management Organisation Post hearing submission including written submission of oral cases and comments on the revised draft DCO
REP3-093	Marine Management Organisation Annex A -Guidance on MCZ assessments
REP3-094	Marine Management Organisation Annex B - Comments on In Principle Monitoring Plan
REP3-095	Marine Management Organisation Annex C - Comments on Herring Noise Contours
REP3-096	Marine Management Organisation Example MCZ screening document
REP3-097	Marine Management Organisation Example MCZ Stage 1 assessment
REP3-098	Cadent Gas Limited Comments on revised draft DCO
REP3-099	Bidwells on behalf of Sir Edward Evans-Lombe Response to Examining Authority's Written Question 1.1.12
REP3-100	Royal Society for the Protection of Birds Responses to further information requested by the ExA
REP3-101	Royal Society for the Protection of Birds Guillemot Razorbill and Kittiwake Phenology 2016-17
REP3-102	Historic England Post hearing submissions including written submissions of oral cases
REP3-103	North Norfolk District Council Representations following Issue Specific Hearings
REP3-104	National Farmers Union and Land Interest Group Written Submission - Open Floor Hearing 3 December 2018
REP3-105	National Farmers Union and Land Interest Group Written Submission - Issue Specific Hearing - 4 December 2018
REP3-106	National Farmers Union and Land Interest Group Written Submission - Issue Specific Hearing - 6 December 2018
REP3-107	National Farmers Union and Land Interest Group

	Outline Soil Management Plan - Supporting Material of Written Submission to Issue Specific Hearing - 6 December 2018
REP3-108	National Farmers Union and Land Interest Group Construction Environmental Management Plan - Supporting Material of Written Submission to Issue Specific Hearing - 6 December 2018
REP3-109	National Farmers Union and Land Interest Group Written Submission - Issue Specific Hearing - 7 December 2018
REP3-110	Edgefield Parish Council Post hearing submission - Late Submission
REP3-111	Corpusty & Saxthorpe Parish Council Post hearing submission - Late Submission
REP3-112	Natural England Deadline 3 Submission - Late submission
Deadline 4 • Applicant's revised draft DCO • Applicant's updated Guide to the Application • Applicant's updated Statement of Commonality of SoCG • Responses to the ExA's Further Written Questions (if required) • Updated SoCG • Responses to further information requested by the ExA	
REP4-001	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP4-002	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP4-003	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order - Clean
REP4-004	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order – Tracked Changes
REP4-005	Ørsted Hornsea Project Three (UK) Ltd Book of Reference (Tracked changes)
REP4-006	Ørsted Hornsea Project Three (UK) Ltd Book of Reference - Schedule of Changes
REP4-007	Ørsted Hornsea Project Three (UK) Ltd Schedule of Changes - Development Consent Order and Deemed Marine Licences
REP4-008	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Application for non-material amendments including Additional Land
REP4-009	Ørsted Hornsea Project Three (UK) Ltd Statement of Reasons - Clean
REP4-010	Ørsted Hornsea Project Three (UK) Ltd Statement of Reasons - Tracked Changes
REP4-011	Ørsted Hornsea Project Three (UK) Ltd Comments on Written Representations and Responses submitted by Interested Parties at Deadline 3
REP4-012	Ørsted Hornsea Project Three (UK) Ltd Response to the Examining Authority's Further Written Questions
REP4-013	Ørsted Hornsea Project Three (UK) Ltd Hearing Speaker Biographies and Statement of Experience
REP4-014	Ørsted Hornsea Project Three (UK) Ltd Annex A – Schedule of Objection to Granting of Compulsory Acquisition Powers
REP4-015	Ørsted Hornsea Project Three (UK) Ltd Statement of Commonality of Statements of Common Ground
REP4-016	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd and Broadland District Council
REP4-017	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Highways England
REP4-018	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and the Marine Management Organisation
REP4-019	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Norfolk County Council
REP4-020	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three(UK) Ltd. and South Norfolk Council
REP4-021	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Ørsted Hornsea Project Three (UK) Ltd and Norfolk Vanguard Ltd and Norfolk Boreas Ltd

Appendix B

REP4-022	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 Outline Ecological Management Plan
REP4-023	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 Outline Code of Construction Practice
REP4-024	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 Outline Construction Traffic Management Plan
REP4-025	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 Outline Landscape Management Plan
REP4-026	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 Design Objectives and Principles for the HVDC Converter/HVAC Substation and HVAC Booster Station Buildings
REP4-027	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 Moray West OWF Application
REP4-028	Ørsted Hornsea Project Three (UK) Ltd Appendix 7- HGV Haul Road Reduction Report
REP4-029	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 - Natural England Letter of No Impediment (Badger Licence)
REP4-030	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 - Booth et al., 2017
REP4-031	Ørsted Hornsea Project Three (UK) Ltd Appendix 10 - Brandt et al., 2018
REP4-032	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 - Nabe-Nielsen et al., 2018
REP4-033	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 - Scheidat et al., 2011
REP4-034	Ørsted Hornsea Project Three (UK) Ltd Appendix 13 - Wisniewska et al., 2016
REP4-035	Ørsted Hornsea Project Three (UK) Ltd Appendix 14 - Bowgen and Cook, 2018
REP4-036	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 - Furness 2015
REP4-037	Ørsted Hornsea Project Three (UK) Ltd Appendix 16 - Cook et al., 2014

Appendix B

REP4-038	Ørsted Hornsea Project Three (UK) Ltd Appendix 17 - Dierschke and Garthe 2006
REP4-039	Ørsted Hornsea Project Three (UK) Ltd Appendix 18 - Garthe and Huppopp 2004
REP4-040	Ørsted Hornsea Project Three (UK) Ltd Appendix 19 - Lawson et al., 2016
REP4-041	Ørsted Hornsea Project Three (UK) Ltd Appendix 20 - Masden 2015
REP4-042	Ørsted Hornsea Project Three (UK) Ltd Appendix 21 - Wade et al., 2016
REP4-043	Ørsted Hornsea Project Three (UK) Ltd Appendix 22 - Desholm 2005
REP4-044	Ørsted Hornsea Project Three (UK) Ltd Appendix 23 - Welcker et al., 2017
REP4-045	Ørsted Hornsea Project Three (UK) Ltd Appendix 24 - Cook et al., 2018
REP4-046	Ørsted Hornsea Project Three (UK) Ltd Appendix 25 - Parry 2015
REP4-047	Ørsted Hornsea Project Three (UK) Ltd Appendix 26 - Sotheran et al., 2017
REP4-048	Ørsted Hornsea Project Three (UK) Ltd Appendix 27 - Pennycuick et al., 1987
REP4-049	Ørsted Hornsea Project Three (UK) Ltd Appendix 28 - Summary of positions in relation to collision mortality for the SPA populations of gannet and kittiwake
REP4-050	Ørsted Hornsea Project Three (UK) Ltd Appendix 29 - Supplementary advice on Conservation Objectives for NNSR SAC, JNCC 2017
REP4-051	Ørsted Hornsea Project Three (UK) Ltd Appendix 30 - Detailed response to the Examining Authority's Q2.2.20
REP4-052	Ørsted Hornsea Project Three (UK) Ltd Appendix 31 - List of Aviation Assumptions
REP4-053	Ørsted Hornsea Project Three (UK) Ltd Appendix 32 - Further Design Development of Option 1: Passing Places at the Main Construction Compound

Appendix B

REP4-054	Ørsted Hornsea Project Three (UK) Ltd Appendix 33 - Main Construction Compound Access Strategy VISSIM Modelling
REP4-055	Ørsted Hornsea Project Three (UK) Ltd Appendix 34 - Noise Clarifications
REP4-056	Ørsted Hornsea Project Three (UK) Ltd Appendix 36 - Aitchinson 2012
REP4-057	Ørsted Hornsea Project Three (UK) Ltd Appendix 37 - Riddington et al., 2008
REP4-058	Ørsted Hornsea Project Three (UK) Ltd Appendix 38 - Regeneris Consulting and The Tourism Company Report, 2014
REP4-059	Ørsted Hornsea Project Three (UK) Ltd Appendix 39 - Environmental Resources Management Report, 2014
REP5-060	Ørsted Hornsea Project Three (UK) Ltd Appendix 40 - Chris McDermott, IEMA Quality Mark Article
REP4-061	Ørsted Hornsea Project Three (UK) Ltd Appendix 41 - Regeneris Consulting Report, 2015
REP4-062	Ørsted Hornsea Project Three (UK) Ltd Appendix 42 - Regeneris Consulting Report, 2016
REP4-063	Ørsted Hornsea Project Three (UK) Ltd Appendix 43 - Outline Skills and Employment Plan Attachment to the Q2.10.1
REP4-064	Ørsted Hornsea Project Three (UK) Ltd Appendix 44 - Detailed response to the Examining Authority's Q2.2.68
REP4-065	Ørsted Hornsea Project Three (UK) Ltd Appendix 45 - Detailed response to the Examining Authority's Q2.2.65
REP4-066	Ørsted Hornsea Project Three (UK) Ltd Appendix 46 - In-Principle Southern North Sea SCI Site Integrity Plan: V2.0
REP4-067	Ørsted Hornsea Project Three (UK) Ltd Appendix 47 - In-Principle Monitoring Plan V3.0
REP4-068	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 48 - Detailed response to the Examining Authority's Q2.9.3
REP4-069	Ørsted Hornsea Project Three (UK) Ltd Appendix 49 - Roulund et al., 2019a
REP4-070	Ørsted Hornsea Project Three (UK) Ltd Appendix 50 - Roulund et al., 2019b
REP4-071	Ørsted Hornsea Project Three (UK) Ltd Appendix 51 - Defra MCZ Guidance 2010
REP4-072	Ørsted Hornsea Project Three (UK) Ltd Appendix 52 - Nuon/Vattenfall Report 2017
REP4-073	Ørsted Hornsea Project Three (UK) Ltd Appendix 53 - Illustrative cable trench cross sections for ducted installation in response to Examining Authority's Q2.1.
REP4-074	Ørsted Hornsea Project Three (UK) Ltd Appendix 54 - List of Aviation Assumptions Used in Assessments
REP4-075	Ørsted Hornsea Project Three (UK) Ltd Appendix 55 - Updated Layout Development Principles
REP4-076	Ørsted Hornsea Project Three (UK) Ltd Appendix 56 - Manwell et al., 2009
REP4-077	Ørsted Hornsea Project Three (UK) Ltd Appendix 57 - Helideck Certificates for Chiswick and Grove Platforms
REP4-078	Ørsted Hornsea Project Three (UK) Ltd Appendix 58 - Indicative Array Layout Based on +/-150m Development Lanes
REP4-079	Ørsted Hornsea Project Three (UK) Ltd Appendix 59 - Fisheries Coexistence and Liaison Plan
REP4-080	Ørsted Hornsea Project Three (UK) Ltd Appendix 60 - Draft CfD Budget Notice
REP4-081	Ørsted Hornsea Project Three (UK) Ltd Appendix 62 - Detailed response to the Examining Authority's Q2.2.34
REP4-082	Ørsted Hornsea Project Three (UK) Ltd Appendix 63 - Detailed response to the Examining Authority's Q2.2.7 and Q2.2.44

Appendix B

REP4-083	Ørsted Hornsea Project Three (UK) Ltd Appendix 64 - Dogger Bank Creyke Beck Examining Authority's Recommendation Report
REP4-084	Ørsted Hornsea Project Three (UK) Ltd Appendix 65 - Dogger Bank Creyke HRA Report
REP4-085	Ørsted Hornsea Project Three (UK) Ltd Appendix 66 - Hornsea Project Two Examining Authority's Recommendation Report
REP4-086	Ørsted Hornsea Project Three (UK) Ltd Appendix 67 - Hornsea Project Two HRA Report
REP4-087	Ørsted Hornsea Project Three (UK) Ltd Appendix 68 - East Anglia Three HRA Report
REP4-088	Ørsted Hornsea Project Three (UK) Ltd Appendix 69 - Norfolk Vanguard Offshore Ornithology Chapter
REP4-089	Ørsted Hornsea Project Three (UK) Ltd Appendix 70 - Inch Cape Scoping Opinion (Ornithology)
REP4-090	Ørsted Hornsea Project Three (UK) Ltd Appendix 71 - Natural England Response to Hornsea Two Deadline 5
REP4-091	Ørsted Hornsea Project Three (UK) Ltd Appendix 72 - Hornsea Project Three Aviation Team
REP4-092	Ørsted Hornsea Project Three (UK) Ltd Appendix 73 - Detailed response to the Examining Authority's Q2.2.30 and Q2.2.39
REP4-093	Ørsted Hornsea Project Three (UK) Ltd Appendix 74 - Anatec Report (2016)
REP4-094	Ørsted Hornsea Project Three (UK) Ltd Appendix 75 - Energy Voice, 2018
REP4-095	Ørsted Hornsea Project Three (UK) Ltd Appendix 76 - HeliOffshore 2017
REP4-096	Ørsted Hornsea Project Three (UK) Ltd Appendix 77 - Detailed response to the Examining Authority's Q2.2.3
REP4-097	Ørsted Hornsea Project Three (UK) Ltd Appendix 78 - Clarification of Biotope Classification within North Norfolk Sandbanks and Saturn Reef SAC

Appendix B

REP4-098	Ørsted Hornsea Project Three (UK) Ltd Appendix 81 - Proposed Minor Amendments Comparison Plan
REP4-099	Ørsted Hornsea Project Three (UK) Ltd Appendix 82 - Location Plan Offshore and Onshore
REP4-100	Ørsted Hornsea Project Three (UK) Ltd Appendix 83 - Location Plan (Onshore)
REP4-101	Ørsted Hornsea Project Three (UK) Ltd Appendix 84 - Onshore Order Limits
REP4-102	Ørsted Hornsea Project Three (UK) Ltd Appendix 85A - Land Plan - Onshore
REP4-103	Ørsted Hornsea Project Three (UK) Ltd Appendix 85B - Land Plan - Onshore
REP4-104	Ørsted Hornsea Project Three (UK) Ltd Appendix 85C - Land Plan - Onshore
REP4-105	Ørsted Hornsea Project Three (UK) Ltd Appendix 86 - Works Plan (Onshore)
REP4-106	Ørsted Hornsea Project Three (UK) Ltd Appendix 87 - Access to Works Plan (Onshore)
REP4-107	Ørsted Hornsea Project Three (UK) Ltd Appendix 88 - Streets Plan
REP4-108	Ørsted Hornsea Project Three (UK) Ltd Appendix 89 - Public Rights of Way Plan (Onshore)
REP4-109	Ørsted Hornsea Project Three (UK) Ltd Appendix 90 - Historic and Scheduled Monument Sites Plan (Onshore)
REP4-110	Ørsted Hornsea Project Three (UK) Ltd Appendix 91 - Statutory and Non-Statutory Nature Conservation Sites (Onshore)
REP4-111	Ørsted Hornsea Project Three (UK) Ltd Appendix 92 - Tree Preservation Order and Hedgerow Plan
REP4-112	Ørsted Hornsea Project Three (UK) Ltd Appendix 93 - Onshore Limits of Deviation Plan
REP4-113	Norfolk County Council Response to the Examining Authority's Further Written Questions and further information requested by the Examining Authority

Appendix B

REP4-114	Norfolk County Council Response Examining Authority's Written Question 2.1.11
REP4-115	Norfolk County Council Response Examining Authority's Written Question 2.9.3
REP4-116	Norfolk County Council Response Examining Authority's Written Question 2.13.10
REP4-117	Whale and Dolphin Conservation Response to the Examining Authority's Further Written Questions
REP4-118	Whale and Dolphin Conservation Deadline 4 Submission - Responses to further information requested by the Examining Authority
REP4-118a	Whale and Dolphin Conservation Deadline 4 Submission - Written Questions Response
REP4-118b	Whale and Dolphin Conservation Deadline 4 Submission - Responses of harbour porpoises to pile driving at the Horns Rev 2 offshore wind farm in the Danish North Sea
REP4-118c	Whale and Dolphin Conservation Deadline 4 Submission - Impacts of offshore wind farm construction on harbour porpoises: acoustic monitoring of echo location activity using porpoise detectors (T-PODs)
REP4-118d	Whale and Dolphin Conservation Deadline 4 Submission - Renewable Energy - Ecological and economic cost benefit analysis of offshore wind energy
REP4-118e	Whale and Dolphin Conservation Deadline 4 Submission - Negative long term effects on harbour porpoises from a large scale offshore wind farm in the Baltic—evidence of slow recovery
REP4-118f	Whale and Dolphin Conservation Deadline 4 Submission - High rates of vessel noise disrupt foraging in wild harbour porpoises (<i>Phocoena phocoena</i>)
REP4-118g	Whale and Dolphin Conservation Deadline 4 Submission - Response to "Resilience of harbour porpoises to anthropogenic disturbance: Must they really feed continuously?"
REP4-119	The Wildlife Trusts Response to the Examining Authority's Further Written Questions
REP4-120	The Wildlife Trusts Deadline 4 Submission - Supporting evidence 1
REP4-120a	The Wildlife Trusts Deadline 4 Submission - TWT response to Examiner's questions: supporting information 1 - Cover Email

Appendix B

REP4-120b	The Wildlife Trusts Deadline 4 Submission - Guiding Principles for assessing the impact of underwater noise
REP4-120c	The Wildlife Trusts Deadline 4 Submission - Temporary shift in masked hearing thresholds in a harbour porpoise (<i>Phocoena phocoena</i>) after exposure to seismic airgun stimuli
REP4-120d	The Wildlife Trusts Deadline 4 Submission - The identification of discrete and persistent areas of relatively high harbour porpoise density in the wider UK marine area
REP4-121	The Wildlife Trusts Deadline 4 Submission - Supporting evidence 2
REP4-121a	The Wildlife Trusts Deadline 4 Submission - TWT response to Examiner's questions: supporting information 2
REP4-121b	The Wildlife Trusts Deadline 4 Submission - Revised Approach to the Management of Commercial Fisheries in European Marine sites: Overarching Policy and Delivery Document
REP4-121c	The Wildlife Trusts Deadline 4 Submission - Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0)
REP4-121d	The Wildlife Trusts Deadline 4 Submission - Marine Mammal noise exposure Criteria Initial Scientific Recommendations
REP4-122	South Norfolk Council Response to the Examining Authority's Further Written Questions
REP4-123	Oulton Parish Council Deadline 4 Submission
REP4-124	Highways England Response to the Examining Authority's Further Written Questions
REP4-125	Marine Management Organisation Response to the Examining Authority's Further Written Questions and further information requested by the Examining Authority
REP4-126	Marine Management Organisation A synthesis of current knowledge on the genesis of the Great Yarmouth and Norfolk Bank Systems - Cooper 2008
REP4-127	The Crown Estate

Appendix B

	Response to the Examining Authority's Further Written Questions and further information requested by the Examining Authority
REP4-128	Historic England Response to the Examining Authority's Further Written Questions
REP4-129	Maritime & Coastguard Agency Response to the Examining Authority's Further Written Questions and further information requested by the Examining Authority
REP4-130	Natural England Deadline 4 Submission - Response to the Examining Authority's Further Written Questions, Further information requested by the Examining Authority and Appendix
REP4-131	Natural England Raw GIS data delivered from the CEND 22/13 survey
REP4-132	Natural England Reef polygon and point layers
REP4-133	National Federation of Fishermen's Organisations Response to the Examining Authority's Further Written Questions
REP4-134	North Norfolk District Council Response to the Examining Authority's Further Written Questions
REP4-135	DLA Piper UK LLP on behalf of National Grid Written Submission
REP4-136	DLA Piper UK LLP on behalf of Cadent Gas Limited Written Submission and appendices
REP4-137	Royal Society for the Protection of Birds Response to the Examining Authority's Further Written Questions and appendices
REP4-138	Brodies LLP on behalf of Spirit Energy Response to the Examining Authority's Further Written Questions and Appendix
REP4-139	Ørsted Hornsea Project Three (UK) Ltd Late Submission - Book of Reference - Clean
REP4-140	Natural England Late Submission - Cruise report for the surveys undertaken

REP4-141	Ray Pearce Late Submission accepted at the discretion of the Examining Authority's discretion
Deadline 5 • Comments on responses to ExA's Further Written Questions (if required) • Responses to further information requested by the ExA	
REP5-001	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP5-002	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP5-003	Ørsted Hornsea Project Three (UK) Ltd Statement of Commonality of Statements of Common Ground
REP5-004	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three and Maritime and Coastguard Agency
REP5-005	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Ørsted Hornsea Project Three (UK) Ltd. and North Norfolk District Council
REP5-006	Ørsted Hornsea Project Three (UK) Ltd Position Statement between: Hornsea Project Three (UK) Ltd. and Shell UK Ltd
REP5-007	Ørsted Hornsea Project Three (UK) Ltd Comments on Written Representations and Responses submitted by Interested Parties at Deadline 4
REP5-008	Ørsted Hornsea Project Three (UK) Ltd Comments on Interested Parties' Responses to the Examining Authority's Second Written Questions submitted at Deadline 4
REP5-009	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 - Appendix G to the Transport Assessment
REP5-010	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 - Preliminary Trenching Assessment
REP5-011	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 - Outline Cable Specification and Installation Plan
REP5-012	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 - Second Issue Specific Hearing clarifications in relation to offshore ornithology

Appendix B

REP5-013	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 - Confirmation of migratory seabirds considered in migratory collision risk modelling
REP5-014	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 - Apportioning Immature Auks to Colonies
REP5-015	Ørsted Hornsea Project Three (UK) Ltd Appendix 7 - Aircraft Management Guidelines
REP5-016	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 - Main Construction Compound Access Strategy VISSIM Modelling Update
REP5-017	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 - Summary of Array Layout Position and Applicants response to Interested Parties answers to Examining Authority's Q2.5.1, Q2.5.6 and Q2.5.7
REP5-018	Ørsted Hornsea Project Three (UK) Ltd Appendix 10 - Habitats and Wild Birds Directives: guidance on the application of article
REP5-019	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 - MarESA Summaries EpusOborApri and PoVen biotopes
REP5-020	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 - Ornithology roadmap with Natural England for the examination phase (ver.B)
REP5-021	Ørsted Hornsea Project Three (UK) Ltd Appendix 13 - Statement of Experience - Anatec Ali MacDonald, John Beattie, and Samantha Westwood
REP5-022	Ørsted Hornsea Project Three (UK) Ltd Appendix 14 - Beatrice A Platform Helideck Information Plate
REP5-023	Oulton Parish Council Deadline 5 Submission
REP5-024	Trinity House Response to Examining Authority's Further Written Questions
REP5-025	Mulbarton Parish Council Map of the Norwich Southern Bypass Protection Zone (NSBPZ)
REP5-026	Natural England Updated Appendix 3 to Natural England's written summary on ISH 2 Ornithology

REP5-027	The Royal Society for the Protection of Birds Deadline 5 Submission and Appendices
REP5-028	Brodiess LLP on behalf of Spirit Energy Comments on the Applicant's responses to the Examining Authority's Written Questions and Appendices
REP5-029	Marine Management Organisation Deadline 5 Submission - Late Submission
Deadline 6 • Post hearing submissions including written submissions of oral cases • Responses	
REP6-001	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP6-002	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP6-003	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order - Clean
REP6-004	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order – Tracked Changes
REP6-005	Ørsted Hornsea Project Three (UK) Ltd Schedule of Changes - Development Consent Order and Deemed Marine Licences
REP6-006	Ørsted Hornsea Project Three (UK) Ltd Statement of Commonality of Statements of Common Ground (SoCG)
REP6-007	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three and the NFFO and VisNed
REP6-008	Ørsted Hornsea Project Three (UK) Ltd Commentary on progress made with Spirit Energy at Deadline 6
REP6-009	Ørsted Hornsea Project Three (UK) Ltd Applicant's comments on Written Representations and Responses submitted by Interested Parties at Deadline 5
REP6-010	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Issue Specific Hearing 5 (29th Jan 2019)
REP6-011	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Written summary of Applicant's oral case put at Issue Specific Hearing 6 (30th Jan 2019)
REP6-012	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Compulsory Acquisition Hearing (31st Jan 2019)
REP6-013	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 -Clarification Note on Onshore Cable Corridor Widths (HVAC and HVDC)
REP6-014	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 - Outline Code of Construction Practice
REP6-015	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 - Outline Construction Traffic Management Plan
REP6-016	Ørsted Hornsea Project Three (UK) Ltd Appendix 3a - Annex A - Hornsea Three Highway Intervention Schemes (The Street)
REP6-017	Ørsted Hornsea Project Three (UK) Ltd Appendix 3b - Annex A - Hornsea Three Highway Intervention Schemes
REP6-018	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 - Rock Protection Decommissioning Methods
REP6-019	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 - Comments on Condition Assessment for The Wash and North Norfolk Coast SAC
REP6-020	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 - Offshore ornithology Hearing Clarifications - cumulative and in combination assessment methods and age class data
REP6-021	Ørsted Hornsea Project Three (UK) Ltd Appendix 7 - Johnson and Cook 2016
REP6-022	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 -Smart Wind and Forewind 2014 Report
REP6-023	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 - Trinder M., 2017
REP6-024	Ørsted Hornsea Project Three (UK) Ltd Appendix 10 -Horsewill and Robinson 2015
REP6-025	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 - Aitken et al., 2014

Appendix B

REP6-026	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 - Preliminary Trenching Assessment
REP6-027	Ørsted Hornsea Project Three (UK) Ltd Appendix 13 - Ornithology roadmap with Natural England for the examination phase (ver.C)
REP6-028	Ørsted Hornsea Project Three (UK) Ltd Appendix 14 - Warwick-Evans et al., 2018
REP6-029	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 - Pennycuik 1997
REP6-030	Ørsted Hornsea Project Three (UK) Ltd Appendix 16 - Johnston et al., 2014 with Corrigendum
REP6-031	Ørsted Hornsea Project Three (UK) Ltd Appendix 17 - Garthe et al., 1999
REP6-032	Ørsted Hornsea Project Three (UK) Ltd Appendix 18 - Duant et al 2002
REP6-033	Ørsted Hornsea Project Three (UK) Ltd Appendix 19 - Alerstam et al., 2007
REP6-034	Ørsted Hornsea Project Three (UK) Ltd Appendix 20 - Graham et al., 2018
REP6-035	Ørsted Hornsea Project Three (UK) Ltd Appendix 21 - Brassuer et al., 2015
REP6-036	Ørsted Hornsea Project Three (UK) Ltd Appendix 22 - Marine Mammal Hearing Clarifications
REP6-037	Ørsted Hornsea Project Three (UK) Ltd Appendix 23 - Construction Traffic Noise and Vibration Assessment at The Old Railway Gatehouse
REP6-038	Ørsted Hornsea Project Three (UK) Ltd Appendix 24 - Proposed Use of Temporary Working Areas for Micrositing - Implications for Environmental Statement
REP6-039	Ørsted Hornsea Project Three (UK) Ltd Appendix 25 - Hornsea Three and Norfolk Vanguard Cumulative Link Impact Assessment Relating to Traffic
REP6-040	Ørsted Hornsea Project Three (UK) Ltd Appendix 26 - Outline Ecological Management Plan
REP6-041	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 27 - Forsythe et al., 1995
REP6-042	Ørsted Hornsea Project Three (UK) Ltd Appendix 28 - Position of the Applicant in relation to collision risk modelling
REP6-043	Ørsted Hornsea Project Three (UK) Ltd Appendix 29 - Applicants interpretation of Natural England's position in relation to collision risk modelling
REP6-044	Ørsted Hornsea Project Three (UK) Ltd Appendix 30 - Outline Onshore Written Scheme of Investigation
REP6-045	Ørsted Hornsea Project Three (UK) Ltd Appendix 31 - CIGRE Report 2009 - Service Experience of HV Underground and Submarine Cable Systems
REP6-046	Ørsted Hornsea Project Three (UK) Ltd Application for Non-material amendments including Additional Land
REP6-047	Natural England ISH5 Annex A - Natural England's Comments on REP 4-097 Biotope Clarification paper as requested at ISH 5
REP6-048	Natural England ISH 5 Annex B - Natural England's comments on REP5 – 010 Preliminary Trenching Assessment (PTA)
REP6-049	Natural England ISH 5 Appendix C- Natural England Comments on REP5 – 011- Appendix 3 Cable Specification Installation Plan (CSIP)
REP6-050	Natural England ISH 5 Annex D- Natural England Comments on REP4-012 pg 43 onwards Applicants response to ExA Q2.2.46 in relation to MEEB
REP6-051	Natural England ISH 5 Annex E- Natural England's comments on REP3 – 024 Appendix 15 The Wash and North Norfolk Coast (W&NNC) SAC In-combination
REP6-052	Natural England ISH5 Annex F - Natural England's Response to the Applicant's response to ExA Q2.2.25
REP6-053	Natural England ISH5 Annex G- Natural England's Comments on the Applicant's response to ExA Q2.2.38

Appendix B

REP6-054	Natural England ISH 5 Annex H - Natural England's Response to REP5-014
REP6-055	Natural England Written Submission of Representations at Issue Specific Hearing 5 - Offshore Ecology
REP6-056	Natural England ISH6 Annex A -Natural England's Comments on the Applicant's Proposed DML appeal conditions
REP6-057	Natural England ISH6 Annex B- Natural England's Comments on REP4-023 Code of Construction Practice Rev.2
REP6-058	Natural England Written summary of Representations made at ISH6 DCO Hearing
REP6-059	Trinity House Written Representation for Issue Specific Hearing 6 - Draft Development Consent Order
REP6-060	N2RS Post hearing submissions including written submissions of oral cases
REP6-061	N2RS Concerns about Public Engagement and Observations on the Current Project Design
REP6-062	N2RS Local cumulative environmental impact assessments of the cable route on landscape, tourism, traffic and recreation
REP6-063	DLA Piper UK LLP on behalf of National Grid Response to Deadline 6
REP6-064	DLA Piper UK LLP on behalf of Cadent Gas Limited Response to Deadline 6
REP6-065	Addleshaw Goddard LLP on behalf of Network Rail Response to Item 11(c) of the Agenda
REP6-066	Weybourne Parish Council Response to Deadline 6
REP6-067	Mulbarton Parish Council Response to Deadline 6
REP6-068	The Wildlife Trusts

Appendix B

	Post-hearing submission and further comments
REP6-069	Bidwells LLP on behalf of Mr Kemp Post hearing submission
REP6-070	Historic England Post hearing submissions including written submissions of oral cases
REP6-071	Oulton Parish Council Response to Deadline 6
REP6-072	Marine Management Organisation Written Representation
REP6-073	Marine Management Organisation Post hearing submissions including written submissions of oral cases
REP6-074	Maritime & Coastguard Agency Responses to the Applicant's comments on representations made by Maritime & Coastguard Agency at deadline 4
REP6-075	Maritime & Coastguard Agency Report following aviation trials and exercises in relation to offshore wind farms
REP6-076	The Royal Society for the Protection of Birds Written Submission
REP6-077	The Royal Society for the Protection of Birds Appendix 3.2 - Collision Risk Modelling: update and clarification
REP6-078	National Farmers Union and the Land Interest Group Written submission - Issue Specific Hearing – Draft Development Consent Order - Wednesday 30th January 2019
REP6-079	National Farmers Union and the Land Interest Group Written submission - Issue Specific Hearing - Compulsory Acquisition - Thursday 31st January 2019
REP6-080	North Norfolk District Council Post hearing submission - Issue Specific Hearing on 30 January 2019
REP6-081	South Norfolk Council, North Norfolk District Council and Broadland District Council Revised version of the applicant's Outline Landscape Plan
REP6-082	Helen & Chris Monk

	Deadline 6 Submission - Suggested Location for Accompanied Site Inspection - Accepted at the discretion of the Examining Authority
REP6-083	Ørsted Hornsea Project Three (UK) Ltd Deadline 6 Submission - Post hearing submission
Deadline 7 • Applicant's updated Guide to the Application • Applicant's updated Statement of Commonality of SoCGs • Comments on the ExA's draft DCO schedule of changes (if required) • Comments on the RIES • Updated SoCGs • Responses to further information requested by the ExA • Post hearing submissions (if required)	
REP7-001	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP7-002	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP7-003	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order - Clean
REP7-004	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order – Tracked Changes
REP7-005	Ørsted Hornsea Project Three (UK) Ltd Schedule of Changes Development Consent Order and Deemed Marine Licences
REP7-006	Ørsted Hornsea Project Three (UK) Ltd Applicants Comments on the Report on the Implications for European Sites (RIES)
REP7-007	Ørsted Hornsea Project Three (UK) Ltd Applicant's comments on Written Representations and Responses submitted by Interested Parties at Deadline 6
REP7-008	Ørsted Hornsea Project Three (UK) Ltd Deadline 6 Submission - Applicant's Response to IPs DL6 DCO Comments
REP7-009	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Issue Specific Hearing 7
REP7-010	Ørsted Hornsea Project Three (UK) Ltd Summary of Applicant's oral case put at Issue Specific Hearing 8

Appendix B

REP7-011	Ørsted Hornsea Project Three (UK) Ltd Written summary of Applicant's oral case put at Issue Specific Hearing 9
REP7-012	Ørsted Hornsea Project Three (UK) Ltd Applicant's Statement of Commonality of Statements of Common Ground (SoCG)
REP7-013	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and South Norfolk Council
REP7-014	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Ørsted Hornsea Project Three (UK) Ltd. and North Norfolk District Council
REP7-015	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Highways England
REP7-016	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Ørsted Hornsea Project Three (UK) Ltd. and Eastern Inshore Fisheries and Conservation Authority
REP7-017	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Broadland District Council
REP7-018	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 - Outline Landscape Plan
REP7-019	Ørsted Hornsea Project Three (UK) Ltd Appendix 2- Outline Ecological Management Plan
REP7-020	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 - In-Principle Monitoring Plan
REP7-021	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 - Outline Cable Specification and Installation Plan
REP7-022	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 - Clarification of Biotope Classification within North Norfolk Sandbanks and Saturn Reef SAC
REP7-023	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 - Jenkins et al., 2015
REP7-024	Ørsted Hornsea Project Three (UK) Ltd Appendix 7 - Cook et al., 2012

Appendix B

REP7-025	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 - East Anglia Three Evidence Plan (Meeting 6)
REP7-026	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 to Deadline 5 submission - Main Construction Compound Access Strategy VISSIM Modelling Update
REP7-027	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 - Norfolk Vanguard Ornithology Technical Appendix
REP7-028	Ørsted Hornsea Project Three (UK) Ltd Appendix 10 - Chamberlain et al. 2006
REP7-029	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 - Furness et al., 2013
REP7-030	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 - Position Statement on Ornithology Mitigation Options
REP7-031	Ørsted Hornsea Project Three (UK) Ltd Appendix 13 - Collision Risk Estimates for Mitigation Scenarios
REP7-032	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 - Ornithological Data Request and Tabulation of Collision Risk Modelling Parameters
REP7-033	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 Annex A Data - Population Estimates and Densities
REP7-034	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 Annex A Data - Raw Data
REP7-035	Ørsted Hornsea Project Three (UK) Ltd Appendix 16 - Newell et al., 2004
REP7-036	Ørsted Hornsea Project Three (UK) Ltd Appendix 17 - Newell et al., 1998
REP7-037	Ørsted Hornsea Project Three (UK) Ltd Appendix 18 - Desprez 2000
REP7-038	Ørsted Hornsea Project Three (UK) Ltd Appendix 19 - Foden et al 2009
REP7-039	Ørsted Hornsea Project Three (UK) Ltd Appendix 20 - Protocol S1 - Alerstam et al., 2007
REP7-040	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 21 - Assessment of Airborne Radar Approaches to Spirit Energy operated platforms potentially restricted by Hornsea Three using J6A and Met Office data
REP7-041	Ørsted Hornsea Project Three (UK) Ltd Appendix 21 - Appendix B
REP7-042	Ørsted Hornsea Project Three (UK) Ltd Appendix 22 - Position Statement on Turbulence
REP7-043	Ørsted Hornsea Project Three (UK) Ltd Appendix 23 - Updated Layout Development Principles
REP7-044	Ørsted Hornsea Project Three (UK) Ltd Appendix 24 - Construction Traffic Noise Assessment Clarification Note
REP7-045	Ørsted Hornsea Project Three (UK) Ltd Appendix 25 - Outline Construction Traffic Management Plan
REP7-046	Ørsted Hornsea Project Three (UK) Ltd Appendix 26 - Construction Traffic Noise and Vibration Assessment for Cawston Village
REP7-047	Ørsted Hornsea Project Three (UK) Ltd Appendix 27 - Development of the Cawston Traffic Intervention Scheme
REP7-048	Ørsted Hornsea Project Three (UK) Ltd Appendix 28 - Cumulative Link Impact Assessment relating to Traffic- Oulton and Cawston
REP7-049	Ørsted Hornsea Project Three (UK) Ltd Appendix 29 - Aviation Meeting Minutes – CHC Helicopter Operator
REP7-050	Ørsted Hornsea Project Three (UK) Ltd Appendix 30 - Aviation Workshop Draft Minutes – Helicopter Operators
REP7-051	Ørsted Hornsea Project Three (UK) Ltd Appendix 31 - Applicant's response to Examining Authority's Rule 17 to Maritime & Coastguard Agency
REP7-052	Ørsted Hornsea Project Three (UK) Ltd Appendix 32 - Dudgeon Offshore Wind Farm Cable Route Geophysical Survey
REP7-053	Ørsted Hornsea Project Three (UK) Ltd Appendix 33 - Le et al., 2014

Appendix B

REP7-054	Ørsted Hornsea Project Three (UK) Ltd Appendix 34 - Figure showing BGS 1992 Upper Cretaceous extents with Sheringham Shoal and Dudgeon
REP7-055	Ørsted Hornsea Project Three (UK) Ltd Appendix 35 - Spirit Energy Protective Provisions
REP7-056	Ørsted Hornsea Project Three (UK) Ltd Appendix 36 - Calculation of helicopter footprints required for approach and take off to the Chiswick Platform
REP7-057	Ørsted Hornsea Project Three (UK) Ltd Appendix 37 - East Anglia Three HRA
REP7-058	Ørsted Hornsea Project Three (UK) Ltd Appendix 38 - Neart na Gaoithe HRA
REP7-059	Ørsted Hornsea Project Three (UK) Ltd Appendix 40 - Ornithology roadmap with Natural England for the examination phase (ver.D)
REP7-060	Ørsted Hornsea Project Three (UK) Ltd Appendix 41 - Outline Code of Construction Practice
REP7-061	Ørsted Hornsea Project Three (UK) Ltd Appendix 42 - Position statement in relation to the Radar Early Warning System at J6A platform
REP7-062	Ørsted Hornsea Project Three (UK) Ltd Appendix 43 - Memorandum of Understanding between Hornsea Project Three and The Wildlife Trusts
REP7-063	Ørsted Hornsea Project Three (UK) Ltd Appendix 44 - Areas of agreement on the J6A data analysis
REP7-064	Natural England Response to Rule 17 Questions
REP7-065	Natural England Comments on the Report on the Implications for European Sites (RIES)
REP7-066	Natural England Summary of Natural England's Advice on North Norfolk Sand Banks and Saturn Reef SAC
REP7-067	Natural England Summary of Natural England's Advice on The Wash and North Norfolk Coast SAC
REP7-068	Natural England

Appendix B

	SNCB response to MSS Avoidance Rate Report
REP7-069	Natural England Non-breeding season populations of seabirds in UK waters
REP7-070	Natural England Summary of Natural England's Advice on Cromer Shoal Chalk Beds MCZ
REP7-071	Natural England Natural England & JNCC joint Technical Guidance Note - Marine Buffers and Margins
REP7-072	Natural England JNCC Report 598
REP7-073	Natural England Summary of Natural England's Advice on Markham's Triangle pMCZ
REP7-074	Natural England Annex A - Further Advice on REP5 -010 Preliminary Trenching Assessment (PTA)
REP7-075	Natural England Annex B - Sabellaria Spinulosa Advice Note
REP7-076	Natural England Annex C - Cable Protection Advice Note
REP7-077	Natural England Annex D - Note on Small Scale Impact
REP7-078	Natural England Annex E - Ornithology Response
REP7-079	Mulbarton Parish Council Onshore Substation – Option E
REP7-080	Oulton Parish Council Post Hearing Submission
REP7-081	CPRE Norfolk Response to Deadline 7 - Including supportive material
REP7-082	Broadland District Council Statement of Common Ground between Hornsea Project Three UK) Ltd. and Broadland District Council
REP7-083	Broadland District Council Post Hearing Submission

Appendix B

REP7-084	Broadland District Council Appendix A to Broadland District Council's Statement of Common Ground
REP7-085	North Norfolk District Council Post Hearing Submission to ISH 9
REP7-086	Cawston Parish Council Post Hearing Submission and Written Submission of Oral Case - ISH 9
REP7-087	Cawston Parish Council Response to ISH9 - Traffic Impacts Action Point 14
REP7-088	Cawston Parish Council Chairman's Response to ISH9 Agenda Item 5G
REP7-089	Cawston Parish Council Evidence of No Passing Places for HGVs in Central Cawston
REP7-090	Cawston Parish Council Comments on Revised Draft Traffic Management Plan
REP7-091	Cawston Parish Council Cawston HGV Traffic Diversion Proposal
REP7-092	Cawston Parish Council Engagement with Ørsted on Traffic in Cawston - Agreement , Disagreement and Suggestions for Management and Mitigation
REP7-093	Brodies LLP on behalf of Spirit Energy Post Hearing Submission to ISH 8
REP7-094	Brodies LLP on behalf of Spirit Energy Appendix 3 - DNV GL Technical Note
REP7-095	Brodies LLP on behalf of Spirit Energy Appendix 4 - Aviation Slides
REP7-096	DLA Piper UK LLP on behalf of National Grid Electricity Transmission Plc and National Grid Gas Plc Protective Provisions
REP7-097	DLA Piper UK LLP on behalf of National Grid Electricity Transmission Plc Response to Deadline 7
REP7-098	DLA Piper UK LLP on behalf of Cadent Gas Limited Protective Provisions

Appendix B

REP7-099	Eastern Power Networks plc Protective Provisions
REP7-100	Trinity House Post Hearing Submission to ISH 8
REP7-101	Trinity House Post Hearing Submission to ISH 9
REP7-102	Maritime & Coastguard Agency Responses to the Examining Authority's request for further information
REP7-103	Marine Management Organisation Comments on the Report on the Implications for European Sites (RIES) and comment on the Examining Authority's Schedule of Changes to the draft Development Consent Order (DCO)
REP7-104	Marine Management Organisation Response to Deadline 7
REP7-105	The Royal Society for the Protection of Birds Response to Deadline 7
REP7-106	Helen & Chris Monk Response to the Outline CMTP and Appendix 25 - Accepted at the discretion of the Examining Authority
REP7-107	V. I. Purdy Response to the Outline CMTP and Appendix 25 - Accepted at the Discretion of the Examining Authority
REP7-108	V.I.Purdy Further Response to the Outline CMTP and Appendix 25 - Accepted at the discretion of the Examining Authority
REP7-109	Mr Stephen & Mrs Clare Brown Response to Deadline 7 - Accepted at the Discretion of the Examining Authority
REP7-110	Elliot and Amanda Marks Response to Deadline 7 All Things Nice Cawston - Accepted at the Discretion of the Examining Authority
REP7-111	Kate Wyatt Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-112	Peter Crossley Response to Deadline 7 - Accepted at the discretion of the Examining Authority

Appendix B

REP7-113	Polly Brockis Post hearing Submission - Accepted at the discretion of the Examining Authority
REP7-114	Nicola Banham Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-115	Andy and Clare Parle Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP7-116	Heidi Hobday Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-117	Frances L. Rossington Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-118	John Bentley Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-119	Mike Linley Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-120	Claire Gray Response to Deadline 7 - Accepted at the discretion of the Examining Authority
REP7-121	Nicola Stokes Response to Deadline 7 - Accepted at the discretion of the Examining Authority
Deadline 8 • Written Representations • Comments on responses to written questions • Notification of wish to be heard at a Compulsory Acquisition Hearing or Open Floor Hearing	
REP8-001	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Cover Email
REP8-002	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Cover Letter
REP8-003	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Guide to the Application
REP8-004	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Deadline 8 Submission - Applicant's Statement of Commonality of Statements of Common Ground (SoCG)
REP8-005	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Statement of Common Ground between Hornsea Project Three and Natural England for Offshore Ornithology
REP8-006	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Forestry Commission Letter – Consent pursuant to Section 135 of the Planning Act 2008
REP8-007	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Applicant's comments on Written Representations and Responses submitted by Interested Parties at Deadline 7
REP8-008	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Appendix 1 to Deadline 8 submission - Applicant's Comments on Natural England's response to the Rule 17 (REP7-064)
REP8-009	Ørsted Hornsea Project Three (UK) Ltd Deadline 8 Submission - Appendix 2 to Deadline 8 submission – MMO's Review of environmental data associated with post-consent monitoring of licence conditions of offshore wind farms (2014)
REP8-010	Alison and Michael Barrett Deadline 8 Submission - Response to Deadline 8 - Accepted at the discretion of the Examining Authority
REP8-011	David Vince & Nicola Draycott Deadline 8 Submission - Response to Deadline 8 - Accepted at the discretion of the Examining Authority
REP8-012	Elliot & Amanda Marks Deadline 8 Submission - Response to Deadline 8 - Accepted at the discretion of the Examining Authority
REP8-013	Graham Whiteley Deadline 8 Submission - Response to Deadline 8 - Accepted at the discretion of the Examining Authority
REP8-014	Helen & Chris Monk Deadline 8 Submission - Response to Deadline 8 - Accepted at the discretion of the Examining Authority
REP8-015	Mulbarton Parish Council Deadline 8 Submission - Written Representation
REP8-016	Richard Buxton Solicitors on behalf of Mulbarton Parish Council Deadline 8 Submission - Written Representation
REP8-017	Oulton Parish Council Deadline 8 Submission - Comments to Deadline 7 Submissions
REP8-018	Phil Daniels Deadline 8 Submission - Response to Deadline 8 - Accepted at the discretion of the Examining Authority
REP8-019	Public Health England Deadline 8 Submission - Response to Consultation
REP8-020	Revd Helen Rengert Deadline 8 Submission - Written Submission - Accepted at the discretion of the Examining Authority

REP8-021	Trinity House Deadline 8 Submission - Written Representation
REP8-022	Natural England Annex 2.2A - Accepted at the discretion of the Examining Authority
Deadline 9 • 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 • Applicant's final CA Schedule • Applicant's final updated version of the Book of Reference • Applicant's final Statement of Commonality of SoCGs • Responses to comments on the ExA's draft DCO schedule of changes • Responses to comments on the RIES • Final SoCGs • Responses to further information requested by the ExA	
REP9-001	Ørsted Hornsea Project Three (UK) Ltd Cover Letter
REP9-002	Ørsted Hornsea Project Three (UK) Ltd Guide to the Application
REP9-003	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order – Clean
REP9-004	Ørsted Hornsea Project Three (UK) Ltd Revised Draft Development Consent Order – Tracked Changes
REP9-005	Ørsted Hornsea Project Three (UK) Ltd Explanatory Memorandum to Development Consent Order
REP9-006	Ørsted Hornsea Project Three (UK) Ltd Development Consent Order Comparisons (Deadline 9 version against Deadline 7 version)
REP9-007	Ørsted Hornsea Project Three (UK) Ltd Schedule of Changes Development Consent Order and Deemed Marine Licences
REP9-008	Ørsted Hornsea Project Three (UK) Ltd Book of Reference - Clean
REP9-009	Ørsted Hornsea Project Three (UK) Ltd Book of Reference (Tracked changes)
REP9-010	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Book of Reference - Schedule of Changes (between Deadline 4 and Deadline 9)
REP9-011	Ørsted Hornsea Project Three (UK) Ltd Statement of Reasons - Clean
REP9-012	Ørsted Hornsea Project Three (UK) Ltd Statement of Reasons - Tracked Changes
REP9-013	Ørsted Hornsea Project Three (UK) Ltd Applicant Responses to the Examining Authority's Further Information - Rule 17
REP9-014	Ørsted Hornsea Project Three (UK) Ltd Applicant's Compulsory Acquisition (CA) Schedule
REP9-015	Ørsted Hornsea Project Three (UK) Ltd Annex A - Schedule of Objection to Granting of Compulsory Acquisition Powers
REP9-016	Ørsted Hornsea Project Three (UK) Ltd Position Statements for Natural England and the Applicant on matters relating to Benthic Ecology and Marine Processes
REP9-017	Ørsted Hornsea Project Three (UK) Ltd Land Plan (Onshore)
REP9-018	Ørsted Hornsea Project Three (UK) Ltd Revised Crown Land Plan
REP9-019	Ørsted Hornsea Project Three (UK) Ltd Revised Special Category Land Plan (Onshore and Offshore)
REP9-020	Ørsted Hornsea Project Three (UK) Ltd Applicant's Final Statement of Commonality of Statements of Common Ground (SoCG)
REP9-021	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Ørsted Hornsea Project Three (UK) Ltd. and North Norfolk District Council
REP9-022	Ørsted Hornsea Project Three (UK) Ltd Updated Statement of Common Ground between Orsted Hornsea Project Three (UK) Ltd. and Natural England
REP9-023	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and the Marine Management Organisation
REP9-024	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Statement of Common Ground between Hornsea Project Three UK) Ltd.,The Wildlife Trusts and Norfolk Wildlife Trust
REP9-025	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three and Trinity House
REP9-026	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Ørsted Hornsea Project Three (UK) Ltd. and Historic England
REP9-027	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Norfolk County Council
REP9-028	Ørsted Hornsea Project Three (UK) Ltd Statement of Common Ground between Orsted Hornsea Project Three (UK) Ltd and Norfolk Vanguard Ltd and Norfolk Boreas Ltd
REP9-029	Ørsted Hornsea Project Three (UK) Ltd Draft Statement of Common Ground between Hornsea Project Three and the Royal Society for the Protection of Birds
REP9-030	Ørsted Hornsea Project Three (UK) Ltd Appendix 1 - Applicant's response to Spirit Energy's submission at Deadline 7
REP9-031	Ørsted Hornsea Project Three (UK) Ltd Appendix 2 - Final Agreed Layout Development Principles
REP9-032	Ørsted Hornsea Project Three (UK) Ltd Appendix 3 - Revised Location Plan Offshore and Onshore
REP9-033	Ørsted Hornsea Project Three (UK) Ltd Appendix 4 - Revised Location Plan (Onshore)
REP9-034	Ørsted Hornsea Project Three (UK) Ltd Appendix 5 -Revised Order Limits and Grid Coordinates Plan (Onshore)
REP9-035	Ørsted Hornsea Project Three (UK) Ltd Appendix 6 - Revised Works Plan (Onshore)
REP9-036	Ørsted Hornsea Project Three (UK) Ltd Appendix 8 - Revised Access to Works Plan (Onshore)
REP9-037	Ørsted Hornsea Project Three (UK) Ltd Appendix 9 - Revised Streets Plan
REP9-038	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Appendix 10 - Revised Public Rights of Way Plan (Onshore)
REP9-039	Ørsted Hornsea Project Three (UK) Ltd Appendix 11 - Revised Historic or Scheduled Monument Sites Plan (Onshore)
REP9-040	Ørsted Hornsea Project Three (UK) Ltd Appendix 12 - Revised Statutory and Non-Statutory Nature Conservation Sites plan (Onshore)
REP9-041	Ørsted Hornsea Project Three (UK) Ltd Appendix 13 - Revised Tree Preservation Order and Hedgerow Plan
REP9-042	Ørsted Hornsea Project Three (UK) Ltd Appendix 14 - Revised Onshore Limits of Deviation Plan
REP9-043	Ørsted Hornsea Project Three (UK) Ltd Appendix 15 - Wakefield et al., 2017
REP9-044	Ørsted Hornsea Project Three (UK) Ltd Appendix 16 - Applicant's position in relation to displacement impacts
REP9-045	Ørsted Hornsea Project Three (UK) Ltd Appendix 17 - Pearson et al., 1968
REP9-046	Ørsted Hornsea Project Three (UK) Ltd Appendix 18 - Langston et al., 2013
REP9-047	Ørsted Hornsea Project Three (UK) Ltd Appendix 19 - Response to Examining Authority's FQ3.1 Rule 17 Collision Risk Modelling
REP9-048	Ørsted Hornsea Project Three (UK) Ltd Deadline 9 Submission - Appendix 20 - Outline Construction Traffic Management Plan - Clean
REP9-049	Ørsted Hornsea Project Three (UK) Ltd Deadline 9 Submission - Appendix 21 - Outline Construction Traffic Management Plan – Tracked Changes
REP9-050	Ørsted Hornsea Project Three (UK) Ltd Appendix 22 - Hornsea Three Proposals to Support Achievement of SAC Conservation Objectives
REP9-051	Ørsted Hornsea Project Three (UK) Ltd Appendix 23 - Update to Assessment of Airborne Radar Approaches to Spirit Energy operated platforms potentially restricted by Hornsea Three using J6A data

Appendix B

REP9-052	Ørsted Hornsea Project Three (UK) Ltd Appendix 24 - Natural England Deadline 6 submission for Hornsea Project Two
REP9-053	Ørsted Hornsea Project Three (UK) Ltd Appendix 25 - Areas of agreement on the J6A data set analysis
REP9-054	Ørsted Hornsea Project Three (UK) Ltd Appendix 26 - Safety Justification for Single Line of Orientation Layout
REP9-055	Ørsted Hornsea Project Three (UK) Ltd Appendix 27 - Revised Offshore Historic Environment Plan
REP9-056	Ørsted Hornsea Project Three (UK) Ltd Appendix 28 - Revised Offshore Indicative Extent of Marine Licences
REP9-057	Ørsted Hornsea Project Three (UK) Ltd Appendix 29 -Revised Offshore Works Plan
REP9-058	Ørsted Hornsea Project Three (UK) Ltd Appendix 30 - Revised Offshore Order Limits and Grid Coordinates Plan
REP9-059	Ørsted Hornsea Project Three (UK) Ltd Appendix 32 - Outline Landscape Plan (tracked change)
REP9-060	Ørsted Hornsea Project Three (UK) Ltd Appendix 33 - Outline Landscape Plan - Clean
REP9-061	Ørsted Hornsea Project Three (UK) Ltd Appendix 34 - Updated Offshore Outline Written Scheme of Investigation
REP9-062	Ørsted Hornsea Project Three (UK) Ltd Appendix 35 - Outline Code of Construction Practice (tracked changes)
REP9-063	Ørsted Hornsea Project Three (UK) Ltd Appendix 36 - Outline Code of Construction Practice - Clean
REP9-064	Ørsted Hornsea Project Three (UK) Ltd Appendix 37 - Outline Ecological Management Plan -Tracked Changes
REP9-065	Ørsted Hornsea Project Three (UK) Ltd Appendix 38 - Outline Ecological Management Plan - Clean
REP9-066	Ørsted Hornsea Project Three (UK) Ltd Appendix 39 - In-Principle Monitoring Plan

Appendix B

REP9-067	Natural England Correction to REP7-078
REP9-068	Natural England Natural England's Comments on the Applicants D7 submissions
REP9-069	Natural England Comments on the Examining Authority's Rule 17 letter to the Applicant dated 19th March 2019 (ExA Q F3.1)
REP9-070	Natural England Natural England's Response to Rule 17 Letter dated 19 March 2019 (ExA Qs F4.1, F4.2, F4.3)
REP9-071	Natural England Natural England's Response to Rule 17 Letter dated 21 March 2019 (ExA Q F6.1)
REP9-072	Natural England SNS SAC Draft Conservation Objectives and Advice on Activities
REP9-073	Natural England Offshore Register Entry for the SNS SAC (Citation)
REP9-074	Brodies LLP on behalf of Spirit Energy Response to Deadline 9
REP9-075	Brodies LLP on behalf of Spirit Energy Appendix 1 - Sworn Statement by Rune Boge
REP9-076	Brodies LLP on behalf of Spirit Energy Appendix 2 - GCA Final Report 25 March 2019
REP9-077	Brodies LLP on behalf of Spirit Energy Appendix 3 - Spirit Energy Note on Impact of Matters Not Agreed
REP9-078	Brodies LLP on behalf of Spirit Energy Appendix 4 - Areas of Agreement on J6A Data Set Analysis
REP9-079	Brodies LLP on behalf of Spirit Energy Appendix 5 - Markham Treaty (UK version) dated 26 May 1992
REP9-080	Brodies LLP on behalf of Spirit Energy Appendix 6 - Sworn Statutory Declaration
REP9-081	National Farmers Union and Land Interest Group Response to Deadline 9
REP9-082	Marine Management Organisation

Appendix B

	Response to Deadline 9
REP9-083	The Royal Society for the Protection of Birds Response to Deadline 9
REP9-084	Addleshaw Goddard LLP on behalf of Network Rail Letter to the Examining Authority
REP9-085	Oulton Parish Council Response to Deadline 9
REP9-086	Norfolk County Council Response to further information requested by the Examining Authority
REP9-087	Darren Hilldrup Response to Deadline 9 - Accepted at the discretion of the Examining Authority
REP9-088	Mark Daniels Response to Deadline 9 - Accepted at the discretion of the Examining Authority
REP9-089	David Vince & Nicola Draycott Response to Deadline 9 - Accepted at the discretion of the Examining Authority
Deadline 10 Deadline for receipt of: • Comments on Written Representations • Comments on responses to Written Questions • Summary of Oral Submissions at Hearings	
REP10-001	Andrew Mildinhal Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-002	Chris and Helen Monk Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-003	Cliver Searson and Nicola Tanner Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-004	Cllr Graham Everett - Reepham Ward - Broadland District Council Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-005	DLA Piper UK LLP on behalf of National Grid Electricity Transmission Plc Deadline 10 Submission - Protective Provisions
REP10-006	Dota Williams

Appendix B

	Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-007	Eversheds Sutherland (International) LLP on behalf of Shell UK Limited Deadline 10 submission - Written Representation
REP10-008	Graham and Emily Whiteley Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-009	Guy Pitcher Deadline 10 Submission - Post Hearing Submission
REP10-010	The Crown Estate Commissioners Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-011	Judy Holland Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-012	Karen Hamilton at Brodies LLP on behalf of Spirit Energy Deadline 10 Submission - Protective Provisions and Area Plan
REP10-013	REFERENCE NOT IN USE
REP10-014	Maritime and Coastguard Agency Deadline 10 Submission - Further Submission
REP10-015	Maritime and Coastguard Agency Deadline 10 Submission - Response to Examining Authority's Written Questions
REP10-016	Melissa Johnson at Addleshaw Goddard LLP on behalf Network Rail Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-017	Nicola Banham Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-018	Nicola Banham Deadline 10 Submission - Response to Deadline 10 - Accepted at the discretion of the Examining Authority
REP10-019	Norfolk County Council Deadline 10 Submission - Response to Examining Authority's Written Questions
REP10-020	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Covering Letter to Deadline 10 submission
REP10-021	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Maritime Coastguard Agency
REP10-022	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Broadland District Council - Accepted at the discretion of the Examining Authority
REP10-023	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Revised Hierarchy of Management Plans

Appendix B

REP10-024	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Applicant's Final Statement of Commonality of Statements of Common Ground (SoCG)
REP10-025	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Joint Statement made by Applicant and Spirit Energy
REP10-026	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 1 to Deadline 10 submissions - Summary Statement on MCA and the Array Development Principles
REP10-027	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 2 to Deadline 10 submission - Benthic Impacts Control Plan
REP10-028	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 3 to Deadline 10 submission - Update to Assessment of Airborne Radar Approaches to Spirit Energy operated platforms potentially restricted by Hornsea Three using J6A data
REP10-029	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 4 to Deadline 10 submission - Applicant's response to Spirit Energy Matters Not Agreed at deadline 9
REP10-030	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 5 to Deadline 10 submission - Aviation Summary Statement
REP10-031	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 6 to Deadline 10 submission - Summary Statement on Shipping and Navigation
REP10-032	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 7 to Deadline 10 submission - Fisheries Coexistence and Liaison Plan
REP10-033	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 8 to Deadline 10 submission - Final Agreed Layout Development Principles
REP10-034	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 9 to Deadline 10 submission - Hornsea Project Two Kittiwake Collision Risk
REP10-035	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Appendix 10 to Deadline 10 submission - Applicant's response to Natural England's Deadline 9 submission (Ornithology)
REP10-036	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Written Summary of Applicant's Oral case put at Further Compulsory Acquisition
REP10-037	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Development Consent Order Comparisons (Deadline 10 version against Deadline 9 version)
REP10-038	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Offshore Ecology Matters Closing Legal Submission on behalf of the Applicant
REP10-039	Ørsted Hornsea Project Three (UK) Ltd

Appendix B

	Deadline 10 Submission - Position statement for Network Rail
REP10-040	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Applicant's Final Guide to the Application
REP10-041	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Final Draft Development Consent Order (Clean)
REP10-042	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Schedule of Changes DCO and DML (From DL9 to DL10)
REP10-043	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Letter of No Impediment - Great Crested Newt mitigation licence application
REP10-044	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Applicant's Commentary to Matters Raised at the Open Floor Hearing on 25 March 2019
REP10-045	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Applicants Statement of Case
REP10-046	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Statement of Common Ground between Hornsea Project Three (UK) Ltd and NFFO and VisNed
REP10-047	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Development Consent Order Comparisons (Deadline 10 version against Application version)
REP10-048	Ørsted Hornsea Project Three (UK) Ltd D9_HOW03_Appendix 20_OCTMP_clean description: Deadline 10 Submission – Updated version of Ørsted Hornsea Project Three (UK) Ltd’s Deadline 9 Submission Appendix 20 - Outline Construction Traffic Management Plan – Clean (REP9-048)
REP10-049	Ørsted Hornsea Project Three (UK) Ltd D9_HOW03_Appendix 21_OCTMP_tracked description: Deadline 10 Submission – Updated version of Ørsted Hornsea Project Three (UK) Ltd’s Deadline 9 Submission Appendix 21 - Outline Construction Traffic Management Plan – Tracked Changes (REP9-049)
REP10-050	Ørsted Hornsea Project Three (UK) Ltd Deadline 10 Submission - Written Summary of Applicant's oral case put at Issue Specific Hearing 10
REP10-051	Phil and Amelia Whiting Deadline 10 Submission - Post Hearing Submission
REP10-052	Polly Brockis Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-053	Polly Brockis Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-054	Ray & Diane Pearce Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-055	Ray Pearce and Diane Pearce

Appendix B

	Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-056	Royal Society for Protection Birds Deadline 10 Submission - RSPB Deadline 10 Submissions
REP10-056a	Royal Society for the Protection of Birds Deadline 10 - Further Submission
REP10-056b	Royal Society for the Protection of Birds Deadline 10 Submission - Submission on alternative solutions, imperative reasons of overriding public interest and compensation
REP10-056c	Royal Society for the Protection of Birds Deadline 10 Submission - Appendix A- Offshore Energy Strategy Strategic Environmental Assessment - Consultation Feedback
REP10-056d	Royal Society for the Protection of Birds Deadline 10 Submission - Appendix B - Managing Natura 2000 sites
REP10-056e	Royal Society for the Protection of Birds Deadline 10 Submission - Appendix C - Contracts for Difference Draft Budget Notice for the Third Allocation Round
REP10-056f	Royal Society for the Protection of Birds Deadline 10 Submission - Appendix D - Written Representation for the Royal Society for the Protection of Birds
REP10-056g	Royal Society for the Protection of Birds Deadline 10 Submission - Appendix E - SMartWind - Appendix J - Response to the Royal Society for the Protection of Birds Written Representation
REP10-056h	Royal Society for the Protection of Birds Deadline 10 Submission - Appendix F - Hornsea Two - Final submission on alternative solutions under the Habitats Regulations for the Royal Society for the Protection of Birds
REP10-057	Simon Court on behalf of Cawston Parish Council Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-058	Spirit Energy Deadline 10 Submission - Supplementary Position Statement in Light of Simulator Trial Results – Accepted at the discretion of the Examining Authority
REP10-059	Steffan Aquarone Deadline 10 Submission - Post Hearing Submission
REP10-060	Steffan Aquarone Deadline 10 Submission - Additional Post Hearing Submission
REP10-061	Steve and Joanne Harding Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-062	Oulton Parish Council Deadline 10 Submission - Written submission of Oral Representation - Accepted at the discretion of the Examining Authority
REP10-063	Oulton Parish Council Deadline 10 Submission - Post Hearing Submission

Appendix B

REP10-064	Tony Barnett Deadline 10 Submission - Post Hearing Submission - Accepted at the discretion of the Examining Authority
REP10-065	Trinity House Deadline 10 submission - Written Representation to ExA
Other Documents	
OD-001	Orsted Hornsea Project Three (UK) Ltd Section 56, Regulation 9 and Regulation 13 Notice
OD-002	Orsted Hornsea Project Three (UK) Ltd Revised Section 56, Regulation 9 and Regulation 13 Notice
OD-003	Orsted Hornsea Project Three (UK) Ltd Section 58, Section 59 and Reg 13 Compliance Certificates
OD-004	Hornsea 3 Submissions received during Acceptance Published on 20 August 2018
OD-005	Regulation 24 Transboundary Screening document Hornsea Project Three

APPENDIX C: LIST OF ABBREVIATIONS

APPENDIX C: LIST OF ABBREVIATIONS

Abbreviation or usage	Reference
AEoI	Adverse Effect on Integrity
AEZ	Archaeological Exclusion Zone
AONB	Area of Outstanding Natural Beauty
AP	Affected Person
AR	Avoidance Rate
ARA	Airborne Radar Approach
APFP	Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
ASI	Accompanied Site Inspection
BDC	Broadland District Council
CA	Compulsory Acquisition
CAH	Compulsory Acquisition Hearing
CEA	Cumulative Effects Assessment
CfD	Contract for Difference
CoCP	Code of Construction Practice
CPC	Cawston Parish Council
CRM	Collision Risk Modelling
CSIP	Cable Specification and Installation Plan
cSAC	Candidate Special Area of Conservation
CTMP	Construction Traffic Management Plan
CV	Coefficient of Variation
DAS	Digital Aerial Survey
DCO	Development Consent Order
DML	Deemed Marine Licence
EA	Environment Agency
ECHR	European Convention on Human Rights
ECOW	Ecological Clerk of Works
ECR	Export Cable Route
EIEOMP	East Inshore and East Offshore Marine Plans
EIFCA	Eastern Inshore Fisheries and Conservation Authority
EMF	Electric and Magnetic Fields
EMP	Ecological Management Plan
EN-1	Overarching National Policy Statement for Energy
EN-3	National Policy Statement for Renewable Energy Infrastructure
EN-5	National Policy Statement for Electricity Networks Infrastructure
EPS	European Protected Species
ES	Environmental Statement
ExA	Examining Authority
FLCP	Fisheries Co-existence and Liaison Plan

APPENDIX C: LIST OF ABBREVIATIONS

Abbreviation or usage	Reference
FRA	Flood Risk Assessment
GVA	Gross Value Added
HAT	Highest Astronomical Tide
HDD	Horizontal Directional Drilling
HE	Highways England
Hist E	Historic England
HGV	Heavy Goods Vehicle
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IP	Interested Party
IRoPI	Imperative Reasons of Overriding Public Interest
ISH	Issue Specific Hearing
LAT	Lowest Astronomical Tide
LEP	Local Enterprise Partnership
LIR	Local Impact Report
LP	Landscape Plan
LSE	Likely Significant Effect
MCAA	Marine and Coastal Access Act 2009
MCA	Maritime and Coastguard Agency
MCZ	Marine Conservation Zone
MDS	Maximum Design Scenario
MEEB	Measures of Equivalent Environmental Benefit
MMO	Marine Management Organisation
MPA	Marine Protected Area
MPC	Mulbarton Parish Council
MW	Megawatt
NAF	Nocturnal Activity Factor
NCC	Norfolk County Council
NE	Natural England
Neptune	Neptune E&P UK Limited
NFFO	National Federation of Fishermen's Organisations
NGET	National Grid Electricity Transmission
nm	Nautical Mile
NNDC	North Norfolk District Council
NPA2017	Neighbourhood Planning Act 2017
NPS	National Policy Statement
NR	National Rail Infrastructure Limited
NRA	Navigational Risk Assessment
NSIP	Nationally Signification Infrastructure Project
NT	National Trust
NUC	Not Under Command

APPENDIX C: LIST OF ABBREVIATIONS

Abbreviation or usage	Reference
NUI	Normally Unmanned Installation
OFH	Open Floor Hearing
OPC	Oulton Parish Council
OWF	Offshore Wind Farm
PA2008	Planning Act 2008
PCH	Potential Collision Height
pMCZ	Proposed Marine Conservation Zone
PRoW	Public Right of Way
PSED	Public Sector Equality Duty
PTS	Permanent Threshold Shift
PVA	Population Viability Analysis
RIAA	Report to Inform Appropriate Assessment
RIES	Report on the Implications for European Sites
RR	Relevant Representation
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAR	Search and Rescue
SIP	Site Integrity Plan
SNC	South Norfolk Council
SNCB	Statutory Nature Conservation Body
SNLP	South Norfolk Local Plan
SoCG	Statement of Common Ground
SoS	Secretary of State
SPA	Special Protection Area
Spirit Energy	Spirit Energy Nederland BV, Spirit Energy North Sea Limited and Spirit Energy Resources Limited
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SWMP	Site Waste Management Plan
TCE	The Crown Estate
TP	Temporary Possession
TWT	The Wildlife Trusts
USI	Unaccompanied Site Inspection
UXO	Unexploded Ordnance
VER	Valued Ecological Receptor
WCS	Worst Case Scenario
WFD	Water Framework Directive
WR	Written Representation
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator
ZVI	Zone of Visual Influence

APPENDIX D: LANDOWNERS REPRESENTED BY THE LAND INTEREST GROUP



The Planning
Inspectorate

Please be aware that this document is no longer available on the National Infrastructure project website.

APPENDIX E: THE RECOMMENDED DCO

201* No. 0000

INFRASTRUCTURE PLANNING

The Hornsea Three Offshore Wind Farm Order

Made - - - - []

Coming into force - - []

CONTENTS

**PART 1
PRELIMINARY**

1. Citation and commencement
2. Interpretation

**PART 2
PRINCIPAL POWERS**

3. Development consent etc. granted by the Order
4. Power to maintain authorised project
5. Benefit of the Order
6. Application and modification of legislative provisions
7. Defence to proceedings in respect of statutory nuisance

**PART 3
STREETS**

8. Street works
9. Application of the 1991 Act
10. Temporary stopping up of streets
11. Temporary stopping up of public rights of way
12. Access to works
13. Agreements with street authorities
14. Power to alter layout etc. of streets

**PART 4
SUPPLEMENTAL POWERS**

15. Discharge of water
16. Protective work to buildings
17. Authority to survey and investigate the land onshore

PART 5 POWERS OF ACQUISITION

- 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 the Compulsory Purchase (Vesting Declarations) Act 1981
- 23. Acquisition of subsoil only
- 24. Modification of Part 1 of the Compulsory Purchase Act 1965
- 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. Statutory undertakers
- 29. Recovery of costs of new connections

PART 6 OPERATIONS

- 30. Operation of generating station
- 31. Deemed marine licences under the 2009 Act

PART 7 MISCELLANEOUS AND GENERAL

- 32. Application of landlord and tenant law
- 33. Operational land for purposes of the 1990 Act
- 34. Felling or lopping of trees and removal of hedgerows
- 35. Trees subject to tree preservation orders
- 36. Certification of plans and documents, etc.
- 37. Arbitration
- 38. Requirements, appeals, etc.
- 39. Abatement of works abandoned or decayed
- 40. Saving provisions for Trinity House
- 41. Crown rights
- 42. Protective provisions
- 43. Funding

SCHEDULE 1 — AUTHORISED PROJECT

PART 1 — AUTHORISED DEVELOPMENT

PART 2 — ANCILLARY WORKS

PART 3 — REQUIREMENTS

SCHEDULE 2 — STREETS SUBJECT TO STREET WORKS

SCHEDULE 3 — STREETS TO BE TEMPORARILY STOPPED UP

SCHEDULE 4 — PUBLIC RIGHTS OF WAY TO BE TEMPORARILY STOPPED UP

- SCHEDULE 5 — ACCESS TO WORKS
- 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 9 — PROTECTIVE PROVISIONS
 - PART 1 — PROTECTION FOR ELECTRICITY, GAS, WATER AND SEWERAGE UNDERTAKERS
 - PART 2 — FOR THE PROTECTION OF NATIONAL GRID AS ELECTRICITY AND GAS UNDERTAKER
 - PART 3 — FOR THE PROTECTION OF CADENT GAS LIMITED AS GAS UNDERTAKER
 - PART 4 — PROTECTION FOR OPERATORS OF ELECTRONIC COMMUNICATIONS CODE NETWORKS
 - PART 5 — PROTECTION OF NETWORK RAIL INFRASTRUCTURE LIMITED
 - PART 6 — FOR THE PROTECTION OF ANGLIAN WATER SERVICES LIMITED
 - PART 7 — FOR THE PROTECTION OF THE ENVIRONMENT AGENCY AND DRAINAGE AUTHORITIES
 - PART 8 — FOR THE PROTECTION OF NORFOLK VANGUARD
 - PART 9 — FOR THE PROTECTION OF NORFOLK BOREAS
- PART 10 FOR THE PROTECTION OF OIL AND GAS LICENSEE
- SCHEDULE 10
 - PART 1 — REMOVAL OF HEDGEROWS
 - PART 2 — REMOVAL OF IMPORTANT HEDGEROWS
- SCHEDULE 11 — DEEMED MARINE LICENCE UNDER THE 2009 ACT— GENERATION ASSETS
 - PART 1 — LICENSED MARINE ACTIVITIES
 - PART 2 — CONDITIONS
- SCHEDULE 12 — DEEMED MARINE LICENCE UNDER THE 2009 ACT – TRANSMISSION ASSETS
 - PART 1 — LICENSED MARINE ACTIVITIES
 - PART 2 — CONDITIONS
- SCHEDULE 13 — ARBITRATION RULES

An application has been made to the Secretary of State for an order under the Planning Act 2008 (“the 2008 Act”)(a).

The application was examined by the Examining Authority, which has made a report to the Secretary of State under section 74(2) of the 2008 Act.

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.

(a) 2008 c.29. Parts 1 to 7 were amended by Chapter 6 of Part 6 of the Localism Act 2011 (c.20).

The Secretary of State has considered the report and recommendation of the Examining Authority, has taken into account the environmental information in accordance with regulation 3 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009^(a) and has had regard to the documents and matters referred to in section 104(2) of the 2008 Act.

The Secretary of State, having decided the application, has determined to make an Order giving effect to the proposals comprised in the application on terms that in the opinion of the Secretary of State are not materially different from those proposed in the application.

The Secretary of State is satisfied that open space within the Order land, when burdened with any 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 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 and 120 of the 2008 Act, makes the following Order—

PART 1

PRELIMINARY

Citation and commencement

1. This Order may be cited as the Hornsea Three Offshore Wind Farm Order and comes into force on [] 201[].

Interpretation

2.—(1) In this Order—

“the 1961 Act” means the Land Compensation Act 1961^(b);

“the 1965 Act” means the Compulsory Purchase Act 1965^(c);

“the 1980 Act” means the Highways Act 1980^(d);

“the 1981 Act” means the Compulsory Purchase (Vesting Declarations) Act 1981^(e);

“the 1989 Act” means the Electricity Act 1989^(f);

“the 1990 Act” means the Town and Country Planning Act 1990^(g);

“the 1991 Act” means the New Roads and Street Works Act 1991^(h);

“the 2004 Act” means the Energy Act 2004⁽ⁱ⁾;

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009^(j);

(a) S.I. 2009/2263. Regulation 3 was amended by S.I. 2012/635 and S.I. 2012/787. S.I. 2009/2263 was revoked by S.I. 2017/572, but continues to apply to this application for development consent by virtue of transitional provisions contained in Regulation 37(2) of that instrument.

(b) 1961 c.33

(c) 1965 c.56

(d) 1980 c.66

(e) 1981 c.66

(f) 1989 c.29

(g) 1990 c.8

(h) 1991 c.22. Section 48(sA) 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)

(i) 2004 c.20

(j) 2009 c.23

“access to works plan” means the plan or plans certified as the access to works plan or plans by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“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 project” means the authorised development and the ancillary works authorised by this Order;

“the book of reference” means the document certified by the Secretary of State as the book of reference for the purposes of the Order under article 36 (certification of plans and documents etc);

“box-type gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a square base which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“buoy” means any floating device used for navigational purposes or measurement purposes;

“cables” means up to 600kV cables for the transmission of electricity, including one or more cable crossings;

“cable circuits” means a number of electrical conductors necessary to transmit electricity between two points within the authorised development; this comprises, in the case of HVAC transmission, three conductors which may be bundled as one cable or take the form of three separate cables, and, in the case of HVDC transmission two conductors, which may be attached together or take the form of single cables, and in either case the circuit may include one or more auxiliary cables (normally fibre optic cables) for the purpose of control, monitoring, protection or general communications;

“cable crossings” means a crossing of existing sub-sea cables or pipelines or other existing infrastructure by a cable or, where cables run together in parallel, a set of cables, authorised by this Order together with physical protection measures including rock placement or other protection measures;

“cable protection” means physical measures for the protection of cables including but not limited to concrete mattresses, with or without frond devices, and/or rock placement (but not material used for cable crossings);

“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 operations consisting of pre-construction monitoring surveys approved under the deemed marine licences, and (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 onshore site preparation works and the words “commencement” and “commenced” must be construed accordingly;

“connection works” means Work Nos. 6 to 15 and any related further associated development in connection with those works;

“construction compound” means a construction site associated with the connection works including central offices, welfare facilities, and storage for construction of the authorised project;

“deemed marine licences” means the marine licences set out in Schedules 11 and 12;

“environmental statement” means the document certified as the environmental statement by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“frond devices” means flow energy dissipation devices, which reduce current velocity and turbulence and encourage settlement of sediment;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which tapers as it rises which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“highway” and “highway authority” have the same meaning as in the 1980 Act^(a)

“horizontal directional drilling” refers to a boring technique involving drilling in an arc between two points;

“horizontal directional drilling compound” means a construction site associated with the connection works where horizontal directional drilling or other trenchless construction technique is proposed including hard standing, lay down and storage areas for construction materials and equipment, areas for spoil, areas for vehicular parking, bunded storage areas, areas comprising water and bentonite tanks, pumps and pipes, areas for welfare facilities including offices and canteen and washroom facilities, wheel washing facilities, workshop facilities and temporary fencing or other means of enclosure and areas for other facilities required for construction purposes;

“HVAC” means high voltage alternating current;

“HVDC” means high voltage direct current;

“in principle Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Hornsea Three Southern North Sea Special Area for Conservation Site Integrity Plan by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“intrusive activities” means activities including anchoring of vessels, jacking up of vessels, depositing soil and seabed clearance;

“jacket foundation” means a lattice type structure constructed of steel, which may include scour protection and additional equipment such as, J-tubes, corrosion protection systems and access platforms;

“joint bay” means an excavation located at regular intervals along the cable route consisting of a concrete flat base slab constructed beneath the ground to facilitate the jointing together of the cables;

“land plan” means the plan or plans certified as the land plan or plans by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“LAT” means lowest astronomical tide;

“lead local flood authority” has the meaning in section 6(7) of the Flood and Water Management Act 2010^(b);

“link box” means the underground metal box placed within a plastic or concrete pit where the metal sheaths between adjacent export cable sections are connected and earthed installed within a ground level manhole or inspection chamber to allow access to the link box for regular maintenance or fault-finding purposes;

“location plan” means the plan or plans certified as the location plan or plans by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace, to the extent assessed in the environmental statement; and

“maintenance” must be construed accordingly;

“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;

(a) “highway” is defined in section 328(1) for “highway authority” see section 1

(b) 2010 c.29

“MMO” means the Marine Management Organisation;

“monopile foundation” means a steel pile, driven and/or drilled into the seabed and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“offshore accommodation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the wind turbine generators;

“offshore electrical installations” means the offshore type 1 substations, the offshore type 2 substations, the offshore subsea HVAC booster stations and the offshore HVAC booster stations forming part of the authorised development;

“offshore HVAC booster station” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing—

- (a) electrical equipment required to provide reactive power compensation; and
- (b) housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the substation;

“offshore subsea HVAC booster station” means a sealed steel or concrete structure located under the surface of the sea, attached to the seabed by means of a foundation, containing electrical equipment required to provide reactive power compensation;

“offshore substation” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing—

- (a) electrical equipment required to switch, transform, convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation; and
- (b) housing accommodation, storage, workshop auxiliary equipment, and facilities for operating, maintaining and controlling the substation or wind turbine generators;

“offshore type 1 substation” means the smaller version of the offshore substations assessed in the environment statement;

“offshore type 2 substation” means the larger version of the offshore substations assessed in the environment statement;

“offshore works” means Work Nos. 1, 2, 3, 4 and 5 and any related further associated development in connection with those works;

“onshore construction works” means—

- (a) temporary haul roads;
- (b) vehicular accesses; and
- (c) construction compound(s), or if horizontal directional drilling is to be used, horizontal directional drilling compound(s).

“onshore HVAC booster station” means a compound, containing electrical equipment required to provide reactive power compensation, and auxiliary equipment and facilities for operating, maintaining and controlling the substation, with external landscaping and means of access;

“onshore HVDC/HVAC substation” means a compound, comprising the onshore HVDC converter station or the onshore HVAC substation, containing electrical equipment required to switch, transform, convert electricity and provide reactive power compensation, with external landscaping and means of access;

“onshore site preparation works” means operations consisting of site clearance, pre-planting of landscaping works, 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 of services, erection of any temporary means of enclosure, creation of site accesses and the temporary display of site notices or advertisements;

“the Order land” means the land shown on the land plans which is within the limits of land to be acquired or used and described in the book of reference;

“the offshore Order limits and grid coordinates plan” means the plan or plans certified by the Secretary of State as the offshore Order limits and grid coordinates plan for the purposes of the Order under article 36 (certification of plans and documents etc);

“the onshore Order limits plan” means the plans certified by the Secretary of State as the onshore Order limits plan for the purposes of the Order under article 36 (certification of plans and documents etc);

“the Order limits” means the limits shown on the offshore Order limits and grid coordinates plan and the onshore Order limits plan within which the authorised project may be carried out, whose grid coordinates seaward of MHWS are set out in paragraph 1 of Part 1 of Schedule 1 to this Order;

“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 under article 36 (certification of plans and documents etc);

“outline construction traffic management plan” means the document certified as the outline construction traffic management plan by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“outline ecological management plan” means the document certified as the outline ecological management plan by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“outline landscape plan” means the document certified as the outline landscape plan by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“outline offshore written scheme of investigation” means the document certified as the outline offshore written scheme of investigation by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“outline onshore written scheme of investigation” means the document certified as the outline onshore written scheme of investigation by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“pontoon gravity base 1 foundation” means a structure principally of steel, concrete, or steel and concrete with a base made up of up to three rectangular pontoons which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“pontoon gravity base 2 foundation” means a structure principally of steel, concrete, or steel and concrete with a base made up of a pontoon arranged in a rectangle around an open centre which rests on the seabed due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“protective provisions plan” means the plan certified by the Secretary of State as the protective provisions plan for the purposes of Part 10 of Schedule 9 to this Order under article 36 (certification of plans and documents etc);

“public rights of way plan” means the plan or plans certified as the temporary stopping up of public rights of way plan by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“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 structure placed in or on the seabed by use of protective aprons, mattresses with or without frond devices, or rock and gravel placement;

“SNCB” means an organisation charged by government with advising on nature conservation matters;

“street” means a street within the meaning of section 48 of the 1991 Act(a), 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);

“streets plan” means the plan or plans certified as the streets plan or plans by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“suction bucket” means a steel cylindrical structure attached to the legs of a jacket foundation which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential;

“mono suction bucket foundation” means a steel cylindrical structure which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential, and may include scour protection and additional equipment such as J-tubes;

“transition joint bay” means the underground concrete bays in Work No. 7 where the offshore export cable circuits comprised in Work No. 6 are jointed to the onshore export cable circuits;

“transition piece” means the metal structure attached to the top of the foundation where the base of the wind turbine generator is connected and may include additional equipment such as J-tubes, corrosion protection systems, boat access systems, access platforms, craneage, electrical transmission equipment and associated equipment;

“tree preservation order and hedgerow plan” means the plan or plans certified as the tree preservation order and hedgerow plan or plans by the Secretary of State for the purposes of this Order under article 36 (certification of plans and documents etc);

“undertaker” means Orsted Hornsea Project Three (UK) Limited (company number 08584210);

“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 three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment, fixed to a foundation or transition piece; and

“works plan” means the plan or plans certified as the works plan by the Secretary of State for the purposes of the Order under article 36 (certification of plans and documents etc).

(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, capacities and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development shall be taken to be measured along that work.

(a) Section 48 was amended by section 124(2) of the Local Transport Act 2008 (c.26).

(b) “street authority” is defined in section 49, which was amended by paragraph 117 of Schedule 1 to the Infrastructure Act (c.7)

(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, Work Nos. 1 to 5 must be constructed within the Order limits seaward of MHWS and Work Nos. 6 to 15 must be constructed within the Order limits landward of MHWS.

Power to maintain the authorised project

4.—(1) The undertaker may at any time 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 any further licence under Part 4 of the 2009 Act (marine licensing) for offshore works not covered by the deemed marine licences.

Benefit of the Order

5.—(1) Subject to paragraph (3), 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 (including the deemed marine licences, in whole or in part) and such related statutory rights as may be agreed between the undertaker and the transferee; and
- (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 the Order (including the deemed marine licences, in whole or in part) and such related statutory rights as may be so agreed.

except where paragraph (6) applies, in which case no consent of the Secretary of State is required.

(2) Where an agreement has been made in accordance with paragraph (1) references in this Order to the undertaker, except in paragraphs (5) and (7), shall include references to the transferee or lessee.

(3) The undertaker shall consult the Secretary of State before making an application for consent under this article by giving notice in writing of the proposed application.

(4) The Secretary of State shall consult the MMO before giving consent to the transfer or grant to another person of the whole or part of the benefit of the provisions of the deemed marine licences.

(5) Where the undertaker has transferred any benefit, or for the duration of any period during which the undertaker has granted any benefit, under paragraph (1)—

- (a) the benefit transferred or granted (“the transferred benefit”) shall include 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 shall reside exclusively with the transferee or, as the case may be, the lessee and the transferred benefit shall not be enforceable against the undertaker; and
 - (c) the exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (1) is subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.
- (6) This paragraph applies to any provisions of this Order and its related statutory rights where—
- (a) the transferee or lessee is the holder of a licence under section 6 of the 1989 Act; 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 shall be payable.
- (7) 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.
- (8) The notice required under paragraphs (3) and (7) 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(9), the date on which the transfer will take effect;
 - (iii) the provisions to be transferred or granted;
 - (iv) the restrictions, liabilities and obligations that, in accordance with paragraph (5)(c), will apply to the person exercising the powers transferred or granted; and
 - (v) where paragraph (6) does not apply, 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.
- (9) The date specified under paragraph (8)(a)(ii) in respect of a notice served in respect of paragraph (7) must not be earlier than the expiry of five days from the date of the receipt of the notice.
- (10) The notice given under paragraph (7) 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.
- (11) Sections 72(7) and (8) of the 2009 Act do not apply to a transfer or grant of the whole or part of the benefit of the provisions of the deemed marine licences to another person by the undertaker pursuant to an agreement under paragraph (1).
- (12) The provisions of articles 8 (street works), 10 (temporary stopping up of streets), 18 (compulsory acquisition of land), 20 (compulsory acquisition of rights), 26 (temporary use of land

for carrying out the authorised project) and 27 (temporary use of land for maintaining the authorised project) shall have effect only for the benefit of the named undertaker and a person who is a transferee or lessee who is also—

- (a) in respect of Work Nos. 6 to 15 a person who holds a licence under the 1989 Act, or
- (b) in respect of functions under article 8 (street works) relating to street, a street authority.

Application and modification of legislative provisions

6. The following provisions do not apply in relation to the construction or works carried out for the purpose of, or in connection with, the construction or maintenance of the authorised project—

- (a) 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—

“or (k) for carrying out development which has been authorised by an order granting development consent pursuant to the Planning Act 2008.”.
- (b) 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.

Defence to proceedings in respect of statutory nuisance

7.—(1) Where proceedings are brought under section 82(1) of the Environmental Protection Act 1990^(c) (summary proceedings by a 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, maintenance or decommissioning 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), or the Control of Pollution Act 1974^(d); or
 - (ii) is a consequence of the construction, maintenance or decommissioning 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 in compliance with requirement 21 (control of noise during the 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

(a) SI 1997/1160

(b) 2017 c.20

(c) 1990 c.43 There are amendments to this Act which are not relevant to the Order.

(d) 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.

relates to the use of premises by the undertaker for purposes of or in connection with the construction, maintenance or decommissioning of the authorised project.

PART 3

STREETS

Street works

8.—(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 under it;
- (b) tunnel or bore under the street;
- (c) place apparatus under the street;
- (d) maintain apparatus under the street or change its position; and
- (e) execute any works required for or incidental to any works referred to in sub-paragraphs (a) to (d).

(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.

(3) In this article “apparatus” has the same meaning as in Part 3 of the 1991 Act.

Application of the 1991 Act

9.—(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 8 (street works); and
- (b) the temporary stopping up, temporary alteration or temporary diversion of a street by the undertaker under article 10 (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^(a) 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 sub-paragraphs (a) to (g).

(3) Section 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.

^(a) Sections 55, 57, 60, 68 and 69 were amended by the Traffic Management Act 2004 (c.18)

Temporary stopping up of streets

10.—(1) The undertaker, during and for the purposes of carrying out the authorised project, may temporarily stop up, alter or divert 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 use any street temporarily stopped up 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, alteration or diversion 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, alter or divert the streets set out in column (2) of Schedule 3 (streets to be temporarily stopped up) to the extent specified, by reference to the letters and numbers shown on the works plans, in column (3) of that Schedule.

(5) The undertaker must not temporarily stop up, alter, divert 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 public 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.

Temporary stopping up of public rights of way

11. 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 column (2) of Schedule 4 (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 rights of way plan.

Access to works

12.—(1) The undertaker may, for the purposes of the authorised project—

- (a) form, lay out and maintain a means of access, or improve or maintain an 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 11 (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 8(1) (street works).

- (2) Such 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.

Power to alter layout etc. of streets

14.—(1) Subject to paragraphs (2) and (3), the undertaker may, in so far as may be expedient or necessary for the purposes of or in connection with constructing, operating and maintaining the authorised development, alter the layout of any street and, without limitation on the scope of this paragraph, the undertaker may—

- (a) alter the level or increase the width of any kerb, footway, cycle track or verge; and
- (b) make and maintain passing place(s).

(2) The undertaker must restore any street that has been temporarily altered under this article to the reasonable satisfaction of the street authority.

(3) The powers conferred by paragraph (1) must not be exercised without the consent of the street authority.

(4) Paragraphs (2) and (3) do not apply where the undertaker is the street authority for a street in which the works are being carried out.

PART 4

SUPPLEMENTAL POWERS

Discharge of water

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 inspect, 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).

(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.

^(a) 1991 c.56. Section 106 was amended by section 35(8)(a) of the Competition and Service (Utilities) Act 1992 (c.43) and sections 36(2) and 99 of the Water Act 2003 (c.37). There are other amendments to this section which are not relevant to this Order.

(5) The undertaker must not, in carrying out or maintaining works pursuant to this article damage or interfere with the bed or banks of any watercourse forming part of a main river.

(6) 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.

(7) 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 Environmental Permitting (England and Wales) Regulations 2016(a).

(8) In this article—

- (a) “public sewer or drain” means a sewer or drain which belongs to a sewerage undertaker, the Environment Agency, an internal drainage board or a local authority; and
- (b) other expressions, excluding watercourse, used both in this article and in the Environmental Permitting (England and Wales) Regulations 2016 have the same meaning as in those Regulations.

(9) If a person who receives an application for consent or approval fails to notify the undertaker of a decision within 28 days of receiving an application for consent under paragraph (3) or approval under paragraph (4)(a) that person is deemed to have granted consent or given approval, as the case may be.

Protective work to buildings

16.—(1) Subject to the following provisions of this article, the undertaker may at its own expense carry out such protective works to any building lying within the Order limits as the undertaker considers necessary or expedient.

(2) Protective works may be carried out—

- (a) at any time before or during the carrying out in the vicinity of the building of any part of the authorised project; or
- (b) after the completion of that part of the authorised project in the vicinity of the building at any time up to the end of the period of five years beginning with the day on which that part of the authorised project is first opened for use.

(3) For the purpose of determining how the powers under this article are to be exercised, the undertaker may enter and survey any building falling within paragraph (1) and any land within its curtilage.

(4) For the purpose of carrying out protective works under this article to a building, the undertaker may (subject to paragraphs (5) and (6))—

- (a) enter the building and any land within its curtilage; and
- (b) where the works cannot be carried out reasonably conveniently without entering land that is adjacent to the building but outside its curtilage, enter the adjacent land (but not any building erected on it).

(5) Before exercising—

- (a) a power under paragraph (1) to carry out protective works to a building;
- (b) a power under paragraph (3) to enter a building and land within its curtilage;
- (c) a power under paragraph (4)(a) to enter a building and land within its curtilage; or
- (d) a power under paragraph (4)(b) to enter land,

the undertaker must, except in the case of emergency, serve on the owners and occupiers of the building or land not less than 14 days’ notice of its intention to exercise the power and, in a case falling within sub-paragraph (a) or (c), specifying the protective works proposed to be carried out.

(a) S.I. 2016/1154

(6) Where a notice is served under paragraph (5)(a), (c) or (d), the owner or occupier of the building or land concerned may, by serving a counter-notice within the period of 10 days beginning with the day on which the notice was served, require the question of whether it is necessary or expedient to carry out the protective works or to enter the building or land to be referred to arbitration under article 37 (arbitration).

(7) The undertaker must compensate the owners and occupiers of any building or land in relation to which powers under this article have been exercised for any loss or damage arising to them by reason of the exercise of the powers.

(8) Where—

- (a) protective works are carried out under this article to a building; and
- (b) within the period of five years beginning with the day on which the part of the authorised project carried out in the vicinity of the building is first opened for use it appears that the protective works are inadequate to protect the building against damage caused by the carrying out or use of that part of the authorised project,

the undertaker must compensate the owners and occupiers of the building for any loss or damage sustained by them.

(9) Nothing in this article relieves the undertaker from any liability to pay compensation under section 152 of the 2008 Act (compensation in case where no right to claim in nuisance).

(10) Any compensation payable under paragraph (7) or (8) must be determined, in case of dispute, under Part 1 of the 1961 Act.

(11) 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.

(12) In this article “protective works”, in relation to a building, means—

- (a) underpinning, strengthening and any other works the purpose of which is to prevent damage that may be caused to the building by the carrying out, maintenance or use of the authorised project; and
- (b) any works the purpose of which is to remedy any damage that has been caused to the building by the carrying out, maintenance or use of the authorised project.

Authority to survey and investigate the land onshore

17.—(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, including the digging of trenches; 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^(a);
- (b) in land held by or in right of the Crown without the consent of the Crown;
- (c) in land located within the highway boundary without the consent of the highway authority; or
- (d) in a private street without the consent of the street authority,

but such consent must not be unreasonably withheld or delayed.

(5) 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.

(6) 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 (4)(c) in the case of a highway authority; or
- (b) under paragraph (4)(d) in the case of a street authority;

that authority is deemed to have granted consent.

(7) 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.

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 7 years beginning on the day on which this Order is made—

- (a) no notice to treat is to be served under Part 1 of the 1965 Act; and
- (b) no declaration is to be executed under section 4 of the 1981 Act as applied by article 19 (application of the Compulsory Purchase (Vesting Declarations) Act 1981).

(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.

(a) As defined in Part 5 of Schedule 9 (Protection for Network Rail Infrastructure Limited).

Compulsory acquisition of rights

20.—(1) Subject to paragraph (2), 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 paragraph, article 21 (private rights) and article 28 (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, and Schedule 2A (counter-notice requiring purchase of land) (as substituted by paragraph 10 of Schedule 7 (modification of compensation and compulsory purchase enactments for the creation of new rights and imposition of new restrictions), where the undertaker creates or 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 or imposition of a restriction under paragraph (1) or (2) 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.

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) cease to have effect in so far as their continuance would be inconsistent with the exercise of the powers under article 18 (compulsory acquisition of land)—

- (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 covenants 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 28 (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 applied by paragraph (1), has effect with the following modifications.

(3) In section 1 (application of act), for subsection 2 substitute—

“(2) This section applies to any Minister, any local or other public authority or any other body or person authorised to acquire land by means of a compulsory purchase order.”

(4) In Section 5(2) (earliest date for execution of declaration) omit the words from “and this subsection” to the end.

(5) Section 5A (time limit for general vesting declaration) is omitted(a).

(6) In section 5B (extension of time limit during challenge) 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) the seven year period mentioned in article 19 (time limit for exercise of authority to acquire land compulsorily) of the Hornsea Three Offshore Wind Farm Order 201[]”.

(7) In section 6 (notices after execution of declaration), in subsection (1)(b) for “section 15 of, or paragraph 6 of Schedule 1 to, the Acquisition of Land Act 1981” substitute “section 134 (notice of authorisation of compulsory acquisition) of the Planning Act 2008”.

(8) In section 7 (constructive notice to treat), in subsection (1)(a), omit the words “(as modified by section 4 of the Acquisition of Land Act 1981)”.

(a) Section 5A to the 1981 Act was inserted by section 182(2) of the Housing and Planning Act 2016 (c.22).

(9) In Schedule A1 (counter-notice requiring purchase of land not in general vesting declaration), for paragraph 1(2) substitute—

“(2) But see article 23(1) (acquisition of subsoil only) of the Hornsea Three Offshore Wind Farm Order 201[], which excludes the acquisition of subsoil only from this Schedule.”

(10) References to the 1965 Act in the 1981 Act must be construed as references to the 1965 Act as applied by section 125 (application of compulsory acquisition provisions) of the 2008 Act (and as modified by article 24 (modification of Part 1 of the Compulsory Purchase Act 1965) to the compulsory acquisition of land under this Order.

Acquisition of subsoil only

23.—(1) The undertaker may acquire compulsorily so much of, or such rights in, the subsoil 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 of land under paragraph (1), the undertaker is not required to acquire an interest in any other part of the land.

(3) The following do not apply in connection with the exercise of the power under paragraph (1) in relation to subsoil only—

- (a) Schedule 2A (counter-notice requiring purchase of land not in notice to treat) to the 1965 Act;
- (b) Schedule A1 (counter-notice requiring purchase of land not in general vesting declaration) to the 1981 Act; and
- (c) Section 153(4A) (blighted land: proposed acquisition of part interest; material detriment test) of the Town and Country Planning Act 1990.

(4) Paragraphs (2) and (3) are to be disregarded where the undertaker acquires a cellar, vault, arch or other construction forming part of a house, building or manufactory.

Modification of Part 1 of the Compulsory Purchase Act 1965

24.—(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), the three year period mentioned in section 4” 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 seven year period mentioned in article 19 (time limit for exercise of authority to acquire land compulsorily) of the Hornsea Three Offshore Wind Farm Order 201[]”.

(3) In section 11A (powers of entry: further notice of entry)—

- (a) in subsection (1)(a), after “land” insert “under that provision”;
- (b) in subsection (2), after “land” insert “under that provision”.

(4) 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 Hornsea Three Offshore Wind Farm Order 201[]”.

(5) In Schedule 2A (counter-notice requiring purchase of land not in notice to treat)—

- (a) for paragraphs 1(2) and 14(2) substitute—

“(2) But see article 23(3) (acquisition of subsoil only) of the Hornsea Three Offshore Wind Farm Order 201[], which excludes the acquisition of subsoil only from this Schedule”; 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 16 (protective work to buildings), article 26 (temporary use of land for carrying out the authorised development) or article 27 (temporary use of land for maintaining the authorised development) of the Hornsea Three Wind Farm Order 201[].”

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, agricultural plant and apparatus, drainage, fences, debris and vegetation from that land;
- (c) construct temporary works (including the provision of means of access), haul roads, 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;

- (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;
 - (f) construct such works on that land as are mentioned in Part 1 of Schedule 1 (authorised development); and
 - (g) carry out mitigation works required pursuant to the requirements in Schedule 1.
- (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
- (a) in the case of land specified in paragraph (1)(a)(i) 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); or
 - (b) in the case of land specified in paragraph (1)(a)(ii) after the end of the period of one year beginning with the date of completion of the part of the authorised project for which temporary possession of the land was 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;
 - (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); or
 - (d) restore the land on which any works have been carried out under paragraph (1)(g) insofar as the works relate to mitigation works identified in the environmental statement or required pursuant to the requirements in Schedule 1.
- (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; or
 - (b) acquiring any part of the subsoil (or rights in the subsoil) of that land under article 23 (acquisition of subsoil 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 the 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 land 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 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.

(5) 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.

(6) 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.

(7) Any dispute as to a person's entitlement to compensation under paragraph (6), or as to the amount of the compensation, must be determined under Part 1 of the 1961 Act.

(8) 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 (6).

(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).

(11) In this article “the maintenance period”, in relation to any phase of the authorised project as approved under requirement 6, means the period of 5 years beginning with the date on which a phase of the authorised project first exports electricity to the national electricity transmission network except where the authorised development consists of the maintenance of any tree or shrub pursuant to requirement 9 where “the maintenance period” means a period of 10 years beginning with the date on which that tree or shrub is first planted.

Statutory undertakers

28. Subject to the provisions of Schedule 9 (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 Order land; 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

29.—(1) Where any apparatus of a public utility undertaker or of a public communications provider is removed under article 28 (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 28 (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 sewage 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 2003 Act; and

“public utility undertaker” has the same meaning as in the 1980 Act.

PART 6

OPERATIONS

Operation of generating station

30.—(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

31. The deemed marine licences set out in Schedules 11 (deemed generator assets marine licence under the 2009 Act) and 12 (deemed transmission assets marine licence under the 2009 Act) respectively, are deemed to be granted to the undertaker under Part 4 of the 2009 Act for the licensed marine activities set out in Part 1, and subject to the conditions set out in Part 2 of each of those Schedules.

PART 7

MISCELLANEOUS AND GENERAL

Application of landlord and tenant law

32.—(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

33. 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

34.—(1) The undertaker may fell or lop any tree within or overhanging land within the Order limits that is not subject to a tree preservation order or 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 onshore site preparation works, 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 not do any 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 purpose of the authorised project—

- (a) subject to paragraph (2) above, remove any hedgerows within the Order limits and specified in Schedule 10, Part 1 (removal of hedgerows) that may be required for the purposes of carrying out the authorised project; and
- (b) remove the important hedgerows as are within the Order limits and specified in Schedule 10, Part 2 (removal of important hedgerows).

(5) In this article “hedgerow” and “important hedgerow” have the same meaning as in the Hedgerow Regulations 1997.

Trees subject to tree preservation orders

35.—(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 before and after 14 May 2018 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 onshore site preparation works 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)—

- (a) the undertaker shall do no unnecessary damage to any tree and shall 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) shall not apply.

(3) The authority given by paragraph (1) shall constitute 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, shall be determined under Part 1 of the 1961 Act.

Certification of plans and documents, etc.

36.—(1) The undertaker must, as soon as practicable after the making of this Order, submit to the Secretary of State copies of—

- (a) the book of reference;
- (b) design objectives and principles;
- (c) the Development Principles;
- (d) the environmental statement;
- (e) the location plans;
- (f) the land plans;
- (g) the offshore Order limits and grid coordinates plan;
- (h) the onshore Order limits plan;
- (i) the works plans;
- (j) the access to works plan;
- (k) the streets plan;
- (l) the public rights of way plan;
- (m) the tree preservation order and hedgerow plan;
- (n) the crown land plans – onshore and offshore;
- (o) the onshore limits of deviation plan;
- (p) the outline construction management plan;
- (q) the outline construction traffic management plan;
- (r) the outline code of construction practice;
- (s) the outline ecological management plan;
- (t) the outline landscape plan;
- (u) the outline onshore written scheme of investigation;
- (v) the in-principle monitoring plan;
- (w) the outline offshore written scheme of investigation;
- (x) the outline fisheries coexistence and liaison plan;
- (y) the in principle Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan;

(z) the protective provisions plan.

(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 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

37.—(1) Any difference under any provision of this Order, unless otherwise provided for, shall be referred to and settled in arbitration in accordance with the rules at Schedule 13 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) For the avoidance of doubt, 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.

Requirements, appeals, etc.

38.—(1) Sub-section (1) of section 78 of the 1990 Act applies to the development consent granted by this Order and to the requirements except that it is modified so as to read for the purposes of this Order only as follows—

(a) after “local planning authority” insert “or Secretary of State”

(b) after subsection (b) insert the following—

“refuse or fails to determine an application for any consent, agreement or approval of that authority required by a requirement imposed on a grant of development consent or contained in a development consent order, or grant it subject to conditions; or”

(c) after Sub-section (1), insert the following—

“(1A) Where the appeal under sub-section (1) relates to a decision by the Secretary of State, the appeal shall be decided by a Secretary of State who would not be responsible for determining an application for development consent with the subject matter of the Hornsea Three Offshore Wind Farm Order 20[] if section 103(1) of the 2008 Act applied.”

(2) Sections 78 and 79 of the 1990 Act have effect in relation to any appeal under the terms of this article except that the Secretary of State in question is the Secretary of State who would be responsible for determining an application for development consent with the subject matter of this Order if section 103(1) of the 2008 Act applied.

(3) The terms of any development order, and other rules and regulations which apply to applications pursuant to conditions or the subject matter of section 78 of the 1990 Act apply, insofar as they are not inconsistent with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 and any other orders, rules or regulations made under the 2008 Act, to any application or appeal made under the requirements specified in paragraph (1).

Abatement of works abandoned or decayed

39. Where Work Nos 1, 2 or 3 or all of them or any part of them, is abandoned or allowed to fall into decay the Secretary of State may, following consultation with the undertaker, by notice in writing require the undertaker at its own expense either to repair, make safe and restore one or both of those Works, or any relevant part of them, or to remove them and, without prejudice to any notice served under section 105(2) of the 2004 Act^(a) restore the site to a safe and proper condition, to such an extent and within such limits as may be specified in the notice.

Saving provisions for Trinity House

40. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

Crown rights

41.—(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— (a) to take, use, enter upon 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)—

- (i) 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;
- (a) (ii) 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
- (b) (iii) 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

42. Schedule 9 (protective provisions) has effect.

Funding

43.—(1) The undertaker must not exercise the powers conferred by the provisions referred to in paragraph (2) in relation to any land unless it has first put in place either—

- (a) a guarantee and the amount of that guarantee approved by the Secretary of State in respect of the liabilities of the undertaker to pay compensation under this Order in respect of the exercise of the relevant power in relation to that land; or
- (b) an alternative form of security and the amount of that security for that purpose approved by the Secretary of State in respect of the liabilities of the undertaker to pay compensation under this Order in respect of the exercise of the relevant power in relation to that land.

(2) The provisions are—

- (a) article 18 (compulsory acquisition of land);

(a) Section 105(2) was substituted by section 69(3) of the Energy Act 2008 (c.32).

- (b) article 20 (compulsory acquisition of rights);
- (c) article 21 (private rights);
- (d) article 23 (acquisition of subsoil only);
- (e) article 25 (rights under or over streets);
- (f) article 26 (temporary use of land for carrying out the authorised project);
- (g) article 27 (temporary use of land for maintaining the authorised project); and
- (h) article 28 (statutory undertakers).

(3) A guarantee or alternative form of security given in respect of any liability of the undertaker to pay compensation under this Order is to be treated as enforceable against the guarantor or person providing the alternative form of security by any person to whom such compensation is payable and must be in such a form as to be capable of enforcement by such a person.

(4) Nothing in this article requires a guarantee or alternative form of security to be in place for more than 15 years after the date on which the relevant power is exercised.

Signed by Authority of the Secretary of State for Business, Energy and Industrial Strategy

	<i>Name</i>
Address	Head of []
Date	Department of Business, Energy and Industrial Strategy

SCHEDULE 1

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 121 kilometres to the northeast of the north Norfolk coast and approximately 10 kilometres west of the median line between UK and Netherlands waters, comprising—

Work No. 1—

- (a) an offshore wind turbine generating station with a gross electrical output of over 100 megawatts comprising up to 300 wind turbine generators each fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation or gravity base foundation;
- (b) up to three offshore accommodation platforms fixed to the seabed within the area shown on the works plan by monopile foundation, mono suction bucket foundation, jacket foundation, or gravity base foundation and which may be connected to each other or one of the offshore substations within Work No. 2 by an unsupported bridge; and
- (c) a network of cables between the wind turbine generators and between the wind turbine generators and Work No. 2 including one or more cable crossings;

and associated development within the meaning of section 115(2) of the 2008 Act comprising—

Work No. 2—

- (a) up to 12 offshore type 1 substations each fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation or box-type gravity base foundations and which may be connected to each other or one of the offshore accommodation platforms within Work No.1(b) by an unsupported bridge;
- (b) up to four offshore type 2 substations each fixed to the seabed by either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations, box-type gravity base foundations, pontoon gravity base 1 foundations, or pontoon gravity base 2 foundations and which may be connected to each other or one of the offshore accommodation platforms within Work No.1(b) by an unsupported bridge;
- (c) a network of cables;
- (d) up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No.5 consisting of offshore export cables along routes within the Order limits seaward of MLWS including one or more cable crossings; and
- (e) up to eight temporary horizontal directional drilling exit pits;

Work No. 3—

- (a) in the event that the mode of transmission is HVAC, up to four offshore HVAC booster stations fixed to the seabed within the area shown on the works plan by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation, or box-type gravity base foundations;
- (b) in the event that the mode of transmission is HVAC, up to six offshore subsea HVAC booster stations fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation, or box-type gravity base foundations;

- (c) in the event that the mode of transmission is HVAC, a network of cables between HVAC booster stations or offshore subsea HVAC booster stations; and
- (d) in the event that the mode of transmission is HVAC, up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No.5 consisting of offshore export cables along routes within the Order limits seaward of MHWS including one or more cable crossings;

Work No. 4— a temporary work area associated with Work No.2 and Work No.3 for vessels to carry out intrusive activities alongside Work No.2 or Work No.3;

Work No. 5— landfall connection works comprising up to six cable circuits and ducts and onshore construction works within the Order limits seaward of MHWS and landward of MLWS;

In the county of Norfolk, districts of North Norfolk, Broadland and South Norfolk

Work No. 6— onshore connection works consisting of up to six cable circuits, ducts and between Work No. 5 and Work No. 7 landward of MHWS and onshore construction works;

Work No.7— onshore connection works consisting of—

- (a) up to six cable circuits and associated electrical circuit ducts between Work No. 6 to Work No. 8;
- (b) onshore construction works;
- (c) up to six transition joint bays; and
- (d) horizontal directional drilling launch pits;

Work No. 8— onshore connection works consisting of—

- (a) up to six cable circuits and associated electrical circuit ducts to Work No. 11;
- (b) onshore construction works;
- (c) up to 440 link boxes; and
- (d) up to 440 joint bays;

Work No. 9— onshore connection works consisting of construction of an onshore HVAC booster station, together with onshore construction works;

Work No. 10— onshore connection works consisting of an onshore HVDC/HVAC substation, including up to six cable circuits and electrical circuit ducts, and onshore construction works;

Work No. 11— onshore connection works consisting of up to six cable circuits and electrical circuit ducts between Work No. 10 and Work No. 12 and onshore construction works;

Work No. 12— onshore connection works consisting of up to six cable circuits and electrical circuit ducts between Work No. 11 and the Norwich Main National Grid substation, including a connection above ground and electrical engineering works within or around the National Grid substation buildings and compound, and onshore construction works;

Work No. 13— a construction compound to support the construction of Work Nos. 8, 9, 10, 11, 12, 14 and 15;

Work No. 14— temporary vehicular access tracks to serve Work Nos. 7, 8, 9, 10, 11, 12, 13 and 15; and

Work No. 15— temporary storage areas to assist with the onshore connection works.

In connection with such Work Nos. 1 to 5 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) 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 5 and the disposal of up to 3,563,133 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;

and in connection with such Work Nos. 6 to 15 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) ramps, means of access and footpaths;
- (b) bunds, embankments, swales, landscaping, fencing and boundary treatments;
- (c) habitat creation;
- (d) jointing bays, link boxes, cable ducts, cable protection, joint protection, manholes, marker posts, underground cable marker, tiles and tape, and lighting and other works associated with cable laying;
- (e) works for the provision of apparatus including cabling, water and electricity supply works, foul drainage provision, surface water management systems and culverting;
- (f) works to alter the position of apparatus, including mains, sewers, drains and cables;
- (g) works to alter the course of, or otherwise interfere with, non-navigable rivers, streams or watercourses;
- (h) landscaping and other works to mitigate any adverse effects of the construction, maintenance or operation of the authorised project;
- (i) works for the benefit or protection of land affected by the authorised project;
- (j) working sites in connection with the construction of the authorised project, construction lay down areas and compounds, storage compounds and their restoration.

2. The grid coordinates for that part of the authorised project which is seaward of MHWS are specified below—

<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 57' 23.299" N	1° 5' 48.611" E	64	53° 45' 27.296" N	2° 34' 19.781" E
2	52° 58' 22.516" N	1° 4' 22.810" E	65	53° 45' 17.155" N	2° 33' 57.193" E
3	52° 59' 43.107" N	1° 3' 16.300" E	66	53° 44' 25.151" N	2° 28' 22.483" E
4	53° 0' 12.806" N	1° 3' 4.176" E	67	53° 43' 43.437" N	2° 23' 42.266" E
5	53° 0' 41.322" N	1° 3' 5.626" E	68	53° 43' 38.549" N	2° 23' 1.918" E
6	53° 2' 15.365" N	1° 3' 25.796" E	69	53° 40' 30.736" N	2° 17' 49.303" E
7	53° 4' 22.383" N	1° 5' 4.618" E	70	53° 37' 10.969" N	2° 7' 19.167" E
8	53° 4' 48.739" N	1° 5' 38.118" E	71	53° 37' 2.480" N	2° 6' 39.277" E
9	53° 5' 0.912" N	1° 6' 53.813" E	72	53° 36' 20.389" N	2° 5' 9.581" E
10	53° 4' 56.963" N	1° 8' 49.809" E	73	53° 35' 18.067" N	2° 5' 0.546" E
11	53° 4' 47.089" N	1° 10' 20.278" E	74	53° 34' 58.529" N	2° 4' 49.759" E
12	53° 4' 50.116" N	1° 12' 8.936" E	75	53° 34' 37.908" N	2° 4' 16.626" E
13	53° 5' 1.606" N	1° 14' 7.325" E	76	53° 32' 54.718" N	2° 4' 40.220" E
14	53° 5' 2.192" N	1° 14' 30.074" E	77	53° 32' 31.275" N	2° 4' 37.727" E
15	53° 4' 58.764" N	1° 14' 55.483" E	78	53° 31' 59.257" N	2° 4' 11.934" E
16	53° 4' 32.854" N	1° 16' 47.381" E	79	53° 31' 13.675" N	2° 3' 20.449" E

17	53° 4' 32.226" N	1° 19' 19.524" E	80	53° 30' 18.703" N	2° 2' 26.715" E
18	53° 4' 54.358" N	1° 22' 30.281" E	81	53° 30' 0.496" N	2° 1' 55.943" E
19	53° 5' 6.119" N	1° 25' 0.302" E	82	53° 29' 53.014" N	2° 1' 22.871" E
20	53° 5' 7.887" N	1° 26' 23.233" E	83	53° 29' 52.335" N	2° 0' 47.588" E
21	53° 5' 4.100" N	1° 27' 30.916" E	84	53° 28' 18.157" N	1° 53' 52.525" E
22	53° 5' 52.998" N	1° 28' 30.016" E	85	53° 27' 38.035" N	1° 51' 19.593" E
23	53° 14' 11.509" N	1° 41' 28.704" E	86	53° 27' 25.643" N	1° 50' 32.418" E
24	53° 14' 27.431" N	1° 42' 14.962" E	87	53° 27' 18.150" N	1° 50' 31.601" E
25	53° 15' 49.705" N	1° 44' 10.074" E	88	53° 26' 16.707" N	1° 50' 4.603" E
26	53° 16' 25.597" N	1° 44' 37.874" E	89	53° 25' 53.921" N	1° 50' 10.016" E
27	53° 19' 1.814" N	1° 45' 50.556" E	90	53° 25' 34.502" N	1° 50' 4.308" E
28	53° 22' 33.955" N	1° 46' 57.914" E	91	53° 24' 21.903" N	1° 49' 42.825" E
29	53° 22' 55.872" N	1° 46' 55.918" E	92	53° 24' 2.505" N	1° 49' 42.663" E
30	53° 23' 22.176" N	1° 47' 7.319" E	93	53° 23' 34.480" N	1° 49' 32.287" E
31	53° 23' 41.762" N	1° 47' 5.727" E	94	53° 23' 14.095" N	1° 49' 34.013" E
32	53° 24' 11.270" N	1° 47' 16.705" E	95	53° 22' 47.157" N	1° 49' 22.581" E
33	53° 24' 33.225" N	1° 47' 17.703" E	96	53° 22' 23.714" N	1° 49' 23.370" E
34	53° 25' 56.028" N	1° 47' 42.459" E	97	53° 18' 42.217" N	1° 48' 12.788" E
35	53° 26' 20.933" N	1° 47' 36.143" E	98	53° 15' 55.220" N	1° 46' 54.772" E
36	53° 26' 43.765" N	1° 47' 45.420" E	99	53° 15' 3.154" N	1° 46' 14.109" E
37	53° 27' 30.131" N	1° 48' 5.945" E	100	53° 13' 23.395" N	1° 43' 55.484" E
38	53° 27' 46.677" N	1° 48' 5.619" E	101	53° 13' 5.062" N	1° 43' 4.402" E
39	53° 28' 17.076" N	1° 48' 21.428" E	102	53° 4' 59.121" N	1° 30' 24.338" E
40	53° 28' 37.302" N	1° 49' 1.846" E	103	53° 4' 20.493" N	1° 29' 37.106" E
41	53° 29' 38.707" N	1° 52' 55.786" E	104	53° 4' 9.988" N	1° 29' 29.310" E
42	53° 31' 13.071" N	1° 59' 48.933" E	105	53° 3' 47.663" N	1° 28' 59.880" E
43	53° 31' 19.720" N	2° 0' 36.709" E	106	53° 3' 36.602" N	1° 28' 9.237" E
44	53° 32' 1.260" N	2° 1' 17.462" E	107	53° 3' 36.599" N	1° 27' 27.833" E
45	53° 32' 51.864" N	2° 2' 12.822" E	108	53° 3' 40.623" N	1° 26' 14.722" E
46	53° 34' 50.465" N	2° 1' 45.585" E	109	53° 3' 39.011" N	1° 25' 12.221" E
47	53° 35' 23.664" N	2° 1' 56.535" E	110	53° 3' 28.120" N	1° 22' 53.680" E
48	53° 35' 46.884" N	2° 2' 37.417" E	111	53° 3' 4.980" N	1° 19' 32.112" E
49	53° 36' 32.251" N	2° 2' 43.845" E	112	53° 3' 6.278" N	1° 16' 22.646" E
50	53° 37' 0.888" N	2° 2' 53.784" E	113	53° 3' 34.066" N	1° 14' 17.070" E
51	53° 37' 20.916" N	2° 3' 21.412" E	114	53° 3' 23.126" N	1° 12' 23.483" E
52	53° 38' 20.262" N	2° 5' 30.569" E	115	53° 3' 19.662" N	1° 10' 8.762" E
53	53° 38' 31.038" N	2° 6' 19.862" E	116	53° 3' 30.020" N	1° 8' 33.828" E
54	53° 41' 39.572" N	2° 16' 17.662" E	117	53° 3' 32.792" N	1° 7' 6.899" E
55	53° 44' 4.728" N	2° 20' 18.541" E	118	53° 1' 51.145" N	1° 5' 45.682" E
56	53° 51' 54.307" N	2° 19' 24.004" E	119	53° 0' 17.303" N	1° 5' 29.793" E
57	53° 52' 12.798" N	2° 19' 38.938" E	120	52° 59' 10.951" N	1° 6' 24.006" E
58	53° 59' 22.420" N	2° 11' 50.694" E	121	52° 58' 23.000" N	1° 7' 34.209" E
59	53° 59' 19.280" N	2° 13' 34.691" E	122	52° 57' 44.291" N	1° 7' 45.470" E
60	53° 58' 42.514" N	2° 32' 43.904" E	123	52° 57' 19.850" N	1° 7' 56.688" E
61	54° 0' 4.028" N	2° 40' 52.651" E	124	52° 56' 59.623" N	1° 8' 4.381" E
62	53° 48' 57.136" N	2° 44' 53.902" E	125	52° 57' 2.633" N	1° 7' 44.016" E
63	53° 41' 22.175" N	2° 47' 35.927" E	126	52° 57' 4.058" N	1° 7' 42.464" 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) marking buoys, 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 seven years beginning with the date this Order comes into force.

Detailed offshore design parameters

2.—(1) The total number of wind turbine generators comprised in the authorised project must not exceed 300 and a total rotor swept area of 9 square kilometres.

(2) Subject to sub-paragraph (3), each wind turbine generator forming part of the authorised project must not—

- (a) exceed a height of 325 metres when measured from LAT to the tip of the vertical blade;
- (b) exceed a rotor diameter of 265 metres;
- (c) be less than 34.97 metres from LAT to the lowest point of the rotating blade; and
- (d) be less than one kilometre from the nearest wind turbine generator in all directions.

(3) The reference in sub-paragraph (2)(d) to the location of a wind turbine generator is a reference to the centre point of that wind turbine generator.

(4) Wind turbine generator foundation structures forming part of the authorised scheme must be one of the following foundation options: monopile foundation, mono suction bucket foundation, jacket foundation or gravity base foundation.

(5) No wind turbine generator—

- (a) jacket foundations employing pin piles forming part of the authorised project shall have a pin pile diameter of greater than four meters; and
- (b) monopile foundation forming part of the authorised project shall have a diameter greater than 15 metres.

(6) The total seabed footprint area for wind turbine generator foundations must not exceed—

- (a) 435,660 square metres excluding scour protection; and
- (b) 1,623,182 square metres including scour protection.

3.—(1) The total number of offshore electrical installations and offshore accommodation platforms shall not exceed 21, and shall consist of no more than—

- (a) 12 offshore type 1 substations;
- (b) four offshore type 2 substations;
- (c) four offshore HVAC booster stations;

- (d) six offshore subsea HVAC booster stations; and
 - (e) three offshore accommodation platforms.
- (2) The dimensions of any offshore type 1 substations forming part of the authorised project must not exceed—
- (a) 90 metres in height when measured from LAT;
 - (b) 100 metres in length; and
 - (c) 100 metres in width.
- (3) The dimensions of any offshore type 2 substation forming part of the authorised project must not exceed—
- (a) 110 metres in height when measured from LAT;
 - (b) 180 metres in length; and
 - (c) 90 metres in width.
- (4) The dimensions of any offshore HVAC booster station forming part of the authorised project must not exceed—
- (a) 90 metres in height when measured from LAT;
 - (b) 100 metres in length; and
 - (c) 100 metres in width.
- (5) The dimensions of any offshore subsea HVAC booster station forming part of the authorised project must not exceed—
- (a) 15 metres in height when measured from the seabed;
 - (b) 50 metres in length; and
 - (c) 50 metres in width.
- (6) The dimensions of any offshore accommodation platform forming part of the authorised project must not exceed—
- (a) 64 metres in height when measured from LAT;
 - (b) 60 metres in length; and
 - (c) 60 metres in width.
- (7) Any bridge located between any offshore substation or accommodation platform shall be no longer than 100 metres.
- (8) Offshore accommodation platform foundation structures forming part of the authorised project must be one of the following foundation options: monopile foundations, mono suction bucket foundations, jacket foundations, or gravity base foundations.
- (9) Offshore installation foundation structures forming part of the authorised scheme must be one of the following foundation options—
- (a) for offshore type 1 substations, offshore HVAC booster stations and offshore subsea HVAC booster stations either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations or box-type gravity base foundations; and
 - (b) for offshore type 2 substations, either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations, box-type gravity base foundations, pontoon gravity base 1 foundations, or pontoon gravity base 2 foundations.
- (10) No offshore installation or offshore accommodation platform—
- (a) jacket foundation employing pin piles forming part of the authorised project shall have a pin pile diameter of greater than 4 metres; and
 - (b) monopile foundation forming part of the authorised project shall have a diameter greater than 15 metres.

(11) The total seabed footprint area for offshore accommodation platform foundations must not exceed—

- (a) 8,836 square metres excluding scour protection; and
- (b) 28,628 square metres including scour protection.

(12) The total seabed footprint area for offshore electrical installation foundations must not exceed—

- (a) 138,900 square metres excluding scour protection; and
- (b) 267,900 square metres including scour protection.

4. The total volume of scour protection for wind turbine generators, offshore accommodation platforms and offshore electrical installations shall not exceed 2,709,673 cubic metres.

5.—(1) The number of cable circuits shall not exceed six.

(2) The total length of the cables comprising Work No. 1(c) shall not exceed 830 kilometres.

(3) The total length of the cables comprising Work Nos. 2(c), 2(d) and 3(d) shall not exceed 1,371 kilometres.

(4) The total volume of cable protection (excluding cable crossings) shall not exceed 2,201,000 cubic metres with a maximum footprint of 1,540,700 square metres.

(5) The total volume of cable protection associated with cable crossings shall not exceed 784,875 cubic metres with a maximum footprint of 747,500 square metres.

(6) The total number of the cable crossings must not exceed 44 unless otherwise agreed with the MMO.

Phases of authorised development

6.—(1) The authorised development may not be commenced until a written scheme setting out the phases of construction of the authorised project has been submitted to and approved by the relevant planning authority, in relation to the connection works, or the MMO, in relation to works seaward of MHWS.

(2) The phases of construction referred to in sub-paragraph (1) shall not exceed two, save that each phase may be undertaken in any number of stages as prescribed in the written scheme.

(3) The scheme must be implemented as approved.

Detailed design approval onshore

7.—(1) Construction of the connection works in either Work No.9 or Work No. 10 shall not commence until details of—

- (a) the layout;
- (b) scale;
- (c) proposed finished ground levels;
- (d) external appearance and materials;
- (e) hard surfacing materials;
- (f) vehicular and pedestrian access, parking and circulation areas;
- (g) minor structures, such as furniture, refuse or other storage units, signs and lighting; and
- (h) proposed and existing functional services above and below, ground, including drainage, power and communications cables and pipelines, manholes and supports;

relating to that work of the authorised project have been submitted to and approved in writing by the relevant planning authority.

(2) The details submitted under sub-paragraph (1) must be in accordance with the limits of deviation set out in the onshore limits of deviation plan and substantially in accordance with the design objectives and principles.

(3) The connection works in Works No.9 and 10 must be carried out in accordance with the approved details.

(4) The connection works in either Work No.9 or Work No. 10 shall not commence until explanation of the choice of HVDC or HVAC for that phase has been provided in writing to the relevant planning authority, either before, or at the same time as, the details referred to in paragraph (1).

Provision of landscaping

8.—(1) No phase of the connection works may commence until for that phase a written landscape plan and associated work programme (which accords with the outline landscape plan and outline ecological management plan) has been submitted to and approved by the relevant planning authority in consultation with the relevant SNCBs and the Historic Buildings and Monuments Commission for England.

(2) The term commence as used in requirement 8(1) shall include any onshore site preparation works.

(3) The landscape plan must include details of—

- (a) surveys, assessments and method statements as guided by BS 5837 and the Hedgerows Regulations 1997; and
- (b) location, number, species, size and planting density of any proposed planting;
- (c) cultivation, importing of materials and other operations to ensure plant establishment;
- (d) existing trees and hedges to be retained with measures for their protection during the construction period; and
- (e) implementation timetables for all landscaping works.

(4) The landscape plan must be carried out as approved.

Implementation and maintenance of landscaping

9.—(1) All landscape works must be carried out in accordance with the landscape plans approved under requirement 8 (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 landscape plan that, within a period of ten years after planting, is removed by the undertaker, 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 otherwise approved in writing by the relevant planning authority.

Ecological management plan

10.—(1) No phase of the connection works may commence until for that phase a written ecological management plan (which accords with the outline ecological management plan and the relevant recommendations of appropriate British Standards) reflecting the survey results and ecological mitigation and enhancement measures included in the environmental statement has been submitted to and approved by the relevant planning authority in consultation with the relevant SNCBs and (where works have potential to impact wetland habitats) the Environment Agency.

(2) The onshore site preparation works may not commence until a written ecological management plan (which accords with the outline ecological management plan) for those works reflecting the survey results and ecological mitigation and enhancement measures included in the

environmental statement has been submitted to and approved by the relevant planning authority in consultation with the relevant SNCBs; and

(3) The ecological management plan must include an implementation timetable and must be carried out as approved.

Highway accesses

11.—(1) Construction of any new permanent or temporary means of access to a highway, or alteration, or use of an existing means of access to a highway, shall not commence until an access plan for that access has been submitted to and approved by Norfolk County Council as the local highway authority.

(2) The access plan must include details of the siting, design, layout, visibility splays, access management measures and a maintenance programme relevant to the access it relates to.

(3) The highway authority must be consulted on the access plan before it is submitted for approval.

(4) The highway accesses (including visibility splays) must be constructed and maintained in accordance with the approved details.

Fencing and other means of enclosure

12.—(1) No phase of the connection works may commence until for that phase written details of all proposed permanent fences, walls or other means of enclosure of the connection works have been submitted to and approved by the relevant planning authority.

(2) Any temporary fences, walls or other means of enclosure must be provided in accordance with the outline code of construction practice.

(3) All construction sites must remain securely fenced in accordance with the code of construction practice at all times during construction of the relevant phase of the connection works.

(4) Any temporary fencing must be removed on completion of the relevant phase of the connection works.

(5) Any approved permanent fencing in relation to an onshore HVDC/HVAC substation or onshore HVAC booster station must be completed before that onshore HVDC/HVAC substation or onshore HVAC booster station is brought into use and maintained for the operational lifetime of the onshore HVDC/HVAC substation or onshore HVAC booster station.

Surface and foul water drainage

13.—(1) No phase of the connection works shall commence until for that phase written details of the surface and (if any) foul water drainage system (including means of pollution control) have, after consultation with the relevant sewerage and drainage authorities and the Environment Agency, been submitted to and approved by the lead local flood authority.

(2) The surface and foul water drainage system for each phase must be constructed and maintained in accordance with the approved details.

Contaminated land and groundwater scheme

14.—(1) No phase of the authorised development within the area of a relevant planning authority may be commenced until a scheme to deal with the contamination of any land (including groundwater) within the Order limits that is likely to cause significant harm to persons or pollution of controlled waters or the environment has been submitted to, and approved by, the relevant planning authority in consultation with the Environment Agency and, to the extent that the plan relates to the intertidal area, the MMO.

(2) The scheme must include an investigation and assessment report, prepared by a specialist consultant approved by the relevant planning authority, to identify the extent of any contamination

and the remedial measures to be taken for that stage to render the land fit for its intended purpose, together with a management plan which sets out long-term measures with respect to any contaminants remaining on the site.

(3) Such remediation as may be identified in the approved scheme must be carried out in accordance with the approved scheme.

Surface water

15.—(1) No part of the onshore HVDC/HVAC substation or onshore HVAC booster station shall commence until, in respect of that installation, a detailed surface water scheme has been prepared in consultation with the Environment Agency and Norfolk County Council and submitted to and approved in writing by Norfolk County Council.

(2) The detailed surface water schemes must accord with the outline code of construction practice and—

- (a) be based on sustainable drainage principles;
- (b) an assessment of the hydrological and hydrogeological context of the onshore HVDC/HVAC substation or onshore HVAC booster station, as applicable; and
- (c) include detailed designs of a surface water drainage scheme.

(3) Construction of the onshore HVDC/HVAC substation or HVAC booster station as applicable must be carried out in accordance with the approved scheme.

Onshore Archaeology

16.—(1) No phase of the connection works may commence until for that phase a written scheme of archaeological investigation (which must accord with the outline onshore written scheme of investigation) for Work Nos. 6 to 15 has been submitted to and approved by the relevant planning authority in consultation with Norfolk County Council and the Historic Buildings and Monuments Commission for England.

(2) The term commence as used in requirement 16(1) shall include any onshore site preparation works.

(3) Any archaeological investigations must be carried out in accordance with the approved scheme.

(4) The archaeological site investigations and post investigation assessment must be completed for that phase in accordance with the programme set out in the written scheme of archaeological investigation and provision made for analysis, publication and dissemination of results and archive deposition secured for that phase.

Code of construction practice

17.—(1) No phase of any works landward of MLWS may commence until for that phase a code of construction practice (which must accord with the outline code of construction practice) has been submitted to and approved by the relevant planning authority, in consultation with the Environment Agency, the relevant SNCBs, the relevant highway authority and, if applicable, the MMO.

(2) The term commence as used in requirement 17(1) shall include any onshore site preparation works.

(3) All construction works for each phase must be undertaken in accordance with the relevant approved code of construction practice.

Construction traffic management plan

18.—(1) No phase of the connection works may commence until written details of a construction traffic management plan (which accords with the outline construction traffic

management plan) for that phase has been submitted to and approved by the relevant planning authority in consultation with the relevant highway authority.

(2) The term commence as used in requirement 18(1) shall include any onshore site preparation works.

(3) The construction traffic management plan for each phase must be implemented as approved for that phase.

European protected species onshore

19.—(1) No phase of the connection 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 phase of the connection works or in any of the trees to be lopped or felled as part of that phase of the connection works.

(2) Where a European protected species is shown to be present, the relevant part(s) of the connection works must not begin until, after consultation with the relevant SNCBs and the relevant planning authority, a scheme of protection and mitigation measures has been submitted to and approved by the relevant planning authority or a European protected species licence granted by Natural England.

(3) The connection works must be carried out in accordance with the approved scheme.

(4) In this Requirement, “European Protected Species” has the same meaning as in regulations 42 and 46 of the Conservation of Habitats and Species Regulations 2017(**a**).

Restoration of land used temporarily for construction

20. Any land landward of MLWS within the Order limits which is used temporarily for construction of the connection works and not ultimately incorporated in permanent works or approved landscaping, must be reinstated in accordance with such details as the relevant planning authority in consultation with, where appropriate, the MMO, and the relevant highway authority, may approve, as soon as reasonably practicable and in any event within twelve months of completion of the relevant phase of the connection works.

Control of noise during operational phase

21.—(1) Prior to commencement of licensed activities landward of MHWS, a noise management plan (NMP) for Work Nos. 9 and 10 shall be submitted to and approved by the relevant planning authority.

(2) The NMP must set out the particulars of—

- (a) the noise attenuation and mitigation measures to be taken to minimise noise resulting from Work Nos. 9 and 10, including any noise limits; and
- (b) a scheme for monitoring attenuation and mitigation measures provided under subparagraph (a) which must include—
 - (i) the circumstances under which noise will be monitored;
 - (ii) the locations at which noise will be monitored;
 - (iii) the method of noise measurement (which must be in accord with BS 4142:2014, an equivalent successor standard or other agreed noise measurement methodology appropriate to the circumstances); and
 - (iv) a complaints procedure.

(3) The NMP must be implemented as approved.

(a) S.I. 2010/490

Local skills and employment

22.—(1) No phase of the connection works may commence until for that phase a skills and employment plan (which accords with the outline skills and employment plan) in relation to the authorised development—

- (a) within the boundaries of Norfolk County Council has been submitted to and approved by Norfolk County Council; and
- (b) within the boundaries of North East Lincolnshire Council has been submitted to and approved by North East Lincolnshire Council.

(2) The skills and employment plan described under requirement 22(1)(a) shall be prepared in consultation with Norfolk County Council, North Norfolk District Council, Broadland District Council, South Norfolk Council and the New Anglia Local Enterprise Partnership, or such other body as may be approved by Norfolk County Council.

(3) The skills and employment plan described under requirement 22(1)(b) shall be prepared in consultation with Humber Local Enterprise Partnership, or such other body as may be approved by North East Lincolnshire Council.

(4) Each skills and employment plan shall identify opportunities for individuals and businesses based in the regions of East Anglia or the Humber to access employment opportunities associated with the construction, operation and maintenance of the authorised development.

(5) The skills and employment plans shall be implemented as approved.

Onshore decommissioning

23.—(1) Within three months of the cessation of commercial operation of the connection works an onshore decommissioning plan must be submitted to the relevant planning authority for approval unless otherwise agreed in writing by the relevant planning authority.

(2) The relevant planning authority must provide its decision on the onshore decommissioning plan required under requirement 23(1) within three months of submission of such plan unless otherwise agreed in writing by the relevant planning authority and the undertaker.

(3) The decommissioning plan must be implemented as approved unless otherwise agreed in writing by the relevant planning authority.

Notification of generation of power

24. The undertaker shall notify the relevant planning authority and the MMO upon first generation of power from each phase of the authorised project not less than seven days after the occurrence of this event.

Requirement for written approval

25. Where the approval, agreement or confirmation of the Secretary of State, relevant planning authority or another person is required under a Requirement, that approval, agreement or confirmation must be given in writing.

Amendments to approved details

26.—(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 subparagraph (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 immaterial 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.

SCHEDULE 2

STREETS SUBJECT TO STREET WORKS

<i>(1) Area</i>	<i>(2) Street subject to street works</i>
North Norfolk District	Private access tracks associated with Muckleberry Collection to the north of The Street
North Norfolk District	Private access track to the north of the A149 and east of Meadow Lane
North Norfolk District	Private access track running parallel to the west end of the A149
North Norfolk District	A149
North Norfolk District	Private access track to the west of Croft Hill
North Norfolk District	Private access track to the west of Croft Hill and north of Spion Kop
North Norfolk District	Private access tracks to the north of Broomhill Plantation and west of Spion Kop
North Norfolk District	Private access track to the east of Broomhill Plantation and west of Spion Kop
North Norfolk District	Private access track running parallel to part of Holgate Hill
North Norfolk District	Holgate Hill
North Norfolk District	Private access track running south east from Holgate Hill
North Norfolk District	Private access track to the east of the North Norfolk Railway
North Norfolk District	Private access track to the north of Warren Farm
North Norfolk District	Private access track to the east of Warren Farm
North Norfolk District	Bridge Road
North Norfolk District	Local street
North Norfolk District	Warren Road
North Norfolk District	Private access track to the north of Cromer Road
North Norfolk District	Cromer Road (A148)
North Norfolk District	Kelling Road
North Norfolk District	Church Road
North Norfolk District	Private access track to the south of Church Road
North Norfolk District	Private access track running to the east of Becketts Farm towards Hall Lane
North Norfolk District	Hempstead Road
North Norfolk District	School Lane
North Norfolk District	Hole Farm Road
North Norfolk District	Plumbstead Road
North Norfolk District	Sweetbriar Lane
North Norfolk District	Private access track to the south west of Barningham Green Plantation
North Norfolk District	Private access track to the south west of Barningham Green Plantation

North Norfolk District	Holt Road
North Norfolk District	Holt Road (B1149)
North Norfolk District	Private access track running north east from Holt Road B1149
North Norfolk District	Briston Road (B1354)
North Norfolk District	Croft Lane
North Norfolk District	Town Close Lane
North Norfolk District	Wood Dalling Road
Broadland District	Blackwater Lane
Broadland District	Heydon Lane
Broadland District	Heydon Road
Broadland District	Reepham Road
Broadland District	Merrison's Lane
Broadland District	Wood Dalling Road
Broadland District	Cawston Road (B1145)
Broadland District	Private access track running south east from Cawston Road
Broadland District	Private access track to the north of Moor Farm
Broadland District	Private access tracks to the north of Moor Farm
Broadland District	Private access track to the east of Moor Farm
Broadland District	Private access track to the north of Church Road
Broadland District	The Grove
Broadland District	Reepham Road
Broadland District	Church Road
Broadland District	Church Farm Lane
Broadland District	Hall Road
Broadland District	Private access track to the south of Hall Road
Broadland District	Ropham Road
Broadland District	Station Road
Broadland District	Private access track to the west of Station Road
Broadland District	Private access track running south west from Station Road
Broadland District	Private access track to the west of Station Road
Broadland District	The Street
Broadland District	Fakenham Road (A1067)
Broadland District	Marl Hill Road
Broadland District	Ringland Lane to Church Street
Broadland District	Ringland Lane
Broadland District	Private access track running south west from Ringland Lane
Broadland District	Blackbreck Lane
Broadland District	Weston Road
Broadland District	Hornington Lane
Broadland District	Private access track known as Sandy Lane, running to the north of Weston Road
South Norfolk	Private access track running south from Weston Road
South Norfolk	Private access track running east from the track mentioned above towards Ringland Road
South Norfolk	Church Lane
South Norfolk	A47

South Norfolk	Church Lane
South Norfolk	Private access track known as Broom Lane
South Norfolk	Easton Road
South Norfolk	Private access tracks to the north of Bawburgh Road
South Norfolk	Bawburgh Road
South Norfolk	Private access track running north to south to the west of Algarsthorpe
South Norfolk	Private access track running west from Bawburgh Road
South Norfolk	Private access track running west from Bawburgh Road
South Norfolk	Walton Road (B1108)
South Norfolk	Market Lane
South Norfolk	Private access track running north east in parallel to part of Market Lane
South Norfolk	Private access track running west of Market Lane
South Norfolk	Great Melton Road
South Norfolk	Private access track running south from Great Melton Road
South Norfolk	Little Melton Road
South Norfolk	Burnthouse Lane
South Norfolk	Private access track running north east from Burnthouse Lane
South Norfolk	Colney Lane
South Norfolk	Norwich Road
South Norfolk	Station Lane
South Norfolk	Private access track running east then north from Station Lane
South Norfolk	A11
South Norfolk	Cantley Lane
South Norfolk	Private access track running east from Cantley Lane
South Norfolk	Private access track running east from Cantley Lane
South Norfolk	Intwood Lane
South Norfolk	Swardeston Lane
South Norfolk	Main Road
South Norfolk	Mangreen Lane
South Norfolk	Private access track running south from Mangreen Lane
South Norfolk	Private access tracks south of Mangreen Cr
South Norfolk	Private access tracks running west from the A140
South Norfolk	Private access tracks south of Mangreen Cr
South Norfolk	Private access track running north west from Oulton Street

SCHEDULE 3

STREETS 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>
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 1a, 1i, 1j, 1k, 1m, 1n and 1p as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 1c and 1d as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 1e and 1f as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 1h and 1g as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 2a and 2b as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 3a and 3b as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 4a and 4b as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	Private access track associated with Muckleberry Collection	Between points 5a and 5b as shown shaded brown on sheet 1 of the streets plan
North Norfolk District	A149	Between points 6a and 6b and between 6c and 6d as shown shaded green on sheet 1 of the streets plan
North Norfolk District	Private access track	Between points 7a and 7b as shown shaded brown on sheet 2 of the streets plan
North Norfolk District	Private access track	Between points 8a and 8b as shown shaded brown on sheet 2 of the streets plan
North Norfolk District	Private access track	Between points 9a, 9b, 9c, 9d and 9e as shown shaded brown on sheet 2 of the streets plan
North Norfolk District	Private access track	Between points 10a and 10b as shown shaded brown on sheet 2 of the streets plan
North Norfolk District	Private access track	Between points 11a and 11b as shown shaded brown on sheets 2 and 3 of the streets plan
North Norfolk District	Holgate Hill	Between points 12a and 12b as shown shaded green on sheets 2 and 3 of the streets plan

North Norfolk District	Private access track	Between points 13a, 13b and 13c as shown shaded brown on sheet 3 of the streets plan
North Norfolk District	Private access track	Between points 14a and 14b as shown shaded brown on sheet 3 of the streets plan
North Norfolk District	Private access track	Between points 15a and 15b as shown shaded brown on sheet 3 of the streets plan
North Norfolk District	Private access track	Between points 16a and 16b as shown shaded brown on sheets 3 and 4 of the streets plan
North Norfolk District	Bridge Road	Between points 17a and 17b as shown shaded green on sheet 3 of the streets plan
North Norfolk District	Local street	Between points 17c and 17d as shown shaded green on sheets 3 and 4 of the streets plan
North Norfolk District	Warren Road	Between points 17d and 17e as shown shaded green on sheets 3 and 4 of the streets plan
North Norfolk District	Private access track	Between points 18a and 18b as shown shaded brown on sheet 4 of the streets plan
North Norfolk District	Cromer Road (A148)	Between points 19a and 19b as shown shaded green on sheet 4 of the streets plan
North Norfolk District	Kelling Road	Between points 20a and 20b as shown shaded green on sheet 4 of the streets plan
North Norfolk District	Church Road	Between points 21a and 21b as shown shaded green on sheet 5 of the streets plan
North Norfolk District	Private access track	Between points 22a and 22b as shown shaded brown on sheet 5 of the streets plan
North Norfolk District	Private access track	Between points 23a and 23b as shown shaded brown on sheet 6 of the streets plan
North Norfolk District	Hempstead Road	Between points 24a and 24b as shown shaded green on sheet 6 of the streets plan
North Norfolk District	School Lane	Between points 25a and 25b and between 25c and 25d as shown shaded green on sheet 7 of the streets plan
North Norfolk District	Hole Farm Road	Between points 26a and 26b as shown shaded green on sheet 7 of the streets plan
North Norfolk District	Plumbstead Road	Between points 27a and 27b as shown shaded green on sheet 8 of the streets plan
North Norfolk District	Sweetbriar Lane	Between points 28a and 28b as shown shaded green on sheet 9 of the streets plan

North Norfolk District	Private access track	Between points 29a and 29b as shown shaded brown on sheet 9 of the streets plan
North Norfolk District	Private access track	Between points 29c and 29d as shown shaded brown on sheet 9 of the streets plan
North Norfolk District	Private access track	Between points 31c and 31d as shown shaded brown on sheets 9 and 10 of the streets plan
North Norfolk District	Holt Road	Between points 30a and 30b as shown shaded green on sheet 10 of the streets plan
North Norfolk District	Holt Road (B1149)	Between points 31a and 31b as shown shaded green on sheet 10 of the streets plan
North Norfolk District	Briston Road (B1354)	Between points 32a and 32b as shown shaded green on sheet 10 of the streets plan
North Norfolk District	Croft Lane	Between points 33a and 33b as shown shaded green on sheet 11 of the streets plan
North Norfolk District	Town Close Lane	Between points 34a and 34b and between 34b and 34c as shown shaded green on sheet 11 of the streets plan
North Norfolk District	Wood Dalling Road	Between points 35a and 35b as shown shaded green on sheet 11 of the streets plan
Broadland District	Blackwater Lane	Between points 36a and 36b as shown shaded green on sheet 12 of the streets plan
Broadland District	Heydon Lane	Between points 37a and 37b as shown shaded green on sheet 13 of the streets plan
Broadland District	Heydon Road	Between points 38a and 38b as shown shaded green on sheet 13 of the streets plan
Broadland District	Reepham Road	Between points 39a and 39b as shown shaded green on sheet 14 of the streets plan
Broadland District	Reepham Road	Between points 40a and 40b as shown shaded green on sheet 14 of the streets plan
Broadland District	Merrison's Lane	Between points 41a, 41b, 41c and 41d as shown shaded green on sheet 15 of the streets plan
Broadland District	Wood Dalling Road	Between points 42a and 42b as shown shaded green on sheet 15 of the streets plan
Broadland District	Cawston Road (B1145)	Between points 43a and 43b as shown shaded green on sheet 15 of the streets plan
Broadland District	Cawston Road (B1145)	Between points 44a and 44b as shown shaded green on sheet

		16 of the streets plan
Broadland District	Private access track	Between points 44c and 44d as shown shaded brown on sheet 16 of the streets plan
Broadland District	Private access track	Between points 45a and 45b as shown shaded brown on sheet 16 of the streets plan
Broadland District	Private access track	Between points 45c, 44d and 45e as shown shaded brown on sheet 16 of the streets plan
Broadland District	Private access track	Between points 46a and 46b as shown shaded brown on sheet 16 of the streets plan
Broadland District	Private access track	Between points 47a and 47b as shown shaded brown on sheets 16 and 17 of the streets plan
Broadland District	Church Road	Between points 48a and 48b as shown shaded green on sheet 17 of the streets plan
Broadland District	The Grove	Between points 49a and 49b as shown shaded green on sheet 17 of the streets plan
Broadland District	Reepham Road	Between points 50a and 50b as shown shaded green on sheet 18 of the streets plan
Broadland District	Church Road	Between points 51a and 51b as shown shaded green on sheet 19 of the streets plan
Broadland District	Church Farm Lane	Between points 52a and 51b and between 52c and 52d as shown shaded green on sheet 19 of the streets plan
Broadland District	Hall Road	Between points 53a and 53b as shown shaded green on sheet 19 of the streets plan
Broadland District	Hall Road	Between points 55a and 55b as shown shaded green on sheet 19 of the streets plan
Broadland District	Private access track	Between points 54a and 54b as shown shaded brown on sheet 20 of the streets plan
Broadland District	Ropham Road	Between points 56a and 56b as shown shaded green on sheet 20 of the streets plan
Broadland District	Station Road	Between points 57a and 57b as shown shaded green on sheet 20 of the streets plan
Broadland District	Private access track	Between points 58a and 58b as shown shaded brown on sheet 20 of the streets plan
Broadland District	Station Road	Between points 59a and 59b as shown shaded green on sheet 20 of the streets plan
Broadland District	Private access track	Between points 59c and 59d as shown shaded brown on sheet

		20 of the streets plan
Broadland District	Private access track	Between points 60a and 60b as shown shaded brown on sheet 20 of the streets plan
Broadland District	The Street	Between points 61a and 61b as shown shaded green on sheet 21 of the streets plan
Broadland District	Fakenham Road (A1067)	Between points 62a and 62b as shown shaded green on sheet 21 of the streets plan
Broadland District	Marl Hill Road	Between points 63a and 63b as shown shaded green on sheet 21 of the streets plan
Broadland District	Ringland Lane	Between points 64a and 64b as shown shaded green on sheet 21 of the streets plan
Broadland District	Ringland Lane to Church Street	Between points 65a and 65b as shown shaded green on sheet 21 of the streets plan
Broadland District	Ringland Lane	Between points 66a and 66b as shown shaded green on sheet 22 of the streets plan
Broadland District	Private access track	Between points 67a and 67b as shown shaded brown on sheet 22 of the streets plan
Broadland District	Blackbreck Lane	Between points 68a and 68b as shown shaded green on sheet 23 of the streets plan
Broadland District	Weston Road	Between points 69a and 69b and between 69c and 69d as shown shaded green on sheet 23 of the streets plan
Broadland District	Hornington Lane	Between points 70a and 70b and between 70c and 70d as shown shaded green on sheet 23 of the streets plan
Broadland District	Private access track	Between points 71a and 71b as shown shaded brown on sheet 24 of the streets plan
South Norfolk	Weston Road	Between points 72a and 72b and between 72c and 72d as shown shaded green on sheet 24 of the streets plan
South Norfolk	Private access track	Between points 73a and 73b as shown shaded brown on sheet 24 of the streets plan
South Norfolk	Private access track	Between points 74a and 74b as shown shaded brown on sheet 24 of the streets plan
South Norfolk	Church Lane	Between points 75a and 75b as shown shaded green on sheet 25 of the streets plan
South Norfolk	A47	Between points 76a and 76b as shown shaded green on sheet 25 of the streets plan

South Norfolk	Church Lane	Between points 77a and 77b as shown shaded green on sheet 25 of the streets plan
South Norfolk	Private access track	Between points 78a and 78b as shown shaded brown on sheet 25 of the streets plan
South Norfolk	Easton Road	Between points 79a and 79b as shown shaded green on sheet 26 of the streets plan
South Norfolk	Private access track	Between points 80a, 8-b, 80c, 80d, and 80e as shown shaded brown on sheet 26 of the streets plan
South Norfolk	Bawburgh Road	Between points 81a and 81b as shown shaded green on sheet 26 of the streets plan
South Norfolk	Bawburgh Road	Between points 81c and 81d as shown shaded green on sheets 26 and 27 of the streets plan
South Norfolk	Private access track	Between points 82a and 82b as shown shaded brown on sheet 27 of the streets plan
South Norfolk	Private access track	Between points 83a and 83b as shown shaded brown on sheet 27 of the streets plan
South Norfolk	Private access track	Between points 84a and 84b as shown shaded brown on sheet 27 of the streets plan
South Norfolk	Bawburgh Road	Between points 85a and 85b as shown shaded green on sheet 27 of the streets plan
South Norfolk	Walton Road (B1108)	Between points 86a and 86b as shown shaded green on sheets 27 and 28 of the streets plan
South Norfolk	Market Lane	Between points 87a and 87b as shown shaded green on sheet 28 of the streets plan
South Norfolk	Market Lane	Between points 87c and 87d as shown shaded green on sheet 28 of the streets plan
South Norfolk	Private access track	Between points 88a and 88b as shown shaded brown on sheet 28 of the streets plan
South Norfolk	Private access track	Between points 89a and 89b as shown shaded brown on sheet 28 of the streets plan
South Norfolk	Great Melton Road	Between points 90a and 90b as shown shaded green on sheet 28 of the streets plan
South Norfolk	Great Melton Road	Between points 91a and 91b as shown shaded green on sheets 28 and 29 of the streets plan
South Norfolk	Private access track	Between points 91c and 91d as shown shaded brown on sheets 28 and 29 of the streets plan

South Norfolk	Little Melton Road	Between points 92a and 92b as shown shaded green on sheets 28 and 29 of the streets plan
South Norfolk	Burnthouse Lane	Between points 93a and 93b as shown shaded green on sheet 29 of the streets plan
South Norfolk	Burnthouse Lane	Between points 93c and 93d as shown shaded green on sheet 29 of the streets plan
South Norfolk	Burnthouse Lane	Between points 93e and 93f as shown shaded green on sheet 29 of the streets plan
South Norfolk	Private access track	Between points 94a and 94b as shown shaded brown on sheet 29 of the streets plan
South Norfolk	Colney Lane	Between points 95a and 95b as shown shaded green on sheet 29 of the streets plan
South Norfolk	Norwich Road	Between points 96a and 96b as shown shaded green on sheet 30 of the streets plan
South Norfolk	Norwich Road	Between points 96c and 96d as shown shaded green on sheet 30 of the streets plan
South Norfolk	Norwich Road	Between points 96e and 96f as shown shaded green on sheet 30 of the streets plan
South Norfolk	Station Lane	Between points 97a and 97b as shown shaded green on sheet 30 of the streets plan
South Norfolk	Station Lane	Between points 97c and 97d as shown shaded green on sheet 30 of the streets plan
South Norfolk	Private access track	Between points 98c and 98d as shown shaded brown on sheet 30 of the streets plan
South Norfolk	A11	Between points 99a and 99b as shown shaded green on sheet 30 of the streets plan
South Norfolk	Cantley Lane	Between points 100a and 100b as shown shaded green on sheet 31 of the streets plan
South Norfolk	Private access track	Between points 101a and 101b as shown shaded brown on sheet 31 of the streets plan
South Norfolk	Private access track	Between points 102a and 102b as shown shaded brown on sheet 31 of the streets plan
South Norfolk	Intwood Lane	Between points 103a and 103b as shown shaded green on sheet 32 of the streets plan
South Norfolk	Swardeston Lane	Between points 104a and 104b as shown shaded green on sheet 32 of the streets plan
South Norfolk	Main Road	Between points 105a and 105b

		as shown shaded green on sheet 33 of the streets plan
South Norfolk	Mulbarton Road	Between points 105c and 105d as shown shaded green on sheet 33 of the streets plan
South Norfolk	Mangreen Lane	Between points 106a and 106b as shown shaded green on sheets 33 and 34 of the streets plan
South Norfolk	Private access track	Between points 107a and 107b as shown shaded brown on sheets 33 and 34 of the streets plan
South Norfolk	Private access track	Between points 108a, 108b, 108c, 108d and 108e as shown shaded brown on sheet 34 of the streets plan
South Norfolk	Private access track	Between points 109a and 109b as shown shaded brown on sheet 34 of the streets plan
South Norfolk	Private access track	Between points 110a, 110b, 110c and 110d as shown shaded brown on sheet 34 of the streets plan
South Norfolk	Private access track	Between points 111a and 111b as shown shaded brown on sheet 35 of the streets plan

SCHEDULE 4

PUBLIC RIGHTS OF WAY TO BE TEMPORARILY STOPPED UP

<i>(1) Area</i>	<i>(2) Public right of way to be temporarily stopped up</i>	<i>(3) Extent of temporary stopping up</i>
North Norfolk District	Footpath Weybourne FP7	Between points 1a and 1b as shown hatched on sheet 1 of the public rights of way plan
North Norfolk District	Restricted Byway Kelling RB4	Between points 2a and 2b as shown hatched on sheet 1 of the public rights of way plan
North Norfolk District	Footpath Kelling FP6	Between points 3a and 3b as shown hatched on sheet 3 of the public rights of way plan
North Norfolk District	Footpath Kelling FP9	Between points 4a and 4b as shown hatched on sheets 3 and 4 of the public rights of way plan
North Norfolk District	Footpath Kelling FP6	Between points 5a and 5b as shown hatched on sheets 3 and 4 of the public rights of way plan
North Norfolk District	Footpath Baconsthorpe FP15	Between points 6a and 6b as shown hatched on sheet 6 of the public rights of way plan
North Norfolk District	Bridleway Hempsted BR15	Between points 7a and 7b as shown hatched on sheet 6 of the public rights of way plan
North Norfolk District	Footpath Hempsted FP10	Between points 8a and 8b as shown hatched on sheet 6 of the public rights of way plan
North Norfolk District	Bridleway Plumstead BR6	Between points 9a and 9b as shown hatched on sheet 8 of the public rights of way plan
North Norfolk District	Restricted Byway RB21	Between points 10a and 10b as shown hatched on sheet 10 of the public rights of way plan
North Norfolk District	Restricted Byway RB21	Between points 11a and 11b as shown hatched on sheet 10 of the public rights of way plan
North Norfolk District	Footpath Corpusty FP20	Between points 12a and 12b as shown hatched on sheet 10 of the public rights of way plan
North Norfolk District	Footpath Corpusty FP19	Between points 13a and 13b as shown hatched on sheet 10 of the public rights of way plan
North Norfolk District	Footpath Corpusty FP2	Between points 14a and 14b as shown hatched on sheet 11 of the public rights of way plan
North Norfolk District	Footpath Corpusty FP2	Between points 15a and 15b as shown hatched on sheet 11 of the public rights of way plan

Broadland District	Footpath Wood Dalling FP3	Between points 16a and 16b as shown hatched on sheet 12 of the public rights of way plan
Broadland District	Bridleway Salle BR4	Between points 17a and 17b as shown hatched on sheet 15 of the public rights of way plan
Broadland District	Footpath Salle FP8	Between points 18a and 18b as shown hatched on sheet 15 of the public rights of way plan
Broadland District	Footpath Salle FP13	Between points 19a and 19b as shown hatched on sheet 15 of the public rights of way plan
Broadland District	Footpath Reepham FP18	Between points 20a and 20b as shown hatched on sheet 16 of the public rights of way plan
Broadland District	Footpath Reepham FP34	Between points 21a and 21b as shown hatched on sheet 16 of the public rights of way plan
Broadland District	Footpath Reepham FP18	Between points 22a and 22b as shown hatched on sheet 16 of the public rights of way plan
Broadland District	Footpath Booton FP1	Between points 23a and 23b as shown hatched on sheet 16 of the public rights of way plan
Broadland District	Footpath Booton FP1	Between points 23c and 23d as shown hatched on sheet 16 of the public rights of way plan
Broadland District	Footpath Booton FP2	Between points 24a and 24b as shown hatched on sheet 17 of the public rights of way plan
Broadland District	Footpath Little Witchingham FP6	Between points 25a and 25b as shown hatched on sheet 18 of the public rights of way plan
Broadland District	Footpath Little Witchingham FP2	Between points 26a and 26b as shown hatched on sheet 19 of the public rights of way plan
South Norfolk	Footpath Little Melton FP2	Between points 27a and 27b as shown hatched on sheet 28 of the public rights of way plan
South Norfolk	Footpath Hethersett FP6	Between points 28a and 28b as shown hatched on sheet 30 of the public rights of way plan
South Norfolk	Bridleway Ketteringham BR2	Between points 29a and 29b as shown hatched on sheet 31 of the public rights of way plan
South Norfolk	Bridleway Ketteringham BR3	Between points 30a and 30b as shown hatched on sheets 31 and 32 of the public rights of way plan
South Norfolk	Footpath East Carleton FP1	Between points 31a and 31b as shown hatched on sheet 32 of the public rights of way plan
South Norfolk	Bridleway Swardeston BR9	Between points 32a and 32b as shown hatched on sheets 33 and 34 of the public rights of way plan

		way plan
South Norfolk	Bridleway Swardeston BR12	Between points 33a and 33b as shown hatched on sheet 34 of the public rights of way plan
South Norfolk	Bridleway Holy Cross BR3	Between points 34a and 34b as shown hatched on sheet 34 of the public rights of way plan

SCHEDULE 5

ACCESS TO WORKS

<i>(1) Area</i>	<i>(2) Description of access</i>
North Norfolk District	Vehicular access from A149 to the north towards Roundhill Plantation as shown on sheet 1 of the access to works plan
North Norfolk District	Vehicular access from A149 to the south as shown on sheet 1 of the access to works plan
North Norfolk District	Vehicular access from Holgate Hill to the north as shown on sheets 2 and 3 of the access to works plan
North Norfolk District	Vehicular access from Bridge Road to the east as shown on sheet 3 of the access to works plan
North Norfolk District	Vehicular access from Cromer Road A148 to the north as shown on sheet 4 of the access to works plan
North Norfolk District	Vehicular access from Cromer Road A148 to the south as shown on sheet 4 of the access to works plan
North Norfolk District	Vehicular access from Kelling Road to the north as shown on sheet 4 of the access to works plan
North Norfolk District	Vehicular access from Kelling Road to the south as shown on sheet 4 of the access to works plan
North Norfolk District	Vehicular access from Church Road to the north as shown on sheet 5 of the access to works plan
North Norfolk District	Vehicular access from Church Road to the south as shown on sheet 5 of the access to works plan
North Norfolk District	Vehicular access to the north of Hempstead Road as shown on sheet 6 of the access to works plan
North Norfolk District	Vehicular access to the south of Hempstead Road as shown on sheet 6 of the access to works plan
North Norfolk District	Vehicular access to the north of School Lane as shown on sheet 7 of the access to works plan
North Norfolk District	Vehicular access from Hole Farm Road to the north as shown on sheet 7 of the access to works plan
North Norfolk District	Vehicular access from Hole Farm Road to the south as shown on sheet 7 of the access to works plan
North Norfolk District	Vehicular access from Plumstead Road to the north as shown on sheet 8 of the access to works plan
North Norfolk District	Vehicular access from Plumstead Road to the south as shown on sheet 8 of the access to

	works plan
North Norfolk District	Vehicular access to the north of Little Barningham Lane as shown on sheet 9 of the access to works plan
North Norfolk District	Vehicular access to the south of Little Barningham Lane as shown on sheet 9 of the access to works plan
North Norfolk District	Vehicular access to the north of the B1149 as shown on sheet 10 of the access to works plan
North Norfolk District	Vehicular access to the south of the B1149 as shown on sheet 10 of the access to works plan
North Norfolk District	Vehicular access to the east of the B1149 as shown on sheet 10 of the access to works plan
North Norfolk District	Vehicular access to the north of Briston Road B1354 as shown on sheet 10 of the access to works plan
North Norfolk District	Vehicular access to the south of Briston Road B1354 as shown on sheet 10 of the access to works plan
North Norfolk District	Vehicular access to the west of Croft Lane near Great Farm as shown on sheet 11 of the access to works plan
North Norfolk District	Vehicular access to the north of Town Close Lane as shown on sheet 11 of the access to works plan
North Norfolk District	Vehicular access to the south of Town Close Lane as shown on sheet 11 of the access to works plan
North Norfolk District	Vehicular access to the north of Wood Dalling Road as shown on sheet 11 of the access to works plan
North Norfolk District	Vehicular access to the south of Wood Dalling Road as shown on sheet 11 of the access to works plan
Broadland District	Vehicular access to the north of Blackwater Lane as shown on sheet 12 of the access to works plan
Broadland District	Vehicular access to the south of Blackwater Lane as shown on sheet 12 of the access to works plan
Broadland District	Vehicular access to the north of Heydon Lane as shown on sheet 13 of the access to works plan
Broadland District	Vehicular access to the south of Heydon Lane as shown on sheet 13 of the access to works plan
Broadland District	Vehicular access to the north of Heydon Road as shown on sheet 13 of the access to works plan
Broadland District	Vehicular access to the south of Heydon Road as shown on sheet 13 of the access to works plan
Broadland District	Vehicular access to the north of Reepham Road as shown on sheet 14 of the access to works plan

Broadland District	Vehicular access to the south of Reepham Road as shown on sheet 14 of the access to works plan
Broadland District	Vehicular access to the south west of Reepham Road as shown on sheet 14 of the access to works plan
Broadland District	Vehicular access to the west of Reepham Road on to Merrison's Lane as shown on sheet 15 of the access to works plan
Broadland District	Vehicular access to the north west of Reepham Road as shown on sheet 15 of the access to works plan
Broadland District	Vehicular access to the south east of Reepham Road as shown on sheet 15 of the access to works plan
Broadland District	Vehicular access to the west of Cawston Road as shown on sheet 15 of the access to works plan
Broadland District	Vehicular access to the east of Cawston Road as shown on sheet 15 of the access to works plan
Broadland District	Vehicular access to the north of Marriott's Way as shown on sheet 16 of the access to works plan
Broadland District	Vehicular access to the north of Church Road as shown on sheet 17 of the access to works plan
Broadland District	Vehicular access to the south of Church Road as shown on sheet 17 of the access to works plan
Broadland District	Vehicular access to the north east of Reepham Road as shown on sheet 18 of the access to works plan
Broadland District	Vehicular access to the south west of Reepham Road as shown on sheet 18 of the access to works plan
Broadland District	Vehicular access to the north of Church Farm Lane as shown on sheet 19 of the access to works plan
Broadland District	Vehicular access to the south of Church Church Farm Lane as shown on sheet 19 of the access to works plan
Broadland District	Vehicular access to the north of Hall Road as shown on sheet 19 of the access to works plan
Broadland District	Vehicular access to the south of Hall Road as shown on sheet 19 of the access to works plan
Broadland District	Vehicular access to the south of Hall Road near Alderford as shown on sheet 19 of the access to works plan
Broadland District	Vehicular access to the south of Reepham Road as shown on sheet 20 of the access to works plan
Broadland District	Vehicular access to the west of Station Road to the north of Marriott's Way as shown on sheet 20 of the access to works plan

Broadland District	Vehicular access to the west of Station Road to the south of Marriott's Way as shown on sheet 20 of the access to works plan
Broadland District	Vehicular access to the north east of the Street as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the south west of the Street as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the east of Marl Hill Road as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the north east of the Ringland Lane as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the south west of Ringland Lane as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the north of Ringland Lane as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the south of Ringland Lane as shown on sheet 21 of the access to works plan
Broadland District	Vehicular access to the west of Ringland Lane opposite Oak Grove as shown on sheet 22 of the access to works plan
Broadland District	Vehicular access to the south west of Ringland Lane as shown on sheet 22 of the access to works plan
Broadland District	Vehicular access to the north of Weston Road opposite Breck Barn Cottages as shown on sheet 23 of the access to works plan
Broadland District	Vehicular access to the north of Weston Road as shown on sheet 23 of the access to works plan
Broadland District	Vehicular access to the south of Weston Road as shown on sheet 23 of the access to works plan
Broadland District	Vehicular access to the north west of Honingham Lane as shown on sheet 23 of the access to works plan
Broadland District	Vehicular access to the south east of Honingham Lane as shown on sheet 23 of the access to works plan
Broadland District	Vehicular access to the north of Weston Road as shown on sheet 24 of the access to works plan
Broadland District	Vehicular access to the south of Weston Road as shown on sheet 24 of the access to works plan
South Norfolk	Vehicular access to the north of Church Lane north of the A47 as shown on sheet 25 of the access to works plan
South Norfolk	Vehicular access to the north of Church south

	of the A47 as shown on sheet 25 of the access to works plan
South Norfolk	Vehicular access to the south of Church south of the A47 as shown on sheet 25 of the access to works plan
South Norfolk	Vehicular access to the north of Broom Lane as shown on sheet 26 of the access to works plan
South Norfolk	Vehicular access to the south of Broom Lane as shown on sheet 26 of the access to works plan
South Norfolk	Vehicular access to west of Easton Road as shown on sheet 26 of the access to works plan
South Norfolk	Vehicular access to east of Easton Road as shown on sheet 26 of the access to works plan
South Norfolk	Vehicular access to the south of Bawburgh Road, on to Bawburgh Road as shown on sheet 26 of the access to works plan
South Norfolk	Vehicular access to the north of Bawburgh Road as shown on sheet 26 of the access to works plan
South Norfolk	Vehicular access to the north of Bawburgh Road as shown on sheet 27 of the access to works plan
South Norfolk	Vehicular access to the south of Bawburgh Road as shown on sheet 27 of the access to works plan
South Norfolk	Vehicular access to the north of Watton Road as shown on sheets 27 and 28 of the access to works plan
South Norfolk	Vehicular access to the south of Watton Road as shown on sheets 27 and 28 of the access to works plan
South Norfolk	Vehicular access to the north of Market Lane as shown on sheet 28 of the access to works plan
South Norfolk	Vehicular access to the east of Market Lane as shown on sheet 28 of the access to works plan
South Norfolk	Vehicular access to the south of Great Melton Road as shown on sheet 28 of the access to works plan
South Norfolk	Vehicular access to the south of Great Melton Road opposite Freshfields as shown on sheets 28 and 29 of the access to works plan
South Norfolk	Vehicular access to the north west of Little Melton Road as shown on sheets 28 and 29 of the access to works plan
South Norfolk	Vehicular access to the south east of Little Melton Road as shown on sheets 28 and 29 of the access to works plan
South Norfolk	Vehicular access to the north west of Burnthouse Lane as shown on sheet 29 of the access to works plan
South Norfolk	Vehicular access to the south east of Burnthouse Lane as shown on sheet 29 of the access to works plan
South Norfolk	Vehicular access to the east of Burnthouse Lane as shown on sheet 29 of the access to works plan

	plan
South Norfolk	Vehicular access to the east of Burnthouse Lane, to the south of the access referenced above, as shown on sheet 29 of the access to works plan
South Norfolk	Vehicular access to the north of Colney Lane as shown on sheet 29 of the access to works plan
South Norfolk	Vehicular access to the north of Norwich Road as shown on sheet 30 of the access to works plan
South Norfolk	Vehicular access to the north of Norwich Road opposite the access for Wynchwood House as shown on sheet 30 of the access to works plan
South Norfolk	Vehicular access to the south of Norwich Road as shown on sheet 30 of the access to works plan
South Norfolk	Vehicular access to the east of Station Lane as shown on sheet 30 of the access to works plan
South Norfolk	Vehicular access to the east of Station Lane, to the south of the access referenced above as shown on sheet 30 of the access to works plan
South Norfolk	Vehicular access to the east of Station Cottages Service Road as shown on sheet 30 of the access to works plan
South Norfolk	Vehicular access to the west of Intwood Road as shown on sheet 32 of the access to works plan
South Norfolk	Vehicular access to the east of Intwood Road as shown on sheet 32 of the access to works plan
South Norfolk	Vehicular access to the east of Swardeston Lane as shown on sheet 32 of the access to works plan
South Norfolk	Vehicular access to the west of Swardeston Lane to the east of the access referenced above as shown on sheet 32 of the access to works plan
South Norfolk	Vehicular access to the north of Main Road as shown on sheet 33 of the access to works plan
South Norfolk	Vehicular access to south of Main Road as shown on sheet 33 of the access to works plan
South Norfolk	Vehicular access to the north of Mangreen Lane as shown on sheets 33 and 34 of the access to works plan
South Norfolk	Vehicular access to the south of Mangreen Lane as shown on sheets 33 and 34 of the access to works plan
South Norfolk	Vehicular access to the south of Mangreen Hall Lane on to a private access track as shown on sheet 34 of the access to works plan
Broadland District	Vehicular access to the west of Oulton Street as shown on sheet 35 of the access to works plan

SCHEDULE 6

LAND IN WHICH ONLY NEW RIGHTS ETC., MAY BE ACQUIRED

<i>(1) Number of land shown on land plans</i>	<i>(2) Purpose for which rights may be acquired</i>
1-001, 1-002, 1-003, 1-004, 1-006, 1-008, 1-017, 1-018, 1-019, 1-022, 1-026, 2-004, 3-001, 3-002, 3-003, 3-004, 3-005, 3-006, 3-011, 3-012, 3-016, 3-017, 3-018, 3-019, 3-022, 3-023, 3-030, 3-031, 4-002, 4-003, 4-004, 4-006, 4-007, 4-009, 4-010, 5-001, 5-002, 5-003, 5-004, 5-006, 5-007, 6-001, 6-002, 6-004, 6-005, 6-006, 7-001A, 7-003, 7-004, 7-005, 7-006, 7-007, 7-009, 8-001, 8-003, 8-005, 8-006, 9-001, 9-005, 9-006, 9-013, 9-016, 9-019, 9-022, 9-026, 10-002, 10-003, 10-005, 10-006, 10-008, 10-009, 11-004, 11-005, 11-006, 11-009, 11-011, 11-013, 11-014, 12-001, 12-004, 12-005, 12-006, 13-001, 13-002, 13-004, 13-006, 14-002, 14-005, 14-006, 14-007, 15-002, 15-006, 15-007, 15-008, 15-009, 15-011, 16-001, 16-002, 16-003, 16-004, 16-005, 16-006, 16-007, 16-012, 16-020, 16-021, 16-025, 16-026, 16-027, 16-028, 16-029, 16-030, 17-002, 17-003, 17-004, 17-006, 17-007, 18-001, 18-002, 18-003, 18-004, 18-005, 18-006, 18-007, 19-001, 19-005, 19-006, 19-007, 19-009, 19-011, 19-012, 19-014, 20-005, 20-008, 20-009, 21-001, 21-002, 21-003, 21-005, 21-006, 21-007, 21-008, 21-010, 21-011, 21-014, 21-015, 21-017, 21-018, 23-001, 23-003, 23-004, 23-009, 23-010, 23-011, 23-012, 23-016, 23-017, 24-003, 24-004, 24-011, 24-012, 25-006, 25-007, 25-008, 25-009, 25-010, 25-011, 25-012, 25-013, 25-015, 25-016, 26-001, 26-005, 26-007, 26-010, 26-011, 26-012, 26-013, 26-014, 26-015, 27-001, 27-002, 27-003, 27-004, 27-008, 27-009, 27-011, 27-012, 28-001, 28-002, 28-003, 28-006, 28-007, 28-009, 28-011, 28-013, 29-003, 29-004, 29-005, 29-006, 29-009, 29-012, 29-013, 29-015, 29-016, 29-017, 30-009, 30-010, 30-011, 30-012, 30-013, 30-014, 30-017, 30-018, 30-023, 30-024, 30-027, 30-028, 30-029, 31-001, 31-002, 31-004, 32-002, 32-003, 32-004, 32-006, 32-007, 32-008, 32-009, 32-010, 33-005, 33-006, 33-016, 33-023, 33-024, 34-001, 34-002, 34-003, 34-004, 34-005, 34-006, 34-007, 34-008, 34-010	New Connection Rights(a) (shown edged red and shaded blue on the Land Plans) required for the construction, operation and maintenance of Work Nos. 6, 7, 8 and 11
1-007, 9-015, 33-007, 33-008, 33-009, 33-010	New Connection Rights and New Construction and Operation Access Rights (shown edged red, shaded blue and hatched brown on the Land

(a) Term as defined in the book of reference.

	Plans) required for the construction, operation and maintenance of Work Nos. 6, 7, 8 and 11 and access to Work Nos.6, 7, 8, 9 and 10
34-011	New Connection Rights and New Construction and Maintenance Access Rights (shown edged red, shaded blue and hatched brown on the Land Plans) required for the construction, operation and maintenance of and access to Work Nos. 11 and 12
9-003, 9-007, 9-008, 9-009, 9-010, 9-014, 9-021, 33-011, 33-015, 33-018, 33-019, 33-021	New Connection Rights and New Landscaping Rights (shown edged red, shaded blue and hatched green on the Land Plans) required for the construction, operation and maintenance of Work No. 8 and for landscaping works relating to Work Nos. 9 and 10
1-014, 1-016, 9-017, 9-024, 9-025,10-004, 33-004	New Construction and Operation Access Rights (edged red and shaded brown on the Land Plans) required for access to Work Nos. 6, 7, 9 and 10
3-024, 3-025, 3-026, 3-027, 3-028, 20-006, 20-007, 20,010, 20-011, 21-012, 21-013, 25-003, 25-004, 25-005, 26-002, 26-003, 26-004, 26-016, 26-017, 28-004, 28-005, 30-003, 30-004, 30-005, 30-015, 30-016, 30-021, 30-022, 30-025, 30-026, 34-009, 34-012	New Construction and Maintenance Access Rights (shown edged red and shaded brown on the Land Plans) required for access to Work Nos. 8, 11 and 12
9-002, 9-004, 9-011, 9-020, 9-023, 33-012, 33-013, 33-020, 33-022	New Landscaping Rights (shown edged red and shaded green on the Land Plans) required for landscaping works relating to Work Nos. 9 and 10

SCHEDULE 7

MODIFICATION OF COMPENSATION AND COMPULSORY PURCHASE ENACTMENTS FOR CREATION OF NEW RIGHTS

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 limitation on the scope 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 from” 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”.

3.—(1) Without limitation on the scope of paragraph 1, the 1961 Act has effect subject to the modification set out in sub-paragraph (2).

(2) For section 5A(5A) (relevant valuation date) of the 1961 Act substitute—

“(5A) If—

- (a) the acquiring authority enters on land for the purpose of exercising a right in pursuance of a notice of entry under section 11(1) of the 1965 Act (as modified by paragraph 7 of Schedule 7 to the Hornsea Three Offshore Wind Farm Order 201[]; and
- (b) the acquiring authority is subsequently required by a determination under paragraph 12 of Schedule 2A to the 1965 Act (as substituted by paragraph 10 of Schedule 7 to the Hornsea Three Wind Farm Order 201[] to acquire an interest in the land, and
- (c) the acquiring authority enters on and takes possession of that land,

the authority is deemed for the purposes of subsection (3)(a) to have entered on that land where it entered on that land for the purpose of exercising that right”

Application of Part 1 of the 1965 Act

4.—(1) The 1965 Act is to have 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 the restriction imposed or to be imposed; or
- (b) the land over which the right is or is to be exercisable, or the restriction is to be enforceable.

(2) Without limitation on the scope 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 or,

(a) 1973 c.26.

in relation to the imposition of a restriction, with the modifications specified in the following provisions of this Schedule.

5. For section 7 of the 1965 Act (measure of compensation in the case of severance) there is substituted the following section—

“7. In assessing the compensation to be paid by the acquiring authority under this Act, regard shall 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.”

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),

are 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 or restrictive covenant, as well as the notice of entry required by subsection (1) of that section (as it applies to compulsory acquisition under article 19), 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 11A (powers of entry: further notices of entry), 11B (counter-notice requiring possession to be taken on specified date), 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) as modified by article 27(3) 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 or enforce the restrictive covenant imposed, subject to compliance with that section as respects compensation.

10. For Schedule 2A to the 1965 Act substitute—

“SCHEDULE 2A

COUNTER-NOTICE REQUIRING PURCHASE OF LAND

Introduction

1.—(1) This Schedule applies where an acquiring authority serve a notice to treat in respect of a right over, or restrictive covenant affecting, the whole or part of a house, building or factory and have not executed a general vesting declaration under section 4 of the 1981 Act as applied by article 22 (application of the Compulsory Purchase (Vesting Declarations) Act 1981) of the Hornsea Three Offshore Wind Farm Order 201[] in respect of the land to which the notice to treat relates.

(2) But see article 23(3) (acquisition of subsoil only) of the Hornsea Three Offshore Wind Farm Order 201[] which excludes the acquisition of subsoil only from this Schedule.

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 authority 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 acquiring authority 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 authority 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 authority decide to refer the counter-notice to the Upper Tribunal they must do so within the decision period.

8. If the authority do 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 authority serve 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 the Upper Tribunal

10. On a referral under paragraph 7, the Upper Tribunal must determine whether the acquisition of the right or the imposition of the restrictive covenant 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 or the imposition of the covenant,
- (b) the use to be made of the right or covenant proposed to be acquired or imposed, and
- (c) if the right or covenant is proposed to be acquired or imposed 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 or the imposition of the covenant 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 authority 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 authority 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 acquiring authority 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.”

SCHEDULE 8

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>
North Norfolk District	1-005	Temporary use for the passing and re-passing of users of public footpaths to facilitate construction for Work Nos. 5, 6 and 7
North Norfolk District	1-009	Temporary use for access and for the passing and re-passing of users of public footpaths to facilitate construction for Work Nos. 5, 6, 7 and 8
North Norfolk District	1-010	Temporary use for the passing and re-passing of users of public footpaths to facilitate construction for Work Nos. 5, 6 and 7
North Norfolk District	1-011	Temporary use for the passing and re-passing of users of public footpaths to facilitate construction for Work Nos. 5, 6 and 7
North Norfolk District	1-012	Temporary use for access to facilitate construction for Work Nos. 5, 6, 7 and 8
North Norfolk District	1-013	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	1-015	Temporary use (including for access and vehicle holding area) to facilitate construction for Work Nos. 5, 6, 7 and 8
North Norfolk District	1-020	Temporary use (including for access and storage) to facilitate construction for Work No. 8
North Norfolk District	1-021	Temporary use (including for access and storage) to facilitate construction for Work No. 8
North Norfolk District	1-023	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	1-024	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	1-025	Temporary use (including for access and storage) to facilitate construction for Work No. 8
North Norfolk District	2-001	Temporary use (including for storage) to facilitate

		construction for Work No. 8
North Norfolk District	2-002	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	2-003	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	2-005	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	3-007	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-008	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-009	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-010	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-013	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-014	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-015	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	3-020	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	3-021	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	3-029	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	4-001	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	4-005	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	4-008	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	5-005	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	6-003	Temporary use (including for storage) to facilitate construction for Work No. 8

North Norfolk District	7-001	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	7-002	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	7-008	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	8-002	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	8-004	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	9-018	Temporary use (including for storage and access) to facilitate construction for Work Nos. 8 and 9
North Norfolk District	10-001	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	10-007	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	10-010	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	11-001	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	11-002	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	11-003	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	11-007	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	11-008	Temporary use for access to facilitate construction for Work No. 8
North Norfolk District	11-010	Temporary use (including for storage) to facilitate construction for Work No. 8
North Norfolk District	11-012	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	12-002	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	12-003	Temporary use (including for storage) to facilitate construction for Work No. 8

Broadland District	13-003	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	13-005	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	14-001	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	14-003	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	14-004	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	14-008	Temporary use for access to facilitate construction for Work No. 8
Broadland District	14-009	Temporary use for access to facilitate construction for Work No. 8
Broadland District	15-001	Temporary use (including for access and storage) to facilitate construction for Work No. 8
Broadland District	15-003	Temporary use for access to facilitate construction for Work No. 8
Broadland District	15-004	Temporary use for access to facilitate construction for Work No. 8
Broadland District	15-005	Temporary use for access to facilitate construction for Work No. 8
Broadland District	15-010	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	16-008	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-009	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-010	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-011	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-013	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-014	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-015	Temporary use for access to

		facilitate construction for Work No. 8
Broadland District	16-016	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-017	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-018	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-019	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-022	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-023	Temporary use for access to facilitate construction for Work No. 8
Broadland District	16-024	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	17-001	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	17-005	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	19-002	Temporary use for access to facilitate construction for Work No. 8
Broadland District	19-003	Temporary use for access to facilitate construction for Work No. 8
Broadland District	19-004	Temporary use for access to facilitate construction for Work No. 8
Broadland District	19-008	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	19-010	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	19-013	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	19-015	Temporary use for access to facilitate construction for Work No. 8
Broadland District	19-016	Temporary use for access to facilitate construction for Work No. 8
Broadland District	20-001	Temporary use (including for storage) to facilitate

		construction for Work No. 8
Broadland District	20-002	Temporary use for access to facilitate construction for Work No. 8
Broadland District	20-003	Temporary use for access to facilitate construction for Work No. 8
Broadland District	20-004	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	21-004	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	21-009	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	21-016	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	21-019	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	22-001	Temporary use for access to facilitate construction for Work No. 8
Broadland District	22-002	Temporary use for access to facilitate construction for Work No. 8
Broadland District	22-003	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	23-002	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	23-005	Temporary use for access to facilitate construction for Work No. 8
Broadland District	23-006	Temporary use for access to facilitate construction for Work No. 8
Broadland District	23-007	Temporary use for access to facilitate construction for Work No. 8
Broadland District	23-008	Temporary use (including for storage) to facilitate construction for Work No. 8
Broadland District	23-013	Temporary use for access to facilitate construction for Work No. 8
Broadland District	23-014	Temporary use for access to facilitate construction for Work No. 8
Broadland District	23-015	Temporary use for access to facilitate construction for Work No. 8

Broadland District	24-001	Temporary use for access to facilitate construction for Work No. 8
Broadland District	24-002	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	24-005	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	24-006	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	24-007	Temporary use for access to facilitate construction for Work No. 8
Broadland District	24-008	Temporary use for access to facilitate construction for Work No. 8
Broadland District	24-009	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	24-010	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	24-013	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	25-001	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	25-002	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	25-014	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	26-006	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	26-008	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	26-009	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	27-005	Temporary use (including for access and storage) to facilitate construction for Work No. 8
South Norfolk	27-006	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	27-007	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	27-010A	Temporary use (including for

		storage) to facilitate construction for Work No. 8
South Norfolk	27-013	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	28-008	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	28-010	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	28-012	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	28-014	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	29-001	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	29-002	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	29-007	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-008	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-010	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-011	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-014	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	30-006	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	30-007	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	30-008	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	30-019	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	30-020	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	30-030	Temporary use (including for storage) to facilitate

		construction for Work No. 8
South Norfolk	31-003	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	32-001	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	32-005	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	32-011	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	33-001	Temporary use (including for access and storage) to facilitate construction for Work No. 8
South Norfolk	33-002	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	33-003	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	33-017	Temporary use (including for storage) to facilitate construction for Work No. 10
Broadland District	35-001	Temporary use (including for storage) to facilitate construction for Work Nos. 8, 9 10, 11, and 12
Broadland District	35-002	Temporary use for access to facilitate construction for Work Nos. 8, 9 10, 11, and 12
Broadland District	35-003	Temporary use (including for storage, access and vehicle holding area) to facilitate construction for Work Nos. 8, 9 10, 11, and 12
Broadland District	35-004	Temporary use for access to facilitate construction for Work Nos. 8, 9 10, 11, and 12
South Norfolk	29-002	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	29-007	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-008	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-010	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	29-011	Temporary use for access to facilitate construction for Work No. 8

South Norfolk	29-014	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	30-006	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	30-007	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	30-008	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	30-019	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	30-020	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	30-030	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	31-003	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	32-001	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	32-005	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	32-011	Temporary use (including for storage) to facilitate construction for Work No. 8
South Norfolk	33-001	Temporary use (including for access and storage) to facilitate construction for Work No. 8
South Norfolk	33-002	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	33-003	Temporary use for access to facilitate construction for Work No. 8
South Norfolk	33-017	Temporary use (including for storage) to facilitate construction for Work No. 10
Broadland District	35-001	Temporary use (including for storage) to facilitate construction for Work Nos. 6, 7, 8, 9 10, 11, and 12
Broadland District	35-002	Temporary use for access to facilitate construction for Work No. 6, 7, 8, 9 10, 11, and 12
Broadland District	35-003	Temporary use (including for storage, access and vehicle

		holding area) to facilitate construction for Work Nos. 6, 7, 8, 9 10, 11, and 12
Broadland District	35-004	Temporary use for access to facilitate construction for Work Nos. 6, 7, 8, 9 10, 11, and 12

SCHEDULE 9

PROTECTIVE PROVISIONS

PART 1

PROTECTION FOR ELECTRICITY, GAS, WATER AND SEWERAGE UNDERTAKERS

Application

1. For the protection of the affected undertakers referred to in this part of this Schedule (save for National Grid which is protected by Part 2 of this Schedule, Cadent Gas Limited which is protected by Part 3 of this Schedule and Anglian Water which is protected by Part 6 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 1989 Act;
- (b) a gas transporter within the meaning of Part 1 of the Gas Act 1986^(a);
- (c) a water undertaker within the meaning of the Water Industry Act 1991^(b);
- (d) a sewerage undertaker within the meaning of Part 1 of the Water Industry Act 1991^(c),

for the area of the authorised development but, for the avoidance of doubt, does not include the undertakers specified in Part 2, Part 3, and Part 6 (National Grid, Cadent Gas Limited and Anglian Water Services Limited) of this Schedule, 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 no less efficient than previously;

“apparatus” means—

- (a) in the case of an electricity undertaker, electric lines or electrical plant (as defined in the 1989 Act), 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—
 - (i) mains, pipes or other apparatus belonging to or maintained by that affected undertaker for the purposes of water supply; and
 - (ii) 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;
- (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

^(a) 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).

^(b) 1991 c.56.

^(c) 1991 c.56.

- (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,

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.

Precedence of the 1991 Act in respect of apparatus in the streets

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.

No acquisition etc. except by agreement

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.

Removal of apparatus

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 must 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 must, 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 must, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible use 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 must 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 37 (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 37 (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, must 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) authorises 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.

Facilities and rights for alternative 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 must 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 37 (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 must 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.

Retained apparatus

7.—(1) Not less than 28 days before starting the execution of any works of the type referred to in paragraph 5 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, the undertaker must submit to the affected undertaker in question a plan, section and description of the works to be executed.

(2) Those works must 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 is entitled to watch and inspect the execution of those works.

(3) Any requirements made by an affected undertaker under sub-paragraph (2) must 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 (2) 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 apply as if the removal of the apparatus had been required by the undertaker under paragraph 5.

(5) 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 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 apply to and in respect of the new plan, section and description.

(6) The undertaker is not required to comply with sub-paragraph (1) in a case of emergency but in that case it must 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 must 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 must 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 which may be required in consequence of the execution of any such works as are referred to in paragraph 5.

(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 37 (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) must be reduced by the amount of that excess.

(4) For the purposes of sub-paragraph (2)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus is not to 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 is to 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) must, 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.

Expenses and costs

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, 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 may 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. Nothing in this part of this Schedule affects 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

1. 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 undertaker and National Grid, have effect.

Interpretation

2. In this Part of this Schedule—

“alternative apparatus” means appropriate alternative apparatus to the satisfaction of the National Grid to enable the National Grid to fulfil its statutory functions in a manner no less efficient than previously;

“apparatus” means—

- (a) electric lines or electrical plant as defined in the Electricity Act 1989, belonging to or maintained by National Grid; and
- (b) any mains, pipes or other apparatus belonging to or maintained by National Grid for the purposes of gas supply, together with any replacement apparatus and such other apparatus constructed pursuant to the Order that becomes operational apparatus of the undertaker for the purposes of transmission, distribution and/or supply and includes any structure in which apparatus is or must be lodged or which gives or will give access to apparatus;

“authorised development” has the same meaning as in article 2 (interpretation) of this Order (unless otherwise specified) for the purposes of this Part of this Schedule shall include the use and maintenance of the authorised development and construction of any works authorised by 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, shall require the undertaker 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” shall 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 either—

- (a) National Grid Electricity Transmission PLC (Company No. 2366977) whose registered office is at 1-3 Strand, London, WC2N 5EH; or
- (b) National Grid Gas PLC (Company No. 200600) whose registered office is at 1-3 Strand, London, WC2N 5EH,

or their successor company(ies);

“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; and

“specified works” means any of the authorised development or activities undertaken in association with the authorised development 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 undertaker under paragraph 7(2) or otherwise;
- (b) may in any way adversely affect any apparatus the removal of which has not been required by the undertaker under paragraph 7(2) or otherwise; and/or
- (c) include any of the activities that are referred to in paragraph 8 of T/SP/SSW/22 (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/SSW/22”).

3. Except for paragraphs 4 (apparatus of National Grid in streets subject to temporary stopping up), 9 (retained apparatus: protection of National Grid as gas undertaker), 10 (retained apparatus: protection of National Grid as electricity undertaker), 11 (expenses) and 12 (indemnity) this Schedule does not apply to apparatus in respect of which the relations between the undertaker and National Grid are regulated by the provisions of Part 3 of the 1991 Act.

Apparatus of National Grid in streets subject to temporary stopping up

4.—(1) Without prejudice to the generality of any other protection afforded to National Grid elsewhere in the Order, where any street is stopped up under article 10 (temporary stopping up of streets), if National Grid has any apparatus in the street or accessed via that street National Grid will be entitled to the same rights in respect of such apparatus as it enjoyed immediately before the stopping up and the undertaker will grant to National Grid, or will procure the granting to the National Grid of, legal easements reasonably satisfactory to National Grid in respect of such apparatus and access to it prior to the stopping up of any such street or highway.

(2) Notwithstanding the temporary stopping up 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 street and/or to execute and do all such works and things in, upon or under any such street 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 street.

Protective works to buildings

5.—(1) The undertaker, in the case of the powers conferred by article 16 (protective work to buildings), must exercise those powers so as not to obstruct or render less convenient the access to any apparatus without the written consent of National Grid which will not unreasonably be withheld and, if by reason of the exercise of those powers any damage to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal or

abandonment) or property of National Grid or any interruption in the supply of electricity and/or gas, as the case may be, the undertaker must bear and pay on demand the cost reasonably incurred by National Grid in making good such damage or restoring the supply; and, subject to sub-paragraph (2), shall—

- (a) pay compensation to National Grid for any loss sustained by it; and
- (b) indemnify National Grid against all claims, demands, proceedings, costs, damages and expenses which may be made or taken against or recovered from or incurred by National Grid, by reason of any such damage or interruption.

(2) Nothing in this paragraph imposes any liability on the undertaker with respect to any damage or interruption to the extent that such damage or interruption is attributable to the act, neglect or default of National Grid or its contractors or workmen; and National Grid will give to the undertaker reasonable notice of any claim or demand as aforesaid and no settlement or compromise thereof shall be made by National Grid, save in respect of any payment required under a statutory compensation scheme, without first consulting the undertaker and giving the undertaker an opportunity to make representations as to the claim or demand.

Acquisition of land

6.—(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 undertaker may not acquire any land interest or apparatus or override any easement or other interest of National Grid otherwise than by agreement (such agreement not to be unreasonably withheld).

(2) The undertaker and National Grid 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 National Grid as of right or other use in relation to the apparatus, then the provisions in this Schedule shall prevail.

(3) Any agreement or consent granted by National Grid under paragraphs 9 or 10 or any other paragraph of this Part of this Schedule, shall not be taken to constitute agreement under subparagraph 6(1).

Removal of apparatus

7.—(1) If, in the exercise of the agreement reached in accordance with paragraph 6 or in any other authorised manner, the undertaker acquires any interest in any Order land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of National Grid 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 accordance with sub-paragraphs (2) to (5) inclusive.

(2) If, for the purpose of executing any works compromised in the authorised development in, on, under or over any land purchased, held, appropriated or used under this Order, the undertaker 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 undertaker must, subject to sub-paragraph (3), afford to National Grid to its satisfaction (taking into account paragraph 8(1) below) the necessary facilities and rights

- (a) for the construction of alternative apparatus in other land of or land secured by the undertaker; 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 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, National Grid must, on receipt of a written notice to that effect from the undertaker, 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 save that this obligation shall 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 undertaker 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 undertaker.

(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 undertaker to be removed under the provisions of this Part of this Schedule.

Facilities and rights for alternative apparatus

8.—(1) Where, in accordance with the provisions of this Part of this Schedule, the undertaker affords to or secures National Grid facilities and rights in land for the construction, use, maintenance and protection in land of the undertaker 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 undertaker 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 agreed by National Grid.

(2) If the facilities and rights to be afforded by the undertaker and agreed with National Grid under sub-paragraph (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 will be referred to arbitration under paragraph 16 (arbitration) and the arbitrator shall make such provision for the payment of compensation by the undertaker to National Grid as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case. In respect of the appointment of an arbitrator under this sub-paragraph (2) article 37 (arbitration) of the Order shall apply.

Retained apparatus: protection of National Grid as Gas Undertaker

9.—(1) Not less than 56 days before the commencement of any specified works the undertaker must submit to National Grid a plan and, if reasonably required by National Grid, a ground monitoring scheme in respect of those works.

(2) 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 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) intended maintenance regimes;

(3) The undertaker must not commence any works to which sub-paragraphs (1) and (2) applies until National Grid has given written approval of the plan so submitted.

(4) Any approval of National Grid required under sub-paragraph (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraph (5) or (7); and,
- (b) must not be unreasonably withheld.

(5) In relation to a work to which sub-paragraphs (1) and (2) applies, 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.

(6) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraphs (1) and (2) or as relevant sub-paragraph (5), as amended from time to time by agreement between the undertaker and National Grid and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (5), (7) and/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 shall be entitled to watch and inspect the execution of those works.

(7) Where National Grid requires protective works to be carried out either by themselves or by the undertaker by itself or by the undertaker (whether of a temporary or permanent nature) such protective works, must be carried out to National Grid's satisfaction prior to the commencement of any authorised development (or any relevant part thereof) to which sub-paragraph (1) applies and National Grid must give 56 days' notice of such works from the date of submission of a plan in line with sub-paragraph (1) or (2) (except in an emergency).

(8) If National Grid in accordance with sub-paragraph (5) or (7) 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 (3) and (6) to (7) apply as if the removal of the apparatus had been required by the undertaker under paragraph 7(2).

(9) Nothing in this paragraph shall preclude the undertaker from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of any works comprising the authorised development, 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.

(10) The undertaker 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 (5), (6) and (7) insofar as is reasonably practicable in the circumstances; and
- (b) comply with sub-paragraph (11) at all times.

(11) At all times when carrying out any works authorised under the Order the undertaker 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 the Health and Safety Executive's "HS(~G)47 Avoiding Danger from underground services".

(12) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the undertaker shall 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 10.

Retained apparatus: Protection of National Grid as Electricity Undertaker

10.—(1) Not less than 56 days before the commencement of any authorised development that is near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 7(2) or otherwise and to which paragraph 7(2)(a) or 7(2)(b) applies, the undertaker must submit to National Grid a plan and seek from National Grid details of the underground extent of their electricity tower foundations.

(2) In relation to works which will or may be situated on, over, under or within—

- (a) 15 metres measured in any direction of any apparatus, or
- (b) 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.

(3) 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 the 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

(4) The undertaker must not commence any works to which sub-paragraph (1), (2), or (3) applies until National Grid has given written approval of the plan so submitted.

(5) Any approval of National Grid required under sub-paragraph (1), (2), or (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraph (6) or (8); and
- (b) must not be unreasonably withheld.

(6) In relation to a work to which sub-paragraph (1), (2), or (3) applies, 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.

(7) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraph (1) or as relevant sub-paragraph (2), (3) or (6) as approved or as amended from time to time by agreement between the undertaker and National Grid and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (5), (6), (8) and/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.

(8) Where National Grid require 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 National Grid's satisfaction prior to the commencement of any authorised

development (or any relevant part thereof) to which sub-paragraph (1) applies and National Grid must give 56 days' notice of such works from the date of submission of a plan in line with sub-paragraphs (1),(2), (3)or (6) (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 undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, paragraphs (1) to (3)and (6) to (7) shall apply as if the removal of the apparatus had been required by the undertaker under paragraph 7(2).

(10) Nothing in this paragraph shall preclude the undertaker from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of any work, a new plan, instead of the plan previously submitted, and having done so the provisions of this paragraph shall apply to and in respect of the new plan.

(11) The undertaker 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 (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 undertaker must comply with National Grid's policies for development near overhead lines ENA TA 43-8 and the Health and Safety Executive's guidance note 6 "Avoidance of Danger from Overhead Lines".

Expenses

11.—(1) Subject to the following provisions of this paragraph, the undertaker shall pay to National Grid on demand all charges, costs and expenses reasonably 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 apparatus or alternative apparatus which may be required in consequence of the execution of any such works as are referred to in this Part of this Schedule including without limitation—

- (a) any costs reasonably incurred or compensation properly paid in connection with the acquisition of rights or the exercise of statutory powers for such apparatus including without limitation in the event that National Grid elects to use compulsory purchase powers to acquire any necessary rights under paragraph 7(3);
- (b) in connection with the cost of the carrying out of any 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 undertaker or, in default of agreement settled by arbitration in accordance with article 37 (arbitration) of the Order 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 undertaker.

(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 National Grid 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.

Indemnity

12.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any works authorised by this Part of this Schedule or in consequence of the construction, use, maintenance or failure of any of the authorised development by or on behalf of the undertaker or in consequence of any act or default of the undertaker (or any person employed or authorised by him) in the course of carrying out such works (including without limitation works carried out by the undertaker 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 purpose of those 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, the undertaker 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) indemnify 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.

(2) The fact that any act or thing may have been done by National Grid on behalf of the undertaker or in accordance with a plan approved by National Grid or in accordance with any requirement of National Grid as a consequence of the authorised development or under its supervision will not (unless sub-paragraph (3) applies), excuse the undertaker from liability under the provisions of this sub-paragraph (2) where the undertaker 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 materially accord with the approved plan or as otherwise agreed between the undertaker and National Grid.

(3) Nothing in sub-paragraph (1) shall impose any liability on the undertaker 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 development 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 undertaker with the benefit of the Order pursuant to section 156 of the 2008 Act or article 5(b) (benefit of the Order) of the Order subject to the proviso that once such works become apparatus (“new apparatus”), any works yet to be executed and not falling within this sub-paragraph 12(3)(b) will be subject to the full terms of this Part of this Schedule including this paragraph 12 in respect of such new apparatus.

(4) National Grid 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.

Enactments and agreements

13. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between the undertaker and National Grid, nothing in this Part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and National Grid in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

Co-operation

14.—(1) Where in consequence of the proposed construction of any of the authorised development, the undertaker or National Grid requires the removal of apparatus under paragraph 7(2) or an National Grid makes requirements for the protection or alteration of apparatus under paragraphs 9 and/or 10, National Grid shall 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 shall use its best endeavours to co-operate with the undertaker for that purpose.

(2) For the avoidance of doubt whenever National Grid’s consent, agreement or approval to is required in relation to plans, documents or other information submitted by the undertaker or the taking of action by National Grid, it must not be unreasonably withheld or delayed.

Access

15. If in consequence of the agreement reached in accordance with paragraph 6 or the powers granted under 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 National Grid to maintain or use the apparatus no less effectively than was possible before such obstruction.

Arbitration

16. Save for differences or disputes arising under paragraphs 7(2), 7(4), 8(1), 9 and 10 any difference or dispute arising between the undertaker and National Grid under this Part of this Schedule must, unless otherwise agreed in writing between the undertaker and National Grid, be determined by arbitration in accordance with article 37 (arbitration).

Notices

17. The plans submitted to National Grid by the undertaker pursuant to paragraphs 9(1) and 10(1) 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 undertaker in writing.

PART 3

FOR THE PROTECTION OF CADENT GAS LIMITED AS GAS UNDERTAKER

Application

1. For the protection of Cadent Gas Limited referred to in this Part of this Schedule the following provisions will, unless otherwise agreed in writing between the undertaker and Cadent Gas Limited, have effect.

Interpretation

2. In this Part of this Schedule—

“alternative apparatus” means appropriate alternative apparatus to the satisfaction of Cadent Gas Limited to enable Cadent Gas Limited to fulfil its statutory functions in a manner no less efficient than previously;

“apparatus” means any mains, pipes or other apparatus belonging to or maintained by Cadent Gas Limited for the purposes of gas supply together with any replacement apparatus and such other apparatus constructed pursuant to the Order that becomes operational apparatus of the undertaker for the purposes of transmission, distribution and/or supply and includes any structure in which apparatus is or must be lodged or which gives or will give access to apparatus;

“authorised development” has the same meaning as in article 2 (interpretation) of this Order (unless otherwise specified) for the purposes of this Part of this Schedule shall include the use and maintenance of the authorised development and construction of any works authorised by this Schedule;

“Cadent Gas Limited” means Cadent Gas Limited, with Company Registration Number 10080864, whose registered office is at Ashbrook Court Prologis Park, Central Boulevard, Coventry, CV7 8PE;

“functions” includes powers and duties;

“ground mitigation scheme” means a scheme approved by Cadent Gas Limited (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, shall require the undertaker to submit for Cadent Gas Limited’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” shall include the ability and right to do any of the following in relation to any apparatus or alternative apparatus of the undertaker including construct, use, repair, alter, inspect, renew 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; and

“specified works” means any of the authorised development or activities undertaken in association with the authorised development 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 undertaker under paragraph 7(2) or otherwise;
- (b) may in any way adversely affect any apparatus the removal of which has not been required by the undertaker under paragraph 7(2) or otherwise; and/or
- (c) include any of the activities that are referred to in paragraph 8 of T/SP/SSW/22 (Cadent Gas Limited'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/SSW/22").

3. Except for paragraphs 4 (apparatus in stopped up streets), 9 (retained apparatus: protection), 10 (expenses) and 11 (indemnity) 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 Gas Limited, the other provisions of this Schedule do not apply to apparatus in respect of which the relations between the undertaker and Cadent Gas Limited are regulated by the provisions of Part 3 of the 1991 Act.

Apparatus of Cadent Gas Limited in streets subject to temporary stopping up

4.—(1) Without prejudice to the generality of any other protection afforded to Cadent Gas Limited elsewhere in the Order, where any street is stopped up under article 4 (temporary stopping up of streets), if Cadent Gas Limited has any apparatus in the street or accessed via that street Cadent Gas Limited will be entitled to the same rights in respect of such apparatus as it enjoyed immediately before the stopping up and the undertaker will grant to Cadent Gas Limited, or will procure the granting to Cadent Gas Limited of, legal easements reasonably satisfactory to Cadent Gas Limited in respect of such apparatus and access to it prior to the stopping up of any such street or highway.

(2) Notwithstanding the temporary stopping up under the powers of article 10 (temporary stopping up of streets), Cadent Gas Limited will be at liberty at all times to take all necessary access across any such street and/or to execute and do all such works and things in, upon or under any such street 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 street.

Protective works to buildings

5.—(1) The undertaker, in the case of the powers conferred by article 16 (protective work to buildings), must exercise those powers so as not to obstruct or render less convenient the access to any apparatus without the written consent of Cadent Gas Limited which will not unreasonably be withheld and, if by reason of the exercise of those powers any damage to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal or abandonment) or property of Cadent Gas Limited or any interruption in the supply of gas, the undertaker must bear and pay on demand the cost reasonably incurred by Cadent Gas Limited in making good such damage or restoring the supply; and, subject to sub-paragraph (2), shall—

- (a) pay compensation to Cadent Gas Limited for any loss sustained by it; and
- (b) indemnify Cadent Gas Limited against all claims, demands, proceedings, costs, damages and expenses which may be made or taken against or recovered from or incurred by Cadent Gas Limited, by reason of any such damage or interruption.

(2) Nothing in this paragraph imposes any liability on the undertaker with respect to any damage or interruption to the extent that such damage or interruption is attributable to the act, neglect or default of Cadent Gas Limited or its contractors or workmen; and Cadent Gas Limited will give to the undertaker reasonable notice of any claim or demand as aforesaid and no settlement or compromise thereof shall be made by Cadent Gas Limited, save in respect of any payment required under a statutory compensation scheme, without first consulting the undertaker and giving the undertaker an opportunity to make representations as to the claim or demand.

Acquisition of land

6.—(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 undertaker may not acquire any land interest or apparatus or override any easement or other interest of Cadent Gas Limited otherwise than by agreement (such agreement not to be unreasonably withheld).

(2) The undertaker and Cadent Gas Limited 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 Cadent Gas Limited as of right or other use in relation to the apparatus, then the provisions in this Schedule shall prevail.

(3) Any agreement or consent granted by Cadent Gas Limited under paragraph 9 or any other paragraph of this Part of this Schedule, shall not be taken to constitute agreement under sub-paragraph 6(1).

Removal of apparatus

7.—(1) If, in the exercise of the agreement reached in accordance with paragraph 6 or in any other authorised manner, the undertaker acquires any interest in any Order land in which any apparatus is placed, that apparatus must not be removed under this Part of this Schedule and any right of Cadent Gas Limited 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 Gas Limited in accordance with sub-paragraphs (2) to (5) inclusive.

(2) If, for the purpose of executing any works compromised in the authorised development in, on, under or over any land purchased, held, appropriated or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it must give to Cadent Gas Limited 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 Cadent Gas Limited reasonably needs to remove any of its apparatus) the undertaker must, subject to sub-paragraph (3), afford to Cadent Gas Limited to its satisfaction (taking into account paragraph 8(1) below) the necessary facilities and rights

- (a) for the construction of alternative apparatus in other land of or land secured by the undertaker; 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 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, Cadent Gas Limited must, on receipt of a written notice to that effect from the undertaker, 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, save that this obligation shall not extend to the requirement for Cadent Gas Limited 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 undertaker under this Part of this Schedule must be constructed in such manner and in such line or situation as may be agreed between Cadent Gas Limited and the undertaker.

(5) Cadent Gas Limited must, after the alternative apparatus to be provided or constructed has been agreed, and subject to the grant to Cadent Gas Limited of any such facilities and rights as are referred to in sub-paragraph (2) or (3), then 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.

Facilities and rights for alternative apparatus

8.—(1) Where, in accordance with the provisions of this Part of this Schedule, the undertaker affords to or secures for Cadent Gas Limited facilities and rights in land for the construction, use, maintenance and protection in land of the undertaker 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 undertaker and Cadent Gas Limited and must be no less favourable on the whole to Cadent Gas Limited than the facilities and rights enjoyed by it in respect of the apparatus to be removed unless agreed by Cadent Gas Limited.

(2) If the facilities and rights to be afforded by the undertaker and agreed with Cadent Gas Limited under sub-paragraph (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 Cadent Gas Limited 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 will be referred to arbitration paragraph 15 (arbitration) and the arbitrator shall make such provision for the payment of compensation by the undertaker to Cadent Gas Limited as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case. In respect of the appointment of an arbitrator under this sub-paragraph (2) article 37 (arbitration) of the Order shall apply.

Retained apparatus: protection Cadent Gas Limited as Gas Undertaker

9.—(1) Not less than 56 days before the commencement of any specified works the undertaker must submit to Cadent Gas Limited a plan and, if reasonably required by Cadent Gas Limited, a ground monitoring scheme in respect of those works.

(2) The plan to be submitted to Cadent Gas Limited 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 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) intended maintenance regimes.

(3) The undertaker must not commence any works to which sub-paragraphs (1) and (2) applies until Cadent Gas Limited has given written approval of the plan so submitted.

(4) Any approval of Cadent Gas Limited required under sub-paragraph (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraphs (5) or (7); and
- (b) must not be unreasonably withheld.

(5) In relation to a work to which sub-paragraphs (1) and (2) apply, Cadent Gas Limited 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.

(6) Works to which this paragraph applies must only be executed in accordance with the plan, submitted under sub-paragraphs (1) and (2) or as relevant sub-paragraph (5), as amended from time to time by agreement between the undertaker and Cadent Gas Limited and in accordance with such reasonable requirements as may be made in accordance with sub-paragraphs (5), (7) and/or (8) by Cadent Gas Limited for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and Cadent Gas Limited shall be entitled to watch and inspect the execution of those works.

(7) Where Cadent Gas Limited requires protective works to be carried out either by themselves or by the undertaker by itself or by the undertaker (whether of a temporary or permanent nature) such protective works, must be carried out to Cadent Gas Limited's satisfaction prior to the commencement of any authorised development (or any relevant part thereof) to which sub-paragraph (1) applies and Cadent Gas Limited must give 56 days' notice of such works from the date of submission of a plan in line with sub-paragraph (1) or (2) (except in an emergency).

(8) If Cadent Gas Limited in accordance with sub-paragraph (5) or (7) 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 (3) and (6) to (7) apply as if the removal of the apparatus had been required by the undertaker under paragraph 7(2).

(9) Nothing in this paragraph shall preclude the undertaker from submitting at any time or from time to time, but in no case less than 56 days before commencing the execution of any works comprising the authorised development, 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.

(10) The undertaker 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 Gas Limited notice as soon as is reasonably practicable and a plan of those works and must—

- (a) comply with sub-paragraphs (5), (6) and (7) insofar as is reasonably practicable in the circumstances; and
- (b) comply with sub-paragraph (11) at all times.

(11) At all times when carrying out any works authorised under the Order the undertaker must comply with Cadent Gas Limited'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 Health and Safety Executive's "HS(~G)47 Avoiding Danger from underground services".

(12) As soon as reasonably practicable after any ground subsidence event attributable to the authorised development the undertaker shall implement an appropriate ground mitigation scheme save that Cadent Gas Limited 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 10.

Expenses

10.—(1) Subject to the following provisions of this paragraph, the undertaker shall pay to Cadent Gas Limited on demand all charges, costs and expenses reasonably anticipated or incurred by Cadent Gas Limited in, or in connection with, the inspection, removal, relaying or replacing, alteration or protection of any apparatus or the construction of any new apparatus or alternative apparatus which may be required in consequence of the execution of any such works as are referred to in this Part of this Schedule including without limitation—

- (a) any costs reasonably incurred or compensation properly paid in connection with the acquisition of rights or the exercise of statutory powers for such apparatus including without limitation in the event that Cadent Gas Limited elects to use compulsory purchase powers to acquire any necessary rights under paragraph 7(3);
- (b) in connection with the cost of the carrying out of any 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 undertaker or, in default of agreement, by arbitration in accordance with article 37 (arbitration) of the Order 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 Gas Limited 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 undertaker.

(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 Cadent Gas Limited 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 Gas Limited 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.

Indemnity

11.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any works authorised by this Part of this Schedule or in consequence of the construction, use, maintenance or failure of any of the authorised development by or on behalf of the undertaker or in consequence of any act or default of the undertaker (or any person employed or authorised by him) in the course of carrying out such works, including without limitation works carried out by the undertaker 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 purpose of those works) or property of Cadent Gas Limited, or there is any interruption in any service provided, or in the supply of any goods, by Cadent Gas Limited, or Cadent Gas Limited becomes liable to pay any amount to any third party, the undertaker will—

- (a) bear and pay on demand the cost reasonably incurred by Cadent Gas Limited in making good such damage or restoring the supply; and
- (b) indemnify Cadent Gas Limited for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Cadent Gas Limited, by reason or in consequence of any such damage or interruption or Cadent Gas Limited becoming liable to any third party as aforesaid

(2) The fact that any act or thing may have been done by Cadent Gas Limited on behalf of the undertaker or in accordance with a plan approved by Cadent Gas Limited or in accordance with any requirement of Cadent Gas Limited as a consequence of the authorised development or under

its supervision will not (unless sub-paragraph (3) applies), excuse the undertaker from liability under the provisions of this sub-paragraph (1) where the undertaker 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 materially accord with the approved plan or as otherwise agreed between the undertaker and Cadent Gas Limited.

(3) Nothing in sub-paragraph (1) shall impose any liability on the undertaker in respect of—

- (a) any damage or interruption to the extent that it is attributable to the neglect or default of Cadent Gas Limited, its officers, servants, contractors or agents; and
- (b) any authorised development and/or any other works authorised by this Part of this Schedule carried out by Cadent Gas Limited as an assignee, transferee or lessee of Cadent Gas Limited with the benefit of the Order pursuant to section 156 of the 2008 Act or article 5 (benefit of the Order) of the Order subject to the proviso that once such works become apparatus (“new apparatus”), any works yet to be executed and not falling within this sub-paragraph (b) will be subject to the full terms of this Part of this Schedule including this paragraph 11 in respect of such new apparatus.

(4) Cadent Gas Limited 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.

(5) Cadent Gas Limited 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 11 applies. If requested to do so by the undertaker, Cadent Gas Limited shall provide an explanation of how the claim has been minimised. The undertaker shall only be liable under this paragraph 11 for claims reasonably incurred by Cadent Gas Limited.

Enactments and agreements

12. Save to the extent provided for to the contrary elsewhere in this Part of this Schedule or by agreement in writing between Cadent Gas Limited and the undertaker, nothing in this Part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and Cadent Gas Limited in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

Co-operation

13.—(1) Where in consequence of the proposed construction of any of the authorised development, the undertaker or Cadent Gas Limited requires the removal of apparatus under paragraph 7(2) or Cadent Gas Limited makes requirements for the protection or alteration of apparatus under paragraph 9, the undertaker shall 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 Gas Limited’s undertaking and Cadent Gas Limited shall use its best endeavours to co-operate with the undertaker for that purpose.

(2) For the avoidance of doubt whenever Cadent Gas Limited’s consent, agreement or approval to is required in relation to plans, documents or other information submitted by the undertaker or the taking of action by Cadent Gas Limited, it must not be unreasonably withheld or delayed.

Access

14. If in consequence of the agreement reached in accordance with paragraph 6 or the powers granted under 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 Cadent Gas Limited to maintain or use the apparatus no less effectively than was possible before such obstruction.

Arbitration

15. Save for differences or disputes arising under paragraph 7(2), 7(4), 8(1), 9 and 11(5) any difference or dispute arising between the undertaker and Cadent Gas Limited under this Part of this Schedule must, unless otherwise agreed in writing between the undertaker and Cadent Gas Limited, be determined by arbitration in accordance with article 37 (arbitration).

Notices

16. The plans submitted to Cadent Gas Limited by the undertaker pursuant to paragraph 9(1) must be sent to Cadent Gas Limited Plant Protection at plantprotection@cadentgas.com or such other address as Cadent Gas Limited may from time to time appoint instead for that purpose and notify to the undertaker (in writing).

PART 4

PROTECTION FOR OPERATORS OF ELECTRONIC COMMUNICATIONS CODE NETWORKS

1.—(1) For the protection of any operator, the following provisions, 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.

3. The exercise of the powers of article 28 (statutory undertakers) are subject to part 10 of Schedule 3A to the Communications Act 2003(b).

4.—(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

(a) See section 106.

(b) 2003 c.21.

- (b) there is any interruption in the supply of the service provided by an operator, the undertaker must bear and pay the cost reasonably incurred by the operator in making good such damage or restoring the supply and must—

- (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) 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 operator, its officers, servants, contractors or agents.

(3) The operator must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise of the claim or demand may 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 must be referred to and settled by arbitration under article 37 (arbitration).

5. 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.

6. Nothing in this part of this Schedule affects 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

1. The following provisions of this Part of this Schedule have effect unless otherwise agreed in writing between the undertaker and Network Rail and, in the case of paragraph 15 any other person on whom rights or obligations are conferred by that paragraph.

2. 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 amended from time to time, granted to Network Rail by the Secretary of State in exercise of powers under section 8 of the Railways Act 1993(a);

“Network Rail” means Network Rail Infrastructure Limited (Company registration number 02904587) whose registered office is at 1 Eversholt Street, London, NW1 2DN 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(b)) 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;

(a) 1993 c.43

(b) 2006 c.46.

“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 Rail for the purposes of such railway or works, apparatus or equipment; and

“specified work” means so much of any of the authorised project as is situated upon, across, under, over or within 15 metres of, or may in any way adversely affect, railway property and for the avoidance of doubt includes the exercise of the powers conferred by article 4 (powers to maintain authorised project), article 12 (access to works), article 15 (discharge of water), article 17 (authority to survey and investigate the land onshore); article 34 (felling or lopping of trees and removal of hedgerows) and article 35 (trees subject to tree preservation orders) in respect of any railway property.

3.—(1) Where under this Part 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 project pursuant to this Order.

4.—(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 settled by arbitration under article 37 (arbitration).

(2) The approval of the engineer under sub-paragraph (1) must not be unreasonably withheld, 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 opinion of the engineer 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 them (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 work), and such protective works as may be reasonably necessary for those purposes are to 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 work until the engineer has notified the undertaker that the protective works have been completed to the engineer's reasonable satisfaction.

5.—(1) Any specified work and any protective works to be constructed by virtue of paragraph 4(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 4;
- (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 described in paragraph 5(1)(a), make good such damage and pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for any loss which it may sustain by reason of any such damage, interference or obstruction.

(3) Nothing in this Part 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.

6. 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.

7. 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.

8.—(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, 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 4(3), pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for any 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 9(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.

9. The undertaker must pay 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 4(3) or in constructing any protective works under paragraph 4(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 is 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, need 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 work, being lighting made reasonably necessary by reason or in consequence of the construction or failure of a specified work.

10.—(1) In this paragraph—

“EMI” means, subject to sub-paragraph (2), electromagnetic interference with Network Rail’s apparatus generated by the operation of the authorised project 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 project) 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 the EMI is not attributable to any change to Network Rail’s apparatus carried out after approval of plans under paragraph 4(1) for the relevant part of the authorised project 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 project take all measures 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 4(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 reasonably be prevented only by modifications to Network Rail's apparatus, Network Rail must not withhold its consent unreasonably to modifications of Network Rail's apparatus, but Network Rail may, in its reasonable discretion select the means of prevention and the method of their execution, and in relation to such modifications paragraph 4(1) has effect subject to this sub-paragraph.

(6) If at any time prior to the commencement of the commercial operation of the authorised project and regardless of any measures adopted under sub-paragraph (3), the testing or commissioning of the authorised project causes EMI then the undertaker must immediately upon receipt of notification by Network Rail of the 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) cease to use (or procure the cessation of use of) the undertaker's apparatus causing the EMI until all measures necessary have been taken to remedy the EMI by way of modification to the source of the 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 the EMI;
- (b) Network Rail must afford reasonable facilities to the undertaker for access to Network Rail's apparatus in the investigation of the 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 the 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 5.

(9) To the extent that it would not otherwise do so, the indemnity in paragraph 14(1) applies, subject to paragraphs 14(2) to 14(8), to the costs and expenses reasonably incurred or losses reasonably suffered by Network Rail through the implementation of the provisions of this paragraph (including costs reasonably 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 9(a) any modifications to Network Rail's apparatus under this paragraph is deemed to be protective works referred to in that paragraph.

(11) In relation to any dispute arising under this paragraph the reference in article 37 (arbitration) to the Secretary of State shall be read as a reference to the Institution of Engineering and Technology for appointment of an arbitrator.

11. 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.

12. 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.

13. 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, provided that at least 56 days' prior notice of the commencement of such alteration, reconstruction or maintenance has been given to the undertaker, are to be paid by the undertaker to Network Rail.

14.—(1) The undertaker must—

- (a) pay to Network Rail all reasonable costs, charges, damages and expenses not otherwise provided for in this Part (but subject to the provisions of this paragraph) which may be occasioned to or reasonably incurred by Network Rail by reason of—
 - (i) the construction or maintenance of a specified work or the failure of such a work; or
 - (ii) 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,
- (b) 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.

(2) 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 supervision of the engineer 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.

(3) 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.

(4) In no circumstances is the undertaker liable to Network Rail under sub-paragraph (1) for any indirect or consequential loss or loss of profits, save that the sums payable by the undertaker under that sub-paragraph include a sum equivalent to the relevant costs in circumstances where—

- (a) Network Rail is liable to make payment of the relevant costs pursuant to the terms of an agreement between Network Rail and a train operator; and
- (b) the existence of that agreement and the extent of Network Rail's liability to make payment of the relevant costs pursuant to its terms has previously been disclosed in writing to the undertaker, but not otherwise.

(5) 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.

(6) The obligation under sub-paragraph (3) to pay Network Rail the relevant costs is, in the event of default, enforceable directly by any train operator concerned to the extent that such sums would be payable to that operator pursuant to sub-paragraph (5).

(7) Network Rail 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 14 applies. If requested to do so by the undertaker, Network Rail shall provide an

explanation of how the claim has been minimised. The undertaker shall only be liable under this paragraph 14 for claims reasonably incurred by Network Rail.

(8) In this paragraph—

“the relevant costs” means the costs, direct losses and expenses (including loss of revenue) reasonably incurred by a 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.

15. 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 Part (including the amount of the relevant costs mentioned in paragraph 14) 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).

16. In the assessment of any sums payable to Network Rail under this Part no account must be taken of 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 Part or increasing the sums so payable.

17. 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 plans 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.

18. 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.

19. 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 5 (benefit of the Order) of this Order in relation to land within 15m of Network Rail’s operational railway and any such notice must be given no later than 14 days before any such application is made and must describe or give (as appropriate)—

- (a) whether the application is for consent pursuant to article 5(a) or 5(b);
- (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

20. In relation to any dispute arising under this Part that is referred to arbitration in accordance with article 37 (arbitration) of the Order, the undertaker will agree to any reasonable extension of time requested by Network Rail pursuant to paragraph 5(3) of Schedule 13 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.

21. 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 36 (certification of plans and

documents etc) are certified by the Secretary of State, provide a set of those plans to Network Rail in a format reasonably specified by Network Rail.

PART 6

FOR THE PROTECTION OF ANGLIAN WATER SERVICES LIMITED

1. For the protection of Anglian Water, the following provisions of this Schedule, unless otherwise agreed in writing between the undertaker and Anglian Water shall have effect.

2. In this part of this Schedule—

“alternative apparatus” means alternative apparatus adequate to enable Anglian Water to fulfil its statutory functions in not less efficient a manner than previously;

“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;

“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. This Part of this Schedule does not apply to apparatus to the extent that the relations between the undertaker and Anglian Water are regulated by the provisions of Part 3 of the 1991 Act.

4. 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 Apparatus—

(a) 2.25 metres where the diameter of the pipe is less than 150 millimetres

(b) 3 metres where the diameter of the pipe is between 150 and 450 millimetres

(c) 4.5 metres where the diameter of the pipe is between 450 and 750 millimetres

(d) 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 the authorised development on behalf of the undertaker.

5. 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 (England and Wales) Regulations 2016 or other legislation 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 or agreement 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 description 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 and description submitted and in accordance with such reasonable requirements as may be made by Anglian Water without delay for the alteration or otherwise for the protection of the apparatus, or for securing access to it.

6. 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 or provide alternative apparatus. Anglian Water must use reasonable endeavours to establish contingency arrangements in a timely manner.

7. 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 37 (arbitration).

8. If the undertaker is unable to create the new rights referred to in paragraph 7, 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.

9. If in consequence of the exercise of the powers conferred by the Order the access to any Apparatus is materially obstructed the undertaker must 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.

10. 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 undertaker, notification of the location of such assets will immediately be given to Anglian Water and afforded the same protection as other Anglian Water assets.

11. If for any reason or in consequence of the construction of any of the works referred to in paragraphs 3 and 5 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 must—

- (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 expenses, loss, damages, penalty or costs properly and reasonably incurred by Anglian Water,

by reason or in consequence of any such damage or interruption.

12. Nothing in paragraph 11 above imposes any liability on the undertaker in respect of 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.

13. Anglian Water must give the undertaker reasonable notice of any claim or demand pursuant to paragraph 11 and must consider its representations before proceeding further in respect of the claim or demand.

14. Anglian Water must use its reasonable endeavours to mitigate in whole or in part and to minimise any claim, costs, expenses, loss, demands and penalties pursuant to paragraph 11. If

requested to do so by the undertaker, Anglian Water shall provide an explanation of how the claim has been minimised

15. Any difference or dispute arising between the undertaker and Anglian Water under this part of this Schedule must, unless otherwise agreed in writing between the undertaker and Anglian Water, be determined by arbitration in accordance with article 37 (arbitration).

PART 7

FOR THE PROTECTION OF THE ENVIRONMENT AGENCY AND DRAINAGE AUTHORITIES

1. The provisions of this Part have effect for the protection of a drainage authority unless otherwise agreed in writing between undertaker and the drainage authority.

2. 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 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(a);

“plans” includes sections, drawings, specifications and method statements; and

“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—

- (a) affect any drainage work or the volumetric rate of flow of water in or flowing to or from any drainage work;
- (b) affect the flow, purity, or quality of water in any watercourse; or
- (c) affect the conservation, distribution or use of water resources.

3.—(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 3.

(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

(a) See section 72(1).

Environment Agency, for the protection of water resources for the prevention of pollution or in the discharge of its environmental duties.

- (d) 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(3)(b).

4. Without limiting paragraph 3, 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.

5.—(1) Subject to sub-paragraph (2), any specified work, and all protective works required by the drainage authority under paragraph 4, 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.

6.—(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.

7. 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.

8. The undertaker must indemnify 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.

9.—(1) Without limiting the other provisions of this Part, the undertaker must indemnify 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 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.

10. 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.

11. Any dispute between the undertaker and the drainage authority under this Part, if the parties agree, must be determined by arbitration under article 37 (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 NORFOLK VANGUARD

1. The provisions of this Part apply for the protection of Vanguard unless otherwise agreed in writing between the undertaker and Vanguard.

2. In this Part—

“apparatus” means the cables, structures or other infrastructure owned, occupied or maintained by Vanguard or its successor in title within the Norfolk Vanguard 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 parcels 16-001, 16-002, 16-003 and 16-004 shown on the land plans and described in the book of reference;

“Norfolk Vanguard Order” means the Norfolk Vanguard Offshore Wind Farm Order as granted by the Secretary of State;

“Norfolk Vanguard Order land” means Order land as defined in the Norfolk Vanguard 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 Norfolk Vanguard Order land;

“proposed Norfolk Vanguard Cable Corridor” means the proposed location for any electrical circuit(s) and construction compound(s) permitted by the Norfolk Vanguard Order within the Norfolk Vanguard 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 Norfolk Vanguard Cable Corridor or any apparatus; or
- (c) may in any way adversely affect any apparatus; and

“Vanguard” means an undertaker with the benefit of all or part of the Norfolk Vanguard Order for the time being.

3. The consent of Vanguard under this Part is not required where the Norfolk Vanguard Order has expired without the authorised development having been commenced pursuant to requirement 1 of Schedule 1 to the Norfolk Vanguard Order.

4. Where conditions are included in any consent granted by Vanguard 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 Vanguard.

5. The undertaker must not under the powers of this Order—

- (a) acquire, extinguish, suspend, override or interfere with any rights that Vanguard has in respect of any apparatus or the proposed Norfolk Vanguard Cable Corridor;
- (b) acquire the Norfolk Vanguard Order land or acquire any new rights or impose restrictive covenants or exercise any powers of temporary use over or in relation to the Norfolk Vanguard Order land without the consent of Vanguard, which must not be unreasonably withheld or delayed but which may be made subject to reasonable conditions.

6.—(1) The undertaker must not under the powers of this Order carry out any specified works without the consent of Vanguard, which must not be unreasonably withheld or delayed but which may be made subject to reasonable conditions and if Vanguard 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 Vanguard and must submit such further particulars available to it that Vanguard may reasonably require.

(3) Any specified works must be constructed without unreasonable delay in accordance with the plans approved in writing by Vanguard.

(4) Any approval of Vanguard 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 Norfolk Vanguard Cable Corridor or for securing access to any apparatus or the proposed Norfolk Vanguard Cable Corridor;

(5) Without limiting sub-paragraph (1), it is not reasonable for Vanguard 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 Norfolk Vanguard Cable Corridor.

(6) Where Vanguard 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 Vanguard'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.

7.—(1) The undertaker must give to Vanguard 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 Vanguard written notice of the completion.

(2) The undertaker is not required to comply with paragraph 6 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 6 in so far as is reasonably practicable in the circumstances.

8. The undertaker must at all reasonable times during construction of the specified works allow Vanguard and its servants and agents access to the specified works and all reasonable facilities for inspection of the specified works.

9.—(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 Vanguard 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), Vanguard may remove the temporary works and may recover the reasonable costs of doing so from the undertaker.

10. 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 Vanguard to maintain or use the apparatus no less effectively than was possible before the obstruction.

11. The undertaker must not exercise the powers conferred by this Order to prevent or interfere with the access by Vanguard to the proposed Norfolk Vanguard Cable Corridor.

12. 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 Vanguard of the location of any apparatus or the proposed Norfolk Vanguard Cable Corridor.

13. The undertaker and Vanguard 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.

14. The undertaker must pay to Vanguard the reasonable expenses incurred by Vanguard in connection with the approval of plans, inspection of any specified works or the alteration or protection of any apparatus or the proposed Norfolk Vanguard Cable Corridor.

15.—(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 Vanguard, or Vanguard becomes liable to pay any amount to any third party, the undertaker must—

- (a) bear and pay the cost reasonably incurred by Vanguard in making good such damage or restoring the service or supply; and
- (b) compensate Vanguard for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Vanguard, by reason or in consequence of any such damage or interruption or Vanguard 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 Vanguard, its officers, servants, contractors or agents.

(3) Vanguard 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) Vanguard 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 15 applies. If requested to do so by the undertaker, Vanguard shall provide an explanation of how the claim has been minimised. The undertaker shall only be liable under this paragraph 15 for claims reasonably incurred by Vanguard.

(5) The fact that any work or thing has been executed or done with the consent of Vanguard and in accordance with any conditions or restrictions prescribed by Vanguard or in accordance with any plans approved by Vanguard 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.

16. Any dispute arising between the undertaker and Vanguard under this Part must be determined by arbitration under article 37 (arbitration).

PART 9

FOR THE PROTECTION OF NORFOLK BOREAS

1. The provisions of this Part apply for the protection of Boreas unless otherwise agreed in writing between the undertaker and Boreas.

2. In this Part—

“apparatus” means the cables, structures or other infrastructure owned, occupied or maintained by Boreas or its successor in title within the Norfolk Boreas Order Land;

“Boreas” means an undertaker with the benefit of all or part of the Norfolk Boreas Order for the time being;

“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 parcels 16-001, 16-002, 16-003 and 16-004 shown on the land plans and described in the book of reference;

“Norfolk Boreas Order” means the Norfolk Boreas Offshore Wind Farm Order as granted by the Secretary of State;

“Norfolk Boreas Order land” means Order land as defined in the Norfolk Boreas 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 land;

“proposed Norfolk Boreas Cable Corridor” means the proposed location for any electrical circuit(s) and construction compound(s) permitted by the Norfolk Boreas Order within the Norfolk Boreas Order land; and

“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 Norfolk Boreas Cable Corridor or any apparatus; or
- (c) may in any way adversely affect any apparatus.

3. The consent of Boreas under this Part is not required where the Norfolk Boreas Order has expired without the authorised development having been commenced pursuant to requirement 1 of Schedule 1 to the Norfolk Boreas Order.

4. Where conditions are included in any consent granted by Boreas 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 Boreas.

5. The undertaker must not under the powers of this Order—

- (a) acquire, extinguish, suspend, override or interfere with any rights that Boreas has in respect of any apparatus or the proposed Norfolk Boreas Cable Corridor;
- (b) acquire the Norfolk Boreas Order land or acquire any new rights or impose restrictive covenants or exercise any powers of temporary use over or in relation to the Norfolk Boreas Order land without the consent of Boreas, which must not be unreasonably withheld or delayed but which may be made subject to reasonable conditions.

6.—(1) The undertaker must not under the powers of this Order carry out any specified works without the consent of Boreas, which must not be unreasonably withheld or delayed but which may be made subject to reasonable conditions and if Boreas 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 Boreas and must submit such further particulars available to it that Boreas may reasonably require.

(3) Any specified works must be constructed without unreasonable delay in accordance with the plans approved in writing by Boreas.

(4) Any approval of Boreas 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 Norfolk Boreas Cable Corridor or for securing access to any apparatus or the proposed Norfolk Boreas Cable Corridor;

(5) Without limiting sub-paragraph (1), it is not reasonable for Boreas 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 Norfolk Boreas Cable Corridor.

(6) Where Boreas 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 Boreas'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.

7.—(1) The undertaker must give to Boreas 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 Boreas written notice of the completion.

(2) The undertaker is not required to comply with paragraph 6 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 6 in so far as is reasonably practicable in the circumstances.

8. The undertaker must at all reasonable times during construction of the specified works allow Boreas and its servants and agents access to the specified works and all reasonable facilities for inspection of the specified works.

9.—(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 Boreas 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), Boreas may remove the temporary works and may recover the reasonable costs of doing so from the undertaker.

10. 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 Boreas to maintain or use the apparatus no less effectively than was possible before the obstruction.

11. The undertaker must not exercise the powers conferred by this Order to prevent or interfere with the access by Boreas to the proposed Norfolk Boreas Cable Corridor.

12. 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 Boreas of the location of any apparatus or the proposed Norfolk Boreas Cable Corridor.

13. The undertaker and Boreas 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.

14. The undertaker must pay to Boreas the reasonable expenses incurred by Boreas in connection with the approval of plans, inspection of any specified works or the alteration or protection of any apparatus or the proposed Norfolk Boreas Cable Corridor.

15.—(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 Boreas, or Boreas becomes liable to pay any amount to any third party, the undertaker must—

- (a) bear and pay the cost reasonably incurred by Boreas in making good such damage or restoring the service or supply; and
- (b) compensate Boreas for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from Boreas, by reason or in consequence of any such damage or interruption or Boreas 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 Boreas, its officers, servants, contractors or agents.

(3) Boreas 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) Boreas 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 15 applies. If requested to do so by the undertaker, Boreas shall provide an explanation of how the claim has been minimised. The undertaker shall only be liable under this paragraph 15 for claims reasonably incurred by Boreas.

(5) The fact that any work or thing has been executed or done with the consent of Boreas and in accordance with any conditions or restrictions prescribed by Boreas or in accordance with any plans approved by Boreas 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.

16. Any dispute arising between the undertaker and Boreas under this Part must be determined by arbitration under article 37 (arbitration). New part 10 to follow

SCHEDULE 10

PART 1

REMOVAL OF HEDGEROWS

<i>(1) Area</i>	<i>(2) Location of hedgerow</i>
North Norfolk District	The hedgerow shown between points 1a and 1b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 2a and 2b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 3a and 3b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 4a and 4b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 5a and 5b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 7a and 7b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 8a and 8b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 9a and 9b on sheet 2 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 10a and 10b on sheet 2 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 11a and 11b on sheet 2 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 12a and 12b on sheet 2 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 13a and 13b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 14a and 14b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 15a and 15b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 16a and 16b on sheet 3 of the tree preservation order and hedgerow plan

North Norfolk District	The hedgerow shown between points 17a and 17b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 18a and 18b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 19a and 19b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 20a and 20b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 21a and 21b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 22a and 22b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 22b and 22c on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 23a and 23b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 25a and 25b on sheets 3 and 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 26a and 26b on sheets 3 and 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 27a and 27b on sheets 3 and 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 29a and 29b on sheet 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 30a and 30b on sheet 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 32a and 32b on sheet 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 33a and 33b on sheet 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 34a and 34b on sheet 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 39a and 39b on sheet 5 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 43a and 43b on sheet 7 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 44a and

	44b on sheet 7 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 45a and 45b on sheet 7 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 47a and 47b on sheet 7 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 50a and 50b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 51a and 51b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 52a and 52b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 53a and 53b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 54a and 54b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 55a and 55b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 56a and 56b on sheet 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 57a and 57b on sheets 8 and 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 58a and 58b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 59a and 59b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 60a and 60b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 61a and 61b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 62a and 62b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 63a and 63b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 64a and 64b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 65a and 65b on sheet 9 of the tree preservation order

	and hedgerow plan
North Norfolk District	The hedgerow shown between points 66a and 66b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 67a and 67b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 68a and 68b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 69a and 69b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 70a and 70b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 71a and 71b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 72a and 72b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 73a and 73b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 74a and 74b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 75a and 75b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 76a and 76b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 77a and 77b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 78a and 78b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 80a and 80b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 81a and 81b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 82a and 82b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 83a and 83b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 85a and 85b on sheet 9 of the tree preservation order and hedgerow plan

North Norfolk District	The hedgerow shown between points 85c and 85d on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 85e and 85f on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 86a and 86b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 87a and 87b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 88a and 88b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 89a and 89b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 90a and 90b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 92a and 92b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 93a and 93b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 94a and 94b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 95a and 95b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 96a and 96b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 97a and 97b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 98a and 98b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 100a and 100b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 102a and 102b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 103a and 103b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 104a and 104b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 105a and

	105b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 106a and 106b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 107a and 107b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 108a and 108b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 109a and 109b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 110a and 110b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 111a and 111b on sheet 11 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 112a and 112b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 115a and 115b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 116a and 116b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 122a and 122b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 123a and 123b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 124a and 124b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 125a and 125b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 128a and 128b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 129a and 129b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 131a and 131b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 132a and 132b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 133a and 133b on sheet 14 of the tree preservation order

	and hedgerow plan
Broadland District	The hedgerow shown between points 134a and 134b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 135a and 135b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 136a and 136b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 137a and 137b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 138a and 138b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 139a and 139b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 140a and 140b on sheet 14 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 141a and 141b on sheet 15 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 142a and 142b on sheet 15 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 143a and 143b on sheet 15 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 144a and 144b on sheet 15 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 145a and 145b on sheet 15 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 146a and 146b on sheet 15 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 147a and 147b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 149a and 149b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 150a and 150b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 152a and 152b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 155a and 155b on sheet 17 of the tree preservation order and hedgerow plan

Broadland District	The hedgerow shown between points 156a and 156b on sheet 17 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 157a and 157b on sheet 18 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 158a and 158b on sheet 18 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 160a and 160b on sheet 18 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 161a and 161b on sheet 18 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 162a and 162b on sheet 18 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 163a and 163b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 164a and 164b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 165a and 165b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 167a and 167b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 168a and 168b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 169a and 169b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 170a and 170b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 171a and 171b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 172a and 172b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 177a and 177b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 178a and 178b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 179a and 179b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 180a and

	180b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 181a and 181b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 182a and 182b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 183a and 183b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 184a and 184b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 185a and 185b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 186a and 186b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 187a and 187b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 188a and 188b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 190a and 190b on sheet 22 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 191a and 191b on sheet 22 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 192a and 192b on sheet 22 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 193a and 193b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 194a and 194b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 195a and 195b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 196a and 196b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 197a and 197b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 199a and 199b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 201a and 201b on sheet 24 of the tree preservation order

	and hedgerow plan
Broadland District	The hedgerow shown between points 202a and 202b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 208a and 208b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 209a and 209b on sheet 25 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 210a and 210b on sheet 25 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 211a and 211b on sheet 25 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 213a and 213b on sheet 25 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 215a and 215b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 216a and 216b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 217a and 217b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 218a and 218b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 219a and 219b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 220a and 220b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 221a and 221b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 223a and 223b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 224a and 224b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 225a and 225b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 226a and 226b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 227a and 227b on sheet 26 of the tree preservation order and hedgerow plan

South Norfolk District	The hedgerow shown between points 232a and 232b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 233a and 233b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 234a and 234b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 235a and 235b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 236a and 236b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 237a and 237b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 238a and 238b on sheet 27 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 239a and 239b on sheets 27 and 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 240a and 240b on sheets 27 and 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 241a and 241b on sheets 27 and 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 242a and 242b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 243a and 243b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 246a and 246b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 246c and 246d on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 247a and 247b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 248a and 248b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 252a and 252b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 253a and 253b on sheets 28 and 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 254a and

	254b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 256a and 256b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 258a and 258b on sheets 28 and 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 259a and 259b on sheets 28 and 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 262a and 262b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 263a and 263b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 264a and 264b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 266a and 266b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 267a and 267b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 268a and 268b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 269a and 269b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 270a and 270b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 271a and 271b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 272a and 272b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 275a and 275b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 276a and 276b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 278a and 278b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 281a and 281b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 282a and 282b on sheet 30 of the tree preservation order

	and hedgerow plan
South Norfolk District	The hedgerow shown between points 283a and 283b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 284a and 284b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 285a and 285b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 286a and 286b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 287a and 287b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 288a and 288b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 289a and 289b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 290a and 290b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 291a and 291b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 292a and 292b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 293a and 293b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 294a and 294b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 296a and 296b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 297a and 297b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 298a and 298b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 299a and 299b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 300a and 300b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 301a and 301b on sheet 32 of the tree preservation order and hedgerow plan

South Norfolk District	The hedgerow shown between points 303a and 303b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 304a and 304b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 306a and 306b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 308a and 308b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 310a and 310b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 311a and 311b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 312a and 312b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 313a and 313b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 314a and 314b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 315a and 315b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 317a and 317b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 319a and 319b on sheet 31 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 322a and 322b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 326a and 326b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 329a and 329b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 338a and 338b on sheet 34 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 340a and 340b on sheet 34 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 341a and 341b on sheets 35 and 36 of the tree preservation order and hedgerow plan

PART 2

REMOVAL OF IMPORTANT HEDGEROWS

<i>(1) Area</i>	<i>(2) Reference of hedgerow</i>
North Norfolk District	The hedgerow shown between points 6a and 6b on sheet 1 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 24a and 24b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 28a and 28b on sheet 3 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 31a and 31b on sheet 4 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 35a and 35b on sheet 5 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 36a and 36b on sheet 5 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 37a and 37b on sheet 5 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 38a and 38b on sheet 5 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 40a and 40b on sheet 6 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 42a and 42b on sheet 6 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 46a and 46b on sheet 7 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 48a and 48b on sheet 7 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 49a and 49b on sheets 7 and 8 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 79a and 79b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 84a and 84b on sheet 9 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 91a and 91b on sheet 10 of the tree preservation order and hedgerow plan
North Norfolk District	The hedgerow shown between points 99a and 99b on sheet 10 of the tree preservation order

	and hedgerow plan
North Norfolk District	The hedgerow shown between points 101a and 101b on sheet 10 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 113a and 113b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 114a and 114b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 117a and 117b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 118a and 118b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 120a and 120b on sheet 12 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 126a and 126b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 127a and 127b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 130a and 130b on sheet 13 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 148a and 148b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 151a and 151b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 151c and 151d on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 153a and 153b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 154a and 154b on sheet 16 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 166a and 166b on sheet 19 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 173a and 173b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 174a and 174b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 175a and 175b on sheet 20 of the tree preservation order and hedgerow plan

Broadland District	The hedgerow shown between points 176a and 176b on sheet 20 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 189a and 189b on sheet 21 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 198a and 198b on sheet 23 of the tree preservation order and hedgerow plan
Broadland District	The hedgerow shown between points 200a and 200b on sheet 23 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 203a and 203b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 204a and 204b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 205a and 205b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 206a and 206b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 207a and 207b on sheet 24 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 212a and 212b on sheet 25 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 214a and 214b on sheet 25 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 222a and 222b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 228a and 228b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 229a and 229b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 230a and 230b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 231a and 231b on sheet 26 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 245a and 245b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 249a and 249b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 250a and

	250b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 251a and 251b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 255a and 255b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 257a and 257b on sheet 28 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 261a and 261b on sheets 28 and 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 265a and 265b on sheet 29 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 273a and 273b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 274a and 274b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 277a and 277b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 279a and 279b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 280a and 280b on sheet 30 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 295a and 295b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 302a and 302b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 305a and 305b on sheet 32 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 307a and 307b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 309a and 309b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 316a and 316b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 318a and 318b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 320a and 320b on sheet 33 of the tree preservation order

	and hedgerow plan
South Norfolk District	The hedgerow shown between points 321a and 321b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 323a and 323b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 324a and 324b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 325a and 325b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 327a and 327b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 328a and 328b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 330a and 330b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 331a and 331b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 332a and 332b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 333a and 333b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 334a and 334b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 335a and 335b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 336a and 336b on sheet 33 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 337a and 337b on sheet 34 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 339a and 339b on sheet 34 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 342a and 342b on sheets 35 and 36 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 343a and 343b on sheets 35 and 36 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 344a and 344b on sheet 36 of the tree preservation order and hedgerow plan

South Norfolk District	The hedgerow shown between points 345a and 345b on sheets 35 and 36 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 346a and 346b on sheets 35 and 36 of the tree preservation order and hedgerow plan
South Norfolk District	The hedgerow shown between points 347a and 347b on sheet 36 of the tree preservation order and hedgerow plan

SCHEDULE 11

DEEMED MARINE LICENCE UNDER THE 2009 ACT— GENERATION ASSETS

PART 1

LICENSED MARINE ACTIVITIES

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004;

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“2017 Regulations” means the Conservation of Offshore Marine Habitats and Species Regulations 2017;

“array cable” means the network of offshore subsea cables connecting the wind turbine generators in Work No.1 and the offshore substations in Work No.2;

“authorised deposits” means the substances and articles specified in paragraph 4 of Part 1 of this licence;

“authorised development” means the development and associated development described in Part 1 of Schedule 1 of the Order;

“authorised project” means Work No. 1 described in paragraph 3 of Part 1 this licence or any part of that work;

“buoy” means any floating device used for navigational purposes or measurement purposes;

“cable protection” means physical measures for the protection of cables including but not limited to concrete mattresses, with or without frond devices, and/or rock placement (but not material used for cable crossings);

“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 licensed marine activities authorised by this marine licence, save for pre-construction monitoring surveys approved under this licence and “commenced” and “commencement” must be construed accordingly;

“condition” means a condition in Part 2 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 under article 36 (certification of plans and documents etc);

“disturbance” must be construed in accordance with regulation 45(1)(b) of the 2017 Regulations;

“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 the Order;

“European site” has the meaning given in regulation 27 of the 2017 Regulations;

“gravity base foundation” 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, corrosion protection systems and access platform(s) and equipment;

“in principle Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Hornsea Three 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 lattice type structure constructed of steel, which may include scour protection and additional equipment such as, J-tubes, corrosion protection systems and access platforms;

“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;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace, to the extent assessed in the environmental statement; and “maintenance” must be 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;

“Markham’s Triangle rMCZ” means the recommended MCZ shown on Figure 3.1 of Volume 5, Annex 2.3 of the environmental statement;

“MCA” means the Maritime and Coastguard Agency;

“MCZ” means a marine conservation zone designated under section 116(1) of the 2009 Act or any area which is recommended for such designation to the relevant secretary of state in accordance with the 2009 Act unless the secretary of state determines that it shall not be designated as a marine conservation zone;

“mean high water springs” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“monopile foundation” means a steel pile, typically cylindrical, driven and/or drilled into the seabed and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“offshore accommodation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the wind turbine generators;

“offshore electrical installations” means the offshore type 1 substations, the offshore type 2 substations, the offshore subsea HVAC booster stations and the offshore HVAC booster stations forming part of the authorised development;

“offshore HVAC booster station” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing—

- (a) electrical equipment required to provide reactive power compensation; and
- (b) housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the substation;

“offshore subsea HVAC booster station” means a sealed steel or concrete structure located under the surface of the sea, attached to the seabed by means of a foundation, containing electrical equipment required to provide reactive power compensation;

“offshore substation” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing—

- (a) electrical equipment required to switch, transform, convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation; and
- (b) housing accommodation, storage, workshop auxiliary equipment, and facilities for operating, maintaining and controlling the substation or wind turbine generators;

“offshore type 1 substation” means the smaller version of the offshore substations assessed in the environment statement;

“offshore type 2 substation” means the larger version of the offshore substations assessed in the environment statement;

“Order” means the Hornsea Project Three Offshore Wind Farm Order 20[];

“the offshore Order limits and grid coordinates plan” means the plan certified as the offshore Order limits and grid coordinates plan by the Secretary of State for the purposes of the Order under article 36 (certification of plans and documents etc);

“outline fisheries coexistence and liaison plan” means the plan or plans certified as the outline fisheries coexistence and liaison plan or plans by the Secretary of State for the purposes of the Order under article 36 (certification of plans and documents etc);

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“statutory historic body” means the Historic Buildings and Monuments Commission for England or its successor in function;

“suction bucket” means a steel cylindrical structure attached to the legs of a jacket foundation which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential;

“mono suction bucket foundation” means a steel cylindrical structure which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential, and may include scour protection and additional equipment such as J-tubes;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Orsted Hornsea Project Three (UK) 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 three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment, fixed to a foundation or transition piece;

“Work No.2” means—

- (a) up to 12 offshore type 1 substations each fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation or box-type gravity base foundations and which may be connected to each other or one of the offshore accommodation platforms within Work No.1(b) by an unsupported bridge;
- (b) up to four offshore type 2 substations each fixed to the seabed by either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations, box-type gravity base foundations, pontoon gravity base 1 foundations, or pontoon gravity base 2 foundations and which may be connected to

each other or one of the offshore accommodation platforms within Work No.1(b) by an unsupported bridge;

- (c) a network of cables;
- (d) up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No.5 consisting of offshore export cables along routes within the Order limits seaward of MHWS including one or more cable crossings; and
- (e) up to eight temporary horizontal directional drilling exit pits; 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 Team
Lancaster House Hampshire Court
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032;

- (b) Marine Management Organisation (local office)

Pakefield Road
Lowestoft
Suffolk
NR33 0HT

- (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 2433;

- (f) Centre for Environment, Fisheries and Aquaculture Science

Pakefield Road

Lowestoft

Suffolk

NR33 0HT

Tel: 01502 562 244;

- (g) Natural England

4th Floor

Foss House

1-2 Peasholme Green

York

YO1 7PX

Tel: 0300 060 4911;

- (h) Historic England

Brooklands

24 Brooklands Avenue

Cambridge

CB2 8BU

Details of licensed marine activities

2. Subject to the licence conditions, 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 within the Order limits seaward of MHWS of the substances and articles specified in paragraph 4 below and up to 1,344,318 cubic metres of inert material of natural origin produced during construction drilling or seabed preparation for foundation works and cable sandwave preparation works within Work No. 1;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) dredging for the purposes of seabed preparation for foundation works and/or electrical circuit works; the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (d) boulder clearance works either by displacement ploughing or subsea grab technique or any other equivalent method;
- (e) removal of static fishing equipment; and
- (f) site preparation works.

3. Such activities are authorised in relation to the construction, maintenance and operation of—

Work No. 1—

- (a) an offshore wind turbine generating station with a gross electrical output of over 100 megawatts comprising up to 300 wind turbine generators each fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation or gravity base foundation;

- (b) up to three offshore accommodation platforms fixed to the seabed within the area shown on the works plan by monopile foundation, mono suction bucket foundation, jacket foundation, or gravity base foundation and which may be connected to each other or one of the offshore substations within Work No. 2 by an unsupported bridge; and
- (c) a network of cables between the wind turbine generators and between the wind turbine generators and Work No. 2 including one or more cable crossings.

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 within the meaning of section 115(2) of the 2008 Act 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 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; and
- (c) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised development.

4. 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 sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

5. The grid coordinates for that part of the authorised development comprising Work No. 1 are specified below and more particularly on the offshore Order limits and grid coordinates plan—

<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
57	53° 52' 12.798" N	2° 19' 38.938" E	61	54° 0' 4.028" N	2° 40' 52.651" E
58	53° 59' 22.420" N	2° 11' 50.694" E	62	53° 48' 57.136" N	2° 44' 53.902" E
59	53° 59' 19.280" N	2° 13' 34.691" E	63	53° 41' 22.175" N	2° 47' 35.927" E
60	53° 58' 42.514" N	2° 32' 43.904" E	64	53° 45' 27.296" N	2° 34' 19.781" E

6. This licence remains in force until the authorised project 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.

7. The provisions of sections 72 of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence only apply to a transfer not falling within article 5 (benefit of the Order).

8. 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.

9. 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 immaterial changes where it has been demonstrated to the satisfaction of the

MMO that it is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

—PART 2 CONDITIONS

Design parameters

1.—(1) The total number of wind turbine generators comprised in the authorised project must not exceed 300 and a total rotor swept area of 9 square kilometres.

(2) Subject to paragraph (3), each wind turbine generator forming part of the authorised project must not—

- (a) exceed a height of 325 metres when measured from LAT to the tip of the vertical blade;
- (b) exceed a rotor diameter of 265 metres;
- (c) be less than 34.97 metres from LAT to the lowest point of the rotating blade; and
- (d) be less than one kilometre from the nearest wind turbine generator in all directions.

(3) The reference in sub-paragraph 1(2)(d) to the location of a wind turbine generator is a reference to the centre point of that wind turbine generator.

(4) Wind turbine generator foundation structures forming part of the authorised scheme must be one of the following foundation options: monopile foundation, mono suction bucket foundation, jacket foundation or gravity base foundation.

(5) No wind turbine generator—

- (a) jacket foundation employing pin piles forming part of the authorised project shall have a pin pile diameter of greater than four metres; and
- (b) monopile foundation forming part of the authorised project shall have a diameter greater than 15 metres.

(6) The total seabed footprint area for wind turbine generator foundations must not exceed—

- (a) 435,660 square metres excluding scour protection; and
- (b) 1,623,182 square metres including scour protection.

(7) The volume of scour protection material for wind turbine generator foundations must not exceed 2,375,044 cubic metres.

2.—(1) The total number of offshore accommodation platforms forming part of the authorised project must not exceed three.

(2) The dimensions of any offshore accommodation platform forming part of the authorised project must not exceed—

- (a) 64 metres in height when measured from LAT;
- (b) 60 metres in length; and
- (c) 60 metres in width.

(3) Any bridge located on an offshore accommodation platform shall be no longer than 100 metres.

(4) Offshore accommodation platform foundation structures forming part of the authorised project must be one of the following foundation options: monopile foundations, mono suction bucket foundations, jacket foundations, or gravity base foundations.

(5) No offshore accommodation platform—

- (a) jacket foundation employing pin piles forming part of the authorised project shall have a pin pile diameter of greater than 4 metres; and

- (b) monopile foundation forming part of the authorised project shall have a diameter greater than 15 metres.

(6) The total seabed footprint area for offshore accommodation platform foundations must not exceed—

- (a) 8,836 square metres excluding scour protection; and
(b) 28,628 square metres including scour protection.

(7) The volume of scour protection material for offshore accommodation platform foundations must not exceed 43,429 cubic metres.

(8) The total number of cable crossings when combined with the deemed marine licence granted under Schedule 12 of the Order must not exceed 44, unless otherwise agreed between the undertaker and the MMO.

(9) In the event that Markham's Triangle rMCZ is designated as an MCZ, no more than—

- (a) 32 wind turbine generators;
(b) one offshore accommodation platform;
(c) 263,855 cubic metres of scour protection;
(d) 87.3 kilometres of array cables;
(e) 87,150 cubic metres of cable protection; and
(f) 126,768 square metres of scour protection

may be located within the boundaries of Markham's Triangle rMCZ.

3.—(1) The total length of the cables in Work No.1(c) and the volume of their cable protection (excluding cable crossings) when combined with the cable authorised under Work No.2(c) of the deemed marine licence granted under Schedule 12 of the Order must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection</i>
Work No. 1(c)	1055 kilometres	1,055,000 cubic metres

(2) No cable protection by way of concrete mattresses may be used in European Sites or MCZ.

(3) No more than 10% of the length of the cables in Work No 1(c) falling within any European Site or MCZ shall be subject to cable protection, unless otherwise agreed with the MMO.

(4) Any cable protection authorised under this licence must be deployed within 15 years from the date of the grant of the Order unless otherwise agreed by the MMO.

Phases of authorised development

4.—(1) The authorised development may not be commenced until a written scheme setting out the phases of construction of the authorised project has been submitted to and approved by the MMO.

(2) The phases of construction referred to in paragraph (1) shall not exceed two, save that each phase may be undertaken in any number of stages as prescribed in the written scheme.

(3) The scheme must be implemented as approved.

Maintenance of the authorised development

5.—(1) The undertaker may at any time maintain the authorised development, except to the extent that this licence or an agreement made under this licence provides otherwise.

(2) No maintenance works whose likely effects are not assessed in the environmental statement may be carried out, unless otherwise approved by the MMO.

(3) Maintenance works include but are not limited to—

- (a) major wind turbine component or offshore accommodation platform replacement;
(b) painting wind turbine generators or offshore accommodation platforms;

- (c) bird waste removal;
- (d) cable remedial burial;
- (e) array cable repairs;
- (f) access ladder replacement;
- (g) wind turbine generator anode replacement; and
- (h) J-tube repair/replacement.

(4) Where the MMO's approval is required under paragraph (2), approval may be given only where it has been demonstrated to the satisfaction of the MMO that 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 undertaker shall issue to operators of vessels under its control operating within the Order limits a code of conduct to prevent collision risk or injury to marine mammals.

(6) The undertaker shall ensure appropriate co-ordination of vessels within its control operating within the Order limits so as to reduce collision risk to other vessels including advisory safe passing distances for vessels.

Extension of time periods

6. Any time period given in this licence given to either the undertaker or the MMO may be extended with the agreement of the other party.

Notifications and inspections

7.—(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 16; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 16;
- (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 16 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 project.

(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 the completion of the licensed activity.

(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 project 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) on 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 and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO 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 programme approved under condition 13(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.

(11) In case of damage to, or destruction or decay of, the authorised project seaward of MHWS or any part thereof the undertaker must as soon as possible and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UK Hydrographic Office. In case of the development of a cable exposure deemed by the undertaker to present a risk to fishing activity, the undertaker must notify the MMO and the Kingfisher Information Service within three working days following the undertaker becoming aware of it.

Aids to navigation

8.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning of the authorised project seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and 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 project to completion of decommissioning of the authorised project seaward of MHWS keep Trinity House and the MMO informed of progress of the authorised project seaward of MHWS including the following—

- (a) notice of commencement of construction of the authorised project 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 project.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 13(1)(j) 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 of the authorised project 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 7(11) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

9.—(1) The undertaker must colour all structures yellow (colour code RAL 1023) from at least highest astronomical tide 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 ensure that the wind turbine generators are painted light grey (colour code RAL 7035).

Aviation safety

10.—(1) The undertaker must exhibit such lights, with such shape, colour and character as are required in writing by Air Navigation Order 2016^(a) and determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the Civil Aviation Authority

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, and the MMO, at least 14 days prior to the commencement of the authorised project, in writing of the following information—

- (a) the date of the commencement of construction of the authorised project;
- (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 and offshore accommodation platform to be constructed;
- (e) the latitude and longitude of each wind turbine generator and offshore 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 authorised project.

Chemicals, drilling and debris

11.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised project 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 the Order, by submission of a disposal return by 31 January each year for the months August to January inclusive, and by 31 July 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 the Order limits seaward of MHWS.

(6) The undertaker must ensure that any rock material used in the construction of the authorised project 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 project 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

(a) S.I. 2016/765

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 13(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

12.—(1) If, due to stress of weather or any other cause the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life and/or of the vessel is threatened, within 48 hours full details of the circumstances of the deposit must be notified 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

13.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) has been submitted to and approved in writing by the MMO, in consultation with Trinity House and the MCA—

(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, which shows—

- (i) the proposed location, including grid co-ordinates of the centre point of the proposed location for each wind turbine generator and offshore accommodation platform, subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions and choice of foundation types for all wind turbine generators and offshore accommodation platforms;
- (ii) the number, specifications and dimensions of the wind turbine generators in that phase;
- (iii) the length and arrangement of cable comprising Work No. 1(c);
- (iv) the dimensions of all monopile foundations, mono suction bucket foundations, jacket foundations or gravity base foundations; and
- (v) any exclusion zones/micrositing requirements identified in any mitigation project pursuant to sub-paragraph 13(2)(d) or relating to any Annex I reefs identified as part of surveys undertaken in accordance with condition 17;

to ensure conformity with the description of Work No. 1 and compliance with conditions 1 to 3 above.

(b) a construction programme to include details of—

- (i) the proposed construction start date;
- (ii) proposed timings for mobilisation of plant delivery of materials and installation works; and
- (iii) an indicative written construction programme for all wind turbine generators offshore accommodation platforms and cable comprised in the works at paragraph

3(a) to 3(b) of Part 1 (licenced marine activities) of this Schedule (insofar as not shown in paragraph (ii) above);

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 and cable installation works and having regard to any mitigation scheme pursuant to subparagraph 13(1)(f);
 - (ii) advisory safe passing distances for vessels around construction sites;
 - (iii) cable installation;
 - (iv) contractors;
 - (v) vessels and vessels transit corridors;
 - (vi) codes of conduct for vessel operators;
 - (vii) associated ancillary works;
 - (viii) guard vessels to be employed; and
 - (ix) details of means to avoid impacts on European sites.
- (d) a project management plan and monitoring 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 project 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) a biosecurity plan detailing how the risk of introduction and spread of invasive non-native species will be minimised;
 - (iv) waste management and disposal arrangements;
 - (v) a code of conduct for vessel operators;
 - (vi) the appointment and responsibilities of a fisheries liaison officer; and
 - (vii) all spatial data for archaeological exclusion zones and application of a protocol for archaeological discoveries.
- (e) a scour protection management plan providing details of the need, type, sources, quantity and installation methods for scour protection, which must be updated and resubmitted for approval if changes to it are proposed following cable laying operations.
- (f) proposed pre-construction monitoring surveys, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 17, 18 and 19.
- (g) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, including details of soft start procedures with specified duration periods following current best practice as advised by the relevant statutory nature conservation bodies.
- (h) a cable specification and installation plan, to include—
 - (i) technical specification of offshore 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 sandwave clearance plan for all designated sites affected, including details of the volumes of material to be dredged, timing of works, locations for disposal and monitoring proposals;
- (iii) a detailed cable laying plan for the Order limits, incorporating a burial risk assessment encompassing the identification of any cable protection that exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised or similar such assessment to ascertain suitable burial depths and cable laying techniques, including cable protection
- (iv) a cable protection plan for all designated sites where cable protection is required, including details of the volumes, material, locations and seabed footprints for cable protection measures, where required, consideration of alternative methods of protection and monitoring proposals and provision for review and update of the plan for a period of 15 years from the date of the grant of the Order;
- (v) proposals for the volume and areas of cable protection to be used for each cable crossing; and
- (vi) proposals for monitoring offshore cables including cable protection during the operational lifetime of the authorised project which includes a risk based approach to the management of unburied or shallow buried cables, and, where necessary, details of micro-siting through any European Site.
- (i) an 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.
- (j) an aid 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 8 for the lifetime of the authorised project.
- (k) a plan for marine mammal monitoring setting out the circumstances in which marine mammal monitoring will be required and the monitoring to be carried out in such circumstances.
- (l) an ornithological monitoring plan setting out the circumstances in which ornithological monitoring will be required and the monitoring to be carried out in such circumstances.

(2) The licensed activities or any part of those activities must not commence unless no later than six months prior to the commencement a written scheme of archaeological investigation has been submitted to and approved by the MMO, in accordance with the outline offshore written scheme of investigation, and in accordance with industry good practice, in consultation with the statutory historic body to include—

- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
- (b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
- (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within six months of any survey being completed;
- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones prior to construction;
- (e) monitoring of archaeological exclusion zones during and post construction, including provision of a report on such monitoring;
- (f) 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;

- (g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme;
- (h) implementation of the Offshore Renewables Protocol for Reporting Archaeological Discoveries as set out by The Crown Estate; and
- (i) 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.

(3) Pre-construction archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific outline written scheme of investigation (which must accord with the details set out in the outline offshore written scheme of investigation) which has been submitted to and approved by the MMO.

(4) The licensed activities or any part of those activities must not commence until a fisheries coexistence and liaison plan in accordance with the outline fisheries coexistence and liaison plan has been submitted to and approved by the MMO.

(5) In the event that driven or part-driven pile foundations 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 Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that where the plan assesses that mitigation is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of the Southern North Sea Special Area of Conservation, it provides for such mitigation, to the extent that harbour porpoise are a protected feature of that site.

(6) 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.

14.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 13 (save for that required under condition 13(1)(f)) 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.

(2) The pre-construction monitoring surveys, construction monitoring, post-construction monitoring and related reporting required under condition 13(1)(f) must be submitted in accordance with the following, unless otherwise agreed in writing with the MMO—

- (a) at least four months prior to the first survey, detail of any pre-construction surveys and an outline of all proposed monitoring;
- (b) at least four months prior to construction, detail on construction monitoring; and
- (c) at least four months prior to commissioning, detail of post-construction (and operational) monitoring;

(3) The design plan required by condition 13(1)(a) shall be prepared by the undertaker and determined by the MMO in accordance with the Development Principles.

(4) The MMO shall determine an application for approval made under condition 13 within a period of four months commencing on the date the application is received by the MMO, unless otherwise agreed in writing with the undertaker.

(5) The licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 13, unless otherwise agreed in writing by the MMO.

Offshore safety management

15. No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has given written approval of an Emergency Response Co-operation Plan (ERCoP) which

includes full details of the plan for emergency response and co-operation for the construction, operation and decommissioning phases of that part of the authorised scheme in accordance with the MCA recommendations contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (or any equivalent guidance that replaces or supersedes it), and has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that part of the authorised scheme, adequately addressed all MCA recommendations contained within MGN543 and its annexes.

Reporting of engaged agents, contractors and vessels

16.—(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

17.—(1) The undertaker must in discharging condition 13(1)(f) submit a monitoring plan or plans in accordance with an in-principle monitoring plan for written approval by the MMO in consultation with the relevant statutory bodies, which shall contain details of proposed surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report and;

- (a) the survey proposals must be in general accordance with the principles set out in the in-principle monitoring plan and 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 preconstruction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) Subject to receipt from the undertaker of specific proposals pursuant to this Condition, the pre-construction surveys must comprise, in outline—

- (a) a high-resolution swath bathymetric survey to include a 100% coverage and a side-scan sonar survey of the parts of the offshore Order limits within which it is proposed to carry out construction works and disposal activities under this licence, to—
 - (i) determine the location, extent and composition of any biogenic or geogenic reef features, as set out within the in-principle monitoring plan;
 - (ii) inform future navigation risk assessments as part of the cable specification and installation plan;
 - (iii) inform the identification of any archaeological exclusion zone and post consent monitoring of any such archaeological exclusion zone; and
 - (iv) to identify and characterise any preferred sandeel habitat.
- (b) any marine mammal monitoring required by the plan for marine mammal monitoring submitted in accordance with condition 13(1)(k); and
- (c) any ornithological monitoring required by the Ornithological Monitoring Plans submitted in accordance with condition 13(1)(l).

(3) The undertaker must carry out the surveys specified within the monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

Construction monitoring

18.—(1) The undertaker must in discharging condition 13(1)(f) submit a construction monitoring plan or plans for written approval by the MMO in consultation with the relevant statutory nature conservation body, which shall include details of any proposed construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must be in general accordance with the principles set out in the in-principle monitoring plan and 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) Subject to receipt from the undertaker of specific proposals pursuant to this condition the construction monitoring plan must include, in outline—

- (a) where piled foundations are to be employed, unless otherwise agreed by the MMO in writing, details of proposed monitoring of the noise generated by the installation of the first four monopile foundations to be constructed under this licence;
- (b) a plan for monitoring of the duration of piling activity; and
- (c) details of vessel traffic monitoring by automatic identification system for the duration of the construction period including obligations to report annually to the MMO, Trinity House and the MCA during the construction phase of the authorised development.

(3) The results of the initial noise measurements monitored in accordance with condition 18(2)(a) 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 the relevant statutory nature conservation body, 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) The undertaker must carry out the surveys specified within the construction monitoring plan or plans in accordance with that plan or plans, including any further noise monitoring required in writing by the MMO under condition 18(3), unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

Post-construction monitoring

19.—(1) The undertaker must in discharging condition 13(1)(f) submit a post-construction monitoring plan or plans for written approval by the MMO in consultation with the relevant statutory nature conservation body including details of proposed post-construction surveys, including methodologies (including appropriate buffers, where relevant) and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must be in general accordance with the principles set out in the in-principle monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the preconstruction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) Subject to receipt of specific proposals the post-construction survey plan or plans must include, in outline—

- (a) a survey to determine any change in the location, extent and composition of any biogenic or geogenic reef feature identified in the pre-construction survey in the parts of the offshore 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) any marine mammal monitoring required by the plan for marine mammal monitoring submitted in accordance with condition 13(1)(k);
- (c) any ornithological monitoring required by the Ornithological Monitoring Plans submitted in accordance with condition 13(1)(l);
- (d) details of vessel traffic monitoring by automatic identification system, for a period of 28 individual days taking account seasonal variations in traffic patterns over the course of one year to be submitted to the MMO, Trinity House and the MCA no later than one year following completion of the construction phase of the authorised development;
- (e) a full sea floor coverage swath-bathymetry survey of the areas within which construction activity has taken place in order to inform of any dropped objects or residual navigational risk to be submitted to the MMO and MCA;
- (f) a bathymetric survey to monitor the effectiveness of archaeological exclusion zones identified to have been potentially impacted by construction works. The data shall be analysed by an accredited archaeologist as defined in the offshore written scheme of investigation required under condition 13(2);
- (g) a high resolution swath bathymetric and side scan sonar survey to determine any change to the seabed morphology and composition around a representative number of WTG foundations within muddy sediments of the outer Silver Pit and Markham's Hole features, in accordance with the scour monitoring detailed within the in-principle monitoring plan; and
- (h) a high resolution swath-bathymetric and side scan sonar survey to determine any change and recovery in the composition of any preferred sandeel habitat identified in the pre-construction survey in the parts of the offshore Order limits in which sandwave clearance activity has been carried out. The survey design must be informed by the results of the pre-construction benthic survey.

(3) The undertaker must carry out the surveys agreed under condition 19(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 body.

Timing of monitoring report

20. Any monitoring report compiled in accordance with the monitoring plans provided under conditions 17, 18 and 19 must be provided to the MMO no later than four months following completion of the monitoring to which it relates, unless otherwise agreed with the MMO.

Updating of cable monitoring plan

21. Following installation of cables, the cable monitoring plan required under condition 13(1)(h)(vi) must be updated with the results of the post-installation surveys. The plan must be implemented during the operational lifetime of the project and reviewed as specified within the plan, following cable burial surveys, or as instructed by the MMO.

Reporting of impact pile driving

22.—(1) Only when driven or part-driven pile foundations or detonation of explosives are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) prior to the commencement of the licenced activities, information on the expected location, start and end dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Forward Look requirements;
- (b) at six month intervals following the commencement of pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements;

- (c) within 12 weeks of completion of impact pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements
- (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.

Reporting of cable protection

23.—(1) Not more than 4 months following completion of the construction phase of the project, the undertaker shall provide the MMO and the relevant SNCBs with a report setting out details of the cable protection used for the authorised scheme.

- (2) The report shall 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.

Decommissioning of cable protection within marine protected areas

- 24.—**(1) The obligations under paragraphs (2) and (3) shall only apply if and to the extent that—
- (a) cable protection is installed as part of the authorised project within an area designated as a European Site or MCZ as at the date of the grant of the Order; and
 - (b) it is a requirement of the written decommissioning programme approved by the Secretary of State pursuant to sections 105 of the 2004 Act, including any modification to the programme under section 108, that such cable protection is removed as part of the decommissioning of the authorised project;

(2) Within such timeframe as specified within the decommissioning programme approved by the Secretary of State, the undertaker shall carry out an appropriate survey of cables within Work No. 1(c), that are subject to cable protection and that are situated within any European Site or MCZ to assess the integrity and condition of that cable protection and determine the appropriate extent of the feasibility of the removal of such cable protection having regard to the condition of the cable protection and feasibility of any new removal techniques at that time, and submit that along with a method statement for recovery of cable protection to the MMO.

(3) Within such timeframe as specified within the decommissioning programme approved by the Secretary of State, the MMO must confirm whether or not it is satisfied with the method statement pursuant to (2) above.

(4) If the MMO has confirmed it is satisfied pursuant to (3) above, then within such timeframe as specified within the decommissioning programme approved by the Secretary of State, the undertaker shall endeavour to recover the cable protection to the extent identified in the survey and according to the methodology set out in the method statement submitted pursuant to (2) above.

SCHEDULE 12

DEEMED MARINE LICENCE UNDER THE 2009 ACT – TRANSMISSION ASSETS

PART 1

LICENSED MARINE ACTIVITIES

1.—(1) In this licence—

“the 2004 Act” means the Energy Act 2004;

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“2017 Regulations” means the Conservation of Offshore Marine Habitats and Species Regulations 2017;

“Annex I reef” means a reef of a type listed in Annex I of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora;

“authorised deposits” means the substances and articles specified in paragraph 4 of Part 1 of this licence;

“authorised development” means the development and associated development described in Part 1 of Schedule 1 of the Order;

“authorised project” means Work Nos. 2, 3, 4 and 5 described in paragraph 3 of Part 1 of this licence or any part of that work;

“buoy” means any floating device used for navigational purposes or measurement purposes;

“cable protection” means physical measures for the protection of cables including but not limited to concrete mattresses, with or without frond devices, and/or rock placement (but not material used for cable crossings);

“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 licensed marine activities authorised by this marine licence, save for pre-construction monitoring surveys approved under this licence and “commenced” and “commencement” must be construed accordingly;

“condition” means a condition in Part 2 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 under article 36 (certification of plans and documents etc);

“disturbance” must be construed in accordance with regulation 45(1)(b) of the 2017 Regulations;

“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 the Order;

“European site” has the meaning given in regulation 27 of the 2017 Regulations;

“gravity base foundation” 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, corrosion protection systems and access platform(s) and equipment;

“in-principle Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan” means the document certified as the in principle Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan by the Secretary of State for the purposes of this Order;

“interconnector cable” means a network of cables between the offshore substations;

“jacket foundation” means a lattice type structure constructed of steel, which may include scour protection and additional equipment such as, J-tubes, corrosion protection systems and access platforms;

“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;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;

“maintain” includes inspect, upkeep, repair, adjust, and alter and further includes remove, reconstruct and replace, to the extent assessed in the environmental statement; and “maintenance” must be 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;

“Markham’s Triangle rMCZ” means the recommended MCZ shown on Figure 3.1 of Volume 5, Annex 2.3 of the environmental statement;

“MCZ” means a marine conservation zone designated under section 116(1) of the 2009 Act or any area which is recommended for such designation to the relevant secretary of state in accordance with the 2009 Act unless the secretary of state determines that it shall not be designated as a marine conservation zone;

“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;

“monopile foundation” means a steel pile, typically cylindrical, driven and/or drilled into the seabed and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“offshore accommodation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the wind turbine generators;

“offshore electrical installations” means the offshore type 1 substations, the offshore type 2 substations, the offshore subsea HVAC booster stations and the offshore HVAC booster stations forming part of the authorised development;

“offshore export cable” means a network of cables for as described in Work No.2(d) and Work No.3(d).

“offshore HVAC booster station” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing—

- (a) electrical equipment required to provide reactive power compensation; and
- (b) housing accommodation, storage, workshop, auxiliary equipment, and facilities for operating, maintaining and controlling the substation;

“offshore subsea HVAC booster station” means a sealed steel or concrete structure located under the surface of the sea, attached to the seabed by means of a foundation, containing electrical equipment required to provide reactive power compensation;

“offshore substation” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and a helicopter platform, containing—

- (a) electrical equipment required to switch, transform, convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation; and
- (b) housing accommodation, storage, workshop auxiliary equipment, and facilities for operating, maintaining and controlling the substation or wind turbine generators;

“offshore type 1 substation” means the smaller version of the offshore substations assessed in the environment statement;

“offshore type 2 substation” means the larger version of the offshore substations assessed in the environment statement;

“the offshore Order limits and grid coordinates plan” means the plan certified as the offshore Order limits and grid coordinates plan by the Secretary of State for the purposes of the Order under article 36 (certification of plans and documents etc);

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“SAC” means an area designated as an area of special area of conservation under regulation 11 of the 2017 Regulations;

“statutory historic body” means Buildings and Monuments Commission for England, the relevant local authority or its successor in function;

“suction bucket” means a steel cylindrical structure attached to the legs of a jacket foundation which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential;

“Order” means the Hornsea Project Three Offshore Wind Farm Order 20[];

“mono suction bucket foundation” means a steel cylindrical structure which partially or fully penetrates the seabed and remains in place using its own weight and hydrostatic pressure differential, and may include scour protection and additional equipment such as J-tubes;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“UK Hydrographic Office” means the UK Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Orsted Energy Hornsea Project Three (UK) 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 three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment, fixed to a foundation or transition piece; 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 Team
Lancaster House Hampshire Court
Newcastle Business Park
Newcastle upon Tyne
NE4 7YH
Tel: 0300 123 1032;
- (b) Marine Management Organisation (local office)
Pakefield Road
Lowestoft
Suffolk
NR33 0HT;
- (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 2433;
- (f) Centre for Environment, Fisheries and Aquaculture Science
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 562 244;
- (g) Natural England
4th Floor
Foss House
1-2 Peasholme Green
York

YO1 7PX

Tel: 0300 060 4911;

- (h) Historic England
Brooklands
24 Brooklands Avenue
Cambridge
CB2 8BU.

Details of licensed marine activities

2. Subject to the licence conditions, 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 within the Order limits seaward of MHWS of the substances and articles specified in paragraph 4 below and up to 2,218,816 cubic metres of inert material of natural origin produced during construction drilling or seabed preparation for foundation works and cable sandwave preparation works within Work Nos. 2, 3, 4 and 5;
- (b) the construction of works in or over the sea and/or on or under the sea bed; dredging for the purposes of seabed preparation for foundation works and/or electrical circuit works;
- (c) boulder clearance works either by displacement ploughing or subsea grab technique or any other equivalent method;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) removal of static fishing equipment; and
- (f) site preparation works.

3. Such activities are authorised in relation to the construction, maintenance and operation of—
Work No.2—

- (a) up to 12 offshore type 1 substations each fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation or box-type gravity base foundations and which may be connected to each other or one of the offshore accommodation platforms within Work No.1(b) by an unsupported bridge;
- (b) up to four offshore type 2 substations each fixed to the seabed by either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations, box-type gravity base foundations, pontoon gravity base 1 foundations, or pontoon gravity base 2 foundations and which may be connected to each other or one of the offshore accommodation platforms within Work No.1(b) by an unsupported bridge;
- (c) a network of cables;
- (d) up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No.5 consisting of offshore export cables along routes within the Order limits seaward of MHWS including one or more cable crossings; and
- (e) up to eight temporary horizontal directional drilling exit pits.

Work No.3—

- (a) in the event that the mode of transmission is HVAC, up to four HVAC booster stations fixed to the seabed within the area shown on the works plan by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation, or box-type gravity base foundations;

- (b) in the event that the mode of transmission is HVAC, up to six offshore subsea HVAC booster stations fixed to the seabed by either monopile foundation, mono suction bucket foundation, jacket foundation, gravity base foundation, or box-type gravity base foundations;
- (c) in the event that the mode of transmission is HVAC, a network of cables between HVAC booster stations or offshore subsea HVAC booster stations; and
- (d) up to six cable circuits between Work No. 2 and Work No. 3, and between Work No. 3 and Work No.5 consisting of offshore export cables along routes within the Order limits seaward of MHWS including one or more cable crossings.

Work No. 4— a temporary work area associated with Work No.2 and Work No.3 for vessels to carry out intrusive activities alongside Work No.2 or Work No.3.

Work No. 5— landfall connection works comprising up to six cable circuits and ducts and onshore construction works within the Order limits seaward of MHWS and landward of MLWS.

In connection with such Works Nos. 2, 3, 4 and 5 and to the extent that they do not otherwise form part of any such work, further associated development within the meaning of section 115(2) of the 2008 Act 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 license, including—

- (a) scour protection around the foundations of the offshore electrical installations;
- (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. 2, 3, 4 and 5 and the disposal of up to 2,218,816 cubic metres of inert material of natural origin within Order limits produced during construction drilling and seabed preparation for foundation works and cable sandwave preparation works; and
- (d) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised development.

4. 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 and seabed preparation for foundation works and cable sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

5. The grid coordinates for that part of the authorised development comprising Work Nos. 2, 3, 4 and 5 are specified below and more particularly on the offshore Order limits and grid coordinates plan—

<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point ID</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 57' 23.299" N	1° 5' 48.611" E	64	53° 45' 27.296" N	2° 34' 19.781" E
2	52° 58' 22.516" N	1° 4' 22.810" E	65	53° 45' 17.155" N	2° 33' 57.193" E
3	52° 59' 43.107" N	1° 3' 16.300" E	66	53° 44' 25.151" N	2° 28' 22.483" E
4	53° 0' 12.806" N	1° 3' 4.176" E	67	53° 43' 43.437" N	2° 23' 42.266" E
5	53° 0' 41.322" N	1° 3' 5.626" E	68	53° 43' 38.549" N	2° 23' 1.918" E
6	53° 2' 15.365" N	1° 3' 25.796" E	69	53° 40' 30.736" N	2° 17' 49.303" E

7	53° 4' 22.383" N	1° 5' 4.618" E	70	53° 37' 10.969" N	2° 7' 19.167" E
8	53° 4' 48.739" N	1° 5' 38.118" E	71	53° 37' 2.480" N	2° 6' 39.277" E
9	53° 5' 0.912" N	1° 6' 53.813" E	72	53° 36' 20.389" N	2° 5' 9.581" E
10	53° 4' 56.963" N	1° 8' 49.809" E	73	53° 35' 18.067" N	2° 5' 0.546" E
11	53° 4' 47.089" N	1° 10' 20.278" E	74	53° 34' 58.529" N	2° 4' 49.759" E
12	53° 4' 50.116" N	1° 12' 8.936" E	75	53° 34' 37.908" N	2° 4' 16.626" E
13	53° 5' 1.606" N	1° 14' 7.325" E	76	53° 32' 54.718" N	2° 4' 40.220" E
14	53° 5' 2.192" N	1° 14' 30.074" E	77	53° 32' 31.275" N	2° 4' 37.727" E
15	53° 4' 58.764" N	1° 14' 55.483" E	78	53° 31' 59.257" N	2° 4' 11.934" E
16	53° 4' 32.854" N	1° 16' 47.381" E	79	53° 31' 13.675" N	2° 3' 20.449" E
17	53° 4' 32.226" N	1° 19' 19.524" E	80	53° 30' 18.703" N	2° 2' 26.715" E
18	53° 4' 54.358" N	1° 22' 30.281" E	81	53° 30' 0.496" N	2° 1' 55.943" E
19	53° 5' 6.119" N	1° 25' 0.302" E	82	53° 29' 53.014" N	2° 1' 22.871" E
20	53° 5' 7.887" N	1° 26' 23.233" E	83	53° 29' 52.335" N	2° 0' 47.588" E
21	53° 5' 4.100" N	1° 27' 30.916" E	84	53° 28' 18.157" N	1° 53' 52.525" E
22	53° 5' 52.998" N	1° 28' 30.016" E	85	53° 27' 38.035" N	1° 51' 19.593" E
23	53° 14' 11.509" N	1° 41' 28.704" E	86	53° 27' 25.643" N	1° 50' 32.418" E
24	53° 14' 27.431" N	1° 42' 14.962" E	87	53° 27' 18.150" N	1° 50' 31.601" E
25	53° 15' 49.705" N	1° 44' 10.074" E	88	53° 26' 16.707" N	1° 50' 4.603" E
26	53° 16' 25.597" N	1° 44' 37.874" E	89	53° 25' 53.921" N	1° 50' 10.016" E
27	53° 19' 1.814" N	1° 45' 50.556" E	90	53° 25' 34.502" N	1° 50' 4.308" E
28	53° 22' 33.955" N	1° 46' 57.914" E	91	53° 24' 21.903" N	1° 49' 42.825" E
29	53° 22' 55.872" N	1° 46' 55.918" E	92	53° 24' 2.505" N	1° 49' 42.663" E
30	53° 23' 22.176" N	1° 47' 7.319" E	93	53° 23' 34.480" N	1° 49' 32.287" E
31	53° 23' 41.762" N	1° 47' 5.727" E	94	53° 23' 14.095" N	1° 49' 34.013" E
32	53° 24' 11.270" N	1° 47' 16.705" E	95	53° 22' 47.157" N	1° 49' 22.581" E
33	53° 24' 33.225" N	1° 47' 17.703" E	96	53° 22' 23.714" N	1° 49' 23.370" E
34	53° 25' 56.028" N	1° 47' 42.459" E	97	53° 18' 42.217" N	1° 48' 12.788" E
35	53° 26' 20.933" N	1° 47' 36.143" E	98	53° 15' 55.220" N	1° 46' 54.772" E
36	53° 26' 43.765" N	1° 47' 45.420" E	99	53° 15' 3.154" N	1° 46' 14.109" E
37	53° 27' 30.131" N	1° 48' 5.945" E	100	53° 13' 23.395" N	1° 43' 55.484" E
38	53° 27' 46.677" N	1° 48' 5.619" E	101	53° 13' 5.062" N	1° 43' 4.402" E
39	53° 28' 17.076" N	1° 48' 21.428" E	102	53° 4' 59.121" N	1° 30' 24.338" E
40	53° 28' 37.302" N	1° 49' 1.846" E	103	53° 4' 20.493" N	1° 29' 37.106" E
41	53° 29' 38.707" N	1° 52' 55.786" E	104	53° 4' 9.988" N	1° 29' 29.310" E
42	53° 31' 13.071" N	1° 59' 48.933" E	105	53° 3' 47.663" N	1° 28' 59.880" E
43	53° 31' 19.720" N	2° 0' 36.709" E	106	53° 3' 36.602" N	1° 28' 9.237" E
44	53° 32' 1.260" N	2° 1' 17.462" E	107	53° 3' 36.599" N	1° 27' 27.833" E
45	53° 32' 51.864" N	2° 2' 12.822" E	108	53° 3' 40.623" N	1° 26' 14.722" E
46	53° 34' 50.465" N	2° 1' 45.585" E	109	53° 3' 39.011" N	1° 25' 12.221" E
47	53° 35' 23.664" N	2° 1' 56.535" E	110	53° 3' 28.120" N	1° 22' 53.680" E
48	53° 35' 46.884" N	2° 2' 37.417" E	111	53° 3' 4.980" N	1° 19' 32.112" E
49	53° 36' 32.251" N	2° 2' 43.845" E	112	53° 3' 6.278" N	1° 16' 22.646" E
50	53° 37' 0.888" N	2° 2' 53.784" E	113	53° 3' 34.066" N	1° 14' 17.070" E
51	53° 37' 20.916" N	2° 3' 21.412" E	114	53° 3' 23.126" N	1° 12' 23.483" E
52	53° 38' 20.262" N	2° 5' 30.569" E	115	53° 3' 19.662" N	1° 10' 8.762" E
53	53° 38' 31.038" N	2° 6' 19.862" E	116	53° 3' 30.020" N	1° 8' 33.828" E
54	53° 41' 39.572" N	2° 16' 17.662" E	117	53° 3' 32.792" N	1° 7' 6.899" E

55	53° 44' 4.728" N	2° 20' 18.541" E	118	53° 1' 51.145" N	1° 5' 45.682" E
56	53° 51' 54.307" N	2° 19' 24.004" E	119	53° 0' 17.303" N	1° 5' 29.793" E
57	53° 52' 12.798" N	2° 19' 38.938" E	120	52° 59' 10.951" N	1° 6' 24.006" E
58	53° 59' 22.420" N	2° 11' 50.694" E	121	52° 58' 23.000" N	1° 7' 34.209" E
59	53° 59' 19.280" N	2° 13' 34.691" E	122	52° 57' 44.291" N	1° 7' 45.470" E
60	53° 58' 42.514" N	2° 32' 43.904" E	123	52° 57' 19.850" N	1° 7' 56.688" E
61	54° 0' 4.028" N	2° 40' 52.651" E	124	52° 56' 59.623" N	1° 8' 4.381" E
62	53° 48' 57.136" N	2° 44' 53.902" E	125	52° 57' 2.633" N	1° 7' 44.016" E
63	53° 41' 22.175" N	2° 47' 35.927" E	126	52° 57' 4.058" N	1° 7' 42.464" E

6. This licence remains in force until the authorised project 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.

7. The provisions of section 72 of the 2009 Act apply to this licence except that the provisions of sections 72(7) and (8) relating to the transfer of the licence only apply to a transfer not falling within article 5 (benefit of the Order).

8. 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 project are taken to include any amendments that may subsequently be approved in writing by the MMO.

9. 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 immaterial changes where it has been demonstrated to the satisfaction of the MMO that it is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

—PART 2 CONDITIONS

Design parameters

1.—(1) The total number of offshore electrical installations shall not exceed 18, and shall consist of no more than—

- (a) 12 offshore type 1 substations;
- (b) four offshore type 2 substations;
- (c) four offshore HVAC booster stations; and
- (d) six offshore subsea HVAC booster stations.

2.—(1) The dimensions of any offshore type 1 substations forming part of the authorised project must not exceed—

- (a) 90 metres in height when measured from LAT;
- (b) 100 metres in length; and
- (c) 100 metres in width.

(2) The dimensions of any offshore type 2 substations forming part of the authorised project must not exceed—

- (a) 110 metres in height when measured from LAT;
- (b) 180 metres in length; and
- (c) 90 metres in width.

(3) The dimensions of any offshore HVAC booster station forming part of the authorised project must not exceed—

- (a) 90 metres in height when measured from LAT;
- (b) 100 metres in length; and
- (c) 100 metres in width.

(4) The dimensions of any offshore subsea HVAC booster station forming part of the authorised project must not exceed—

- (a) 15 metres in height when measured from the seabed;
- (b) 50 metres in length; and
- (c) 50 metres in width.

(5) Any bridge located on an offshore electrical installation shall be no longer than 100 metres.

(6) Offshore electrical installation foundation structures forming part of the authorised scheme must be one of the following foundation options—

- (a) for offshore type 1 substations, offshore HVAC booster stations and offshore subsea HVAC booster stations either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations or box-type gravity base foundations; and
- (b) for offshore type 2 substations, either monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, jacket foundations, box-type gravity base foundations, pontoon gravity base 1 foundations, or pontoon gravity base 2 foundations.

(7) No offshore electrical installation—

- (a) jacket foundation employing pin piles forming part of the authorised project shall have a pin pile diameter of greater than 4 metres; and
- (b) monopile foundation forming part of the authorised project shall have a diameter greater than 15 metres.

(8) The total seabed footprint area for offshore electrical installation foundations must not exceed—

- (a) 138,900 square metres excluding scour protection; and
- (b) 267,900 square metres including scour protection.

(9) The volume of scour protection material for offshore electrical installation foundations must not exceed 291,200 cubic metres.

(10) The total number of cable crossings when combined with the deemed marine licence granted under Schedule 11 of the Order must not exceed 44, unless otherwise agreed between the undertaker and the MMO.

(11) In the event that Markham's Triangle rMCZ is designated as an MCZ, no more than—

- (a) one substation;
- (b) 27,200 cubic metres of scour protection;
- (c) 41.2 kilometres of interconnector or offshore export cables;
- (d) 41,200 cubic metres of cable protection; and
- (e) 17,370 cubic metres of cable protection associated with cable crossings;

may be located within the boundaries of Markham's Triangle rMCZ.

3.—(1) The total length of the cables and the volume of their cable protection (excluding cable crossings) must not exceed the following—

<i>Work</i>	<i>Length</i>	<i>Cable protection</i>
Work Nos. 2 and 3	1,371 kilometres	1,371,000 cubic metres
Work No. 5	3 kilometres	None

(2) No cable protection by way of concrete mattresses may be used in European Sites or MCZ.

(3) No more than 10% of the length of the cables in Work Nos. 2, 3 and 5 falling within any European Site or MCZ shall be subject to cable protection.

4.—(1) The total length of the cables in Work No.2(c) and the volume of their cable protection when combined with the cable authorised under Work No.1(c) of the deemed marine licence granted under Schedule 11 of the Order must not exceed the following—

<i>Length</i>	<i>Cable protection</i>
1,055 kilometres	1,055,000 cubic metres

(2) Any cable protection authorised under this licence must be deployed within 15 years from the date of the grant of the Order unless otherwise agreed by the MMO.

Phases of authorised development

5.—(1) The authorised development may not be commenced until a written scheme setting out the phases of construction of the authorised project has been submitted to and approved by the MMO.

(2) The phases of construction referred to in paragraph (1) shall not exceed two, save that each phase may be undertaken in any number of stages as prescribed in the written scheme.

(3) The scheme must be implemented as approved.

Maintenance of the authorised development

6.—(1) The undertaker may at any time maintain the authorised development, except to the extent that this licence or an agreement made under this licence provides otherwise.

(2) No maintenance works whose likely effects are not assessed in the environmental statement may be carried out, unless otherwise approved by the MMO.

(3) Maintenance works include but are not limited to—

- (a) offshore electrical installation component replacement;
- (b) offshore electrical installation painting;
- (c) removal of organic build-up;
- (d) cable remedial burial;
- (e) cable repairs;
- (f) replacement of offshore electrical installation anodes; and
- (g) J-tube repair/replacement.

(4) Where the MMO's approval is required under paragraph (2), such approval may be given only where it has been demonstrated to the satisfaction of the MMO that 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 undertaker shall issue to operators of vessels under its control operating within the Order limits a code of conduct to prevent collision risk or injury to marine mammals.

(6) The undertaker shall ensure appropriate co-ordination of vessels within its control operating within the Order limits so as to reduce collision risk to other vessels including advisory safe passing distances for vessels.

Extension of time periods

7. Any time period given in this licence given to either the undertaker or the MMO may be extended with the agreement of the other party.

Notifications and inspections

8.—(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 project.

(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 the completion of the licensed activity.

(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 project 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) on 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 Nos 2, 3, 4 and 5 and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO 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 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.

(11) In case of damage to, or destruction or decay of, the authorised project seaward of MHWS or any part thereof including the exposure of cables the undertaker must as soon as possible and no

later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish and the UK Hydrographic Office. In case of the development of a cable exposure deemed by the undertaker to present a risk to fishing activity, the undertaker must notify the MMO and the Kingfisher Information Service within three working days following the undertaker becoming aware of it.

Aids to navigation

9.—(1) The undertaker must during the whole period from commencement of the licensed activities to completion of decommissioning of the authorised project seaward of MHWS exhibit such lights, marks, sounds, signals and other aids to navigation, and 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 project to completion of decommissioning of the authorised project seaward of MHWS keep Trinity House and the MMO informed of progress of the authorised project seaward of MHWS including the following—

- (a) notice of commencement of construction of the authorised project 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 project.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 14(1)(j) 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 of the authorised project 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 8(11) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

10. The undertaker must colour all structures yellow (colour code RAL 1023) from at least highest astronomical tide to a height directed by Trinity House, or must colour the structure as directed by Trinity House from time to time.

Aviation safety

11.—(1) The undertaker must exhibit such lights, with such shape, colour and character as are required in writing by Air Navigation Order 2016^(a) and determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the Civil Aviation Authority

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, at least 14 days prior to the commencement of the authorised project, in writing of the following information—

- (a) the date of the commencement of construction of the authorised project;
- (b) the date any offshore electrical installations are brought into use;
- (c) the maximum height of any construction equipment to be used;
- (d) the maximum heights of any offshore electrical installations to be constructed;

(a) S.I. 2016/765

(e) the latitude and longitude of each offshore electrical installations 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 authorised project. Copies of notifications must be provided to the MMO.

Chemicals, drilling and debris

12.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised project 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 the Order, by submission of a disposal return by 31 January each year for the months August to January inclusive, and by 31 July 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 the Order limits seaward of MHWS.

(6) The undertaker must ensure that any rock material used in the construction of the authorised project 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 project 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 deposit the authorised deposits within or outside of the Order limits because the safety of human life and/or of the vessel is threatened, within 48 hours full details of the circumstances of the deposit must be notified 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 phase of those activities must not commence until the following (as relevant to that phase) have been submitted to and approved in writing by the MMO in consultation with Trinity House and the MCA—

- (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 which shows, in accordance with the Development Principles—
 - (i) the proposed location, including grid co-ordinates of the centre point of the proposed location for each offshore electrical installation, subject to any micro-siting required due to anthropological constraints, environmental constraints or difficult ground conditions and choice of foundation of all offshore electrical installations;
 - (ii) the height, length and width of all offshore electrical installations;
 - (iii) the length and arrangement of all cables comprised in Work Nos. 2, 3, and 5;
 - (iv) the dimensions of all monopile foundations, mono suction bucket foundations, jacket foundations, gravity base foundations, box-type gravity base foundations, pontoon gravity base 1 foundations and pontoon gravity base 2 foundations;
 - (v) the proposed layout of all offshore electrical installations including any exclusion zones identified under sub-paragraph 14(2)(d); and
 - (vi) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to sub-paragraph 14(2)(d) or relating to any Annex I reefs identified as part of surveys undertaken in accordance with condition 18;

to ensure conformity with the description of Work Nos. 2, 3, 4 and 5 and compliance with conditions 1 to 3 above.

- (b) a construction programme to include details of—
 - (i) the proposed construction start date;
 - (ii) proposed timings for mobilisation of plant delivery of materials and installation works; and
 - (iii) an indicative written construction programme for all offshore electrical installations and electrical circuits comprised in the works at paragraph 2(f) of Part 1 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above);

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 14(1)(f);
 - (ii) advisory safe passing distances for vessels around construction sites;
 - (iii) cable installation;
 - (iv) contractors;
 - (v) vessels and vessels transit corridors;
 - (vi) codes of conduct for vessel operators;
 - (vii) associated ancillary works;
 - (viii) guard vessels to be employed; and
 - (ix) details of means to avoid impacts on European sites.
- (d) a project management plan and monitoring 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 project 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) a biosecurity plan detailing how the risk of introduction and spread of invasive non-native species will be minimised;
 - (iv) waste management and disposal arrangements;
 - (v) a code of conduct for vessel operators;
 - (vi) the appointment and responsibilities of a fisheries liaison officer; and
 - (vii) all spatial data for archaeological exclusion zones and application of a protocol for archaeological discoveries
- (e) a scour protection management plan providing details of the need, type, sources, quantity and installation methods for scour protection, which plan must be updated and resubmitted for approval if changes to it are proposed following cable laying operations.
- (f) proposed pre-construction surveys, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 18, 19 and 20.
- (g) in the event that driven or part-driven pile foundations are proposed to be used, a marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, including details of soft start procedures with specified duration periods following current best practice as advised by the relevant statutory nature conservation bodies.
- (h) a cable specification and installation plan, to include—
- (i) technical specification of offshore 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 sandwave clearance plan for all designated sites affected, including details of the volumes of material to be dredged, timing of works, locations for disposal and monitoring proposals;
 - (iii) a detailed cable laying plan for the Order limits, incorporating a burial risk assessment encompassing the identification of any cable protection that exceeds 5% of navigable depth referenced to Chart Datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised or similar such assessment to ascertain suitable burial depths and cable laying techniques, including cable protection;
 - (iv) a cable protection plan for all designated sites where cable protection is required, including details of the volumes, material, locations and seabed footprints for cable protection measures, where required, consideration of alternative methods of protection and monitoring proposals and provision for review and update of the plan for a period of 15 years from the date of the grant of the Order;
 - (v) proposals for the volume and areas of cable protection to be used for each cable crossing; and
 - (vi) proposals for monitoring offshore cables including cable protection during the operational lifetime of the authorised project which includes a risk based approach to the management of unburied or shallow buried cables, and, where necessary, details of micro-siting through any European Site.
- (i) an 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;

- (j) an aid 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 8 for the lifetime of the authorised project.

(2) The licensed activities or any part of those activities must not commence unless no later than six months prior to the commencement a written scheme of archaeological investigation has been submitted to and approved by the MMO, in accordance with the outline offshore written scheme of investigation, and in accordance with industry good practice, in consultation with the statutory historic body to include—

- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
- (b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
- (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within six months of any survey being completed;
- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones prior to construction;
- (e) monitoring of archaeological exclusion zones during and post construction;
- (f) 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 project, 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;
- (g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised project;
- (h) implementation of the Offshore Renewables Protocol for Reporting Archaeological Discoveries as set out by The Crown Estate; and
- (i) 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.

(3) Pre-construction archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific outline written scheme of investigation (which must accord with the details set out in the outline offshore written scheme of investigation) which has been submitted to and approved by the MMO.

(4) The licensed activities or any part of those activities must not commence until a fisheries coexistence and liaison plan in accordance with the outline fisheries coexistence and liaison plan has been submitted to and approved by the MMO.

(5) In the event that driven or part-driven pile foundations 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 Hornsea Three Southern North Sea Special Area of Conservation Site Integrity Plan has been submitted to the MMO and the MMO is satisfied that the plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that harbour porpoise are a protected feature of that site.

(6) 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) Each programme, statement, plan, protocol or scheme required to be approved under condition 14 (save for that required under condition 14(1)(f)) 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.

(2) The pre-construction monitoring surveys, construction monitoring, post-construction monitoring and related reporting required under condition 14(1)(f) must be submitted in accordance with the following, unless otherwise agreed in writing with the MMO—

- (a) at least four months prior to the first survey, detail of any pre-construction surveys and an outline of all proposed monitoring;
- (b) at least four months prior to construction, detail on construction monitoring; and
- (c) at least four months prior to commissioning, detail of post-construction (and operational) monitoring.

(3) The design plan required by condition 14(1)(a) shall be prepared by the undertaker and determined by the MMO in accordance with the Development Principles.

(4) The MMO shall determine an application for consent made under this article within a period of four months commencing on the date the application is received by the MMO, unless otherwise agreed in writing with the undertaker.

(5) The licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 14, unless otherwise agreed in writing by the MMO.

Offshore safety management

16. No part of the authorised project may commence until the MMO, in consultation with the MCA, has given written approval of an Emergency Response Co-operation Plan (ERCoP) which includes full details of the plan for emergency response and co-operation for the construction, operation and decommissioning phases of that part of the authorised project in accordance with the MCA recommendations contained within MGN543 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (or any equivalent guidance that replaces or supersedes it), and has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that part of the authorised project, adequately addressed all MCA recommendations contained within MGN543 and its annexes.

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 project 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 submit in discharging condition 14(1)(f) submit a monitoring plan or plans in accordance with an in-principle monitoring plan for written approval by the MMO in consultation with the relevant statutory bodies, which shall contain details of proposed surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report, and;

- (a) the survey proposals must be in general accordance with the principles set out in the in-principle monitoring plan and 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 preconstruction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) Subject to receipt from the undertaker of specific proposals pursuant to this Condition the pre-construction surveys must comprise, in outline—

- (a) a high-resolution swath bathymetric survey to include a 100% coverage and a side-scan sonar survey of the parts of the offshore Order limits within which it is proposed to carry out construction works and disposal activities under this licence to—
 - (i) provide a baseline of the seabed environment and bathymetric conditions against which specific post construction marine process monitoring can be undertaken, as set out within the in-principle monitoring plan;
 - (ii) determine the location, extent and composition of any biogenic or geogenic reef features, as set out within the in-principle monitoring plan;
 - (iii) inform future navigation risk assessments as part of the cable specification and installation plan;
 - (iv) inform the identification of any archaeological exclusion zone and post consent monitoring of any such archaeological exclusion zone; and
 - (v) identify and characterise any preferred sandeel habitat.
- (b) a survey (in the parts of the offshore Order limits in which it is proposed to carry out construction works under this licence) to provide a baseline of the benthic environment within designated sites against which specific post construction benthic monitoring can be undertaken, as set out within the in-principle monitoring plan.

(3) Any monitoring report compiled in accordance with the monitoring plans provided under this condition must be provided to the MMO no later than four months following completion of the monitoring to which it relates.

Construction monitoring

19.—(1) The undertaker must in discharging condition 14(1)(f) submit a construction monitoring plan or plans for written approval by the MMO in consultation with the relevant statutory nature conservation body, which shall include details of any proposed construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must be in general accordance with the principles set out in the in-principle monitoring plan and 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) Subject to receipt from the undertaker of specific proposals pursuant to this condition the construction monitoring plan must include in outline details of vessel traffic monitoring by automatic identification system for the duration of the construction period including obligations to report annually to the MMO, Trinity House and the MCA during the construction phase of the authorised development.

(3) The undertaker must carry out the surveys specified within the construction monitoring plan or plans in accordance with that plan or plans unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

Post-construction monitoring

20.—(1) The undertaker must in discharging condition 14(1)(f) submit a post-construction monitoring plan or plans for written approval by the MMO in consultation with the relevant statutory nature conservation body including details of proposed post-construction surveys, including methodologies (including appropriate buffers, where relevant) and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must be in general accordance with the principles set out in the in-principle monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful

and valid comparison with the preconstruction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) Subject to receipt of specific proposals the post-construction survey plan or plans must include, in outline—

- (a) details of a high-resolution swath bathymetric survey to be undertaken no sooner than 6 months following completion of construction works and disposal activities were carried out under this licence to assess recovery of sandwave features within any designated site, and any changes bathymetric profile in designated sites following application of cable protection material. The need for further surveys must be agreed in writing with the MMO following submission of the first year of survey data;
- (b) details of a survey to determine any change in the location, extent and composition of any biogenic or geogenic reef feature identified in the pre-construction survey in the parts of the offshore Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey;
- (c) details of a survey to determine the recovery of any benthic features of ecological importance within designated sites, following cable burial and excavation of HDD exit pits, and to assess degree colonisation of cable protection material as detailed within the in-principle monitoring plan. The survey design must be informed by the results of the pre-construction benthic survey. The need for further surveys must be agreed in writing with the MMO following submission of the first year of survey data;
- (d) details of vessel traffic monitoring by automatic identification system, for a period of 28 individual days taking account seasonal variations in traffic patterns over the course of one year to be submitted to the MMO, Trinity House and the MCA no later than one year following completion of the construction phase of the authorised development;
- (e) details of a full sea floor coverage swath-bathymetry survey of the areas within which construction activity has taken place in order to inform of any dropped objects or residual navigational risk to be submitted to the MMO and MCA;
- (f) a bathymetric survey to monitor the effectiveness of archaeological exclusion zones identified to have been potentially impacted by construction works. The data shall be analysed by an accredited archaeologist as defined in the offshore written scheme of investigation required under condition 14(2);
- (g) a high resolution swath-bathymetric and side scan sonar survey to determine any change in the composition of any preferred sandeel habitat identified in the pre-construction survey in the parts of the offshore Order limits in which sandwave clearance activity has been carried out. The survey design must be informed by the results of the pre-construction benthic survey; and
- (h) a swath bathymetric survey to IHO Order 1a of the installed export cable route and provision of the data and survey report(s) to the MMO, MCA and UKHO.

(3) The undertaker must carry out the surveys specified within the post-construction monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

Timing of monitoring report

21. Any monitoring report compiled in accordance with the monitoring plans provided under conditions 18, 19 and 20 must be provided to the MMO no later than four months following completion of the monitoring to which it relates, unless otherwise agreed with the MMO.

Reporting of impact pile driving

22.—(1) Only when driven or part-driven pile foundations or detonation of explosives are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) prior to the commencement of the licenced activities, information on the expected location, start and end dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Forward Look requirements;
 - (b) at six month intervals following the commencement of pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements;
 - (c) within 12 weeks of completion of impact pile driving/detonation of explosives, information on the locations and dates of impact pile driving/detonation of explosives to satisfy the Marine Noise Registry's Close Out requirements.
- (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.

Reporting of cable protection

23.—(1) Not more than 4 months following completion of the construction phase of the project, the undertaker shall provide the MMO and the relevant SNCBs with a report setting out details of the cable protection used for the authorised scheme.

(2) The report shall 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.

Decommissioning of cable protection within marine protected areas

24.—(1) The obligations under paragraphs (2) and (3) shall only apply if and to the extent that—

- (a) cable protection is installed as part of the authorised project within an area designated as a European Site or MCZ as at the date of the grant of the Order; and
- (b) it is a requirement of the written decommissioning programme approved by the Secretary of State pursuant to sections 105 of the 2004 Act, including any modification to the programme under section 108, that such cable protection is removed as part of the decommissioning of the authorised project;

(2) Within such timeframe as specified within the decommissioning programme approved by the Secretary of State, the undertaker shall carry out an appropriate survey of cables within Work Nos. 2(c), 2(d), 3(c) and 3(d) that are subject to cable protection and that are situated within any European Site or MCZ to assess the integrity and condition of that cable protection and determine the appropriate extent of the feasibility of the removal of such cable protection having regard to the condition of the cable protection and feasibility of any new removal techniques at that time, and submit that along with a method statement for recovery of cable protection to the MMO.

(3) Within such timeframe as specified within the decommissioning programme approved by the Secretary of State, the MMO must confirm whether or not it is satisfied with the method statement pursuant to (2) above.

(4) If the MMO has confirmed it is satisfied pursuant to (3) above, then within such timeframe as specified within the decommissioning programme approved by the Secretary of State, the undertaker shall endeavour to recover the cable protection to the extent identified in the survey and according to the methodology set out in the method statement submitted pursuant to (2) above.

SCHEDULE 13

ARBITRATION RULES

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 37 of the Order.

(2) The Parties will first use their reasonable endeavours to settle a dispute amicably through negotiations undertaken in good faith by the senior management of the Parties. Any dispute which is not resolved amicably by the senior management of the Parties within twenty (20) business days of the dispute arising, or such longer period as agreed in writing by the Parties, shall be subject to arbitration in accordance with the terms of this Schedule.

(3) The Arbitration shall be 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 will be measured in business days and this will exclude weekends, bank and public holidays.

(2) Time periods will be calculated from the day after the Arbitrator is appointed which shall be 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 will be that set out in sub-paragraphs (2) to (4) below unless amended in accordance with paragraph 5(3).

(2) Within 15 days of the Arbitrator being appointed, the Claimant shall 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, and 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 15 days of receipt of the Claimant’s statements under sub-paragraph (2) by the Arbitrator and Respondent, the Respondent shall 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 5 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 Arbitrator shall 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.

(2) 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.

(3) Within 5 days of receiving the last submission, the Arbitrator will notify the parties whether a hearing is to be held and the length of that hearing.

(4) Within 10 days of the Arbitrator advising the parties that he will hold a hearing, the date and venue for the hearing will be fixed by agreement with the parties, save that if there is no agreement the Arbitrator shall direct a date and venue which he considers is fair and reasonable in all the circumstances. The date for the hearing shall not be less than 35 days from the date of the Arbitrator's direction confirming the date and venue of the hearing.

(5) A decision will 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.

(6) There will be no process of examination and cross-examination of experts, but the Arbitrator shall 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) will be that—

- (a) At least 20 days before a hearing, the Arbitrator will provide a list of issues to be addressed by the expert(s);
- (b) If more than one expert is called, they will jointly confer and produce a joint report or reports within 10 days of the issues being provided; and
- (c) The form and content of a joint report shall be as directed by the Arbitrator and must be provided at least 5 days before the hearing.

(7) Within 10 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 shall take these submissions into account in the Award.

(8) 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.

(9) 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.

(10) The Arbitrator's award shall include reasons. The parties shall accept that the extent to which reasons are given shall be 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 shall be no discovery or disclosure, except that the Arbitrator shall have 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 should 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 will notify the parties that the award is completed, signed and dated, and that it will 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 shall 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) Subject to sub-paragraph (3), the Arbitrator will award recoverable costs on the general principle that each party should bear its own costs.

(3) The Arbitrator may depart from the general principle in sub-paragraph (2) and make such other costs award as it considers reasonable where a party has behaved unreasonably as defined within the National Planning Practice Guidance or such other guidance as may replace it.

Confidentiality

7.—(1) Subject to sub-paragraphs (2) and (3), any arbitration hearing and documentation shall be open to and accessible by the public.

(2) The Arbitrator may direct that the whole or part of a hearing is to be private and/or any documentation to be confidential where it is necessary in order to protect commercially sensitive information.

(3) Nothing in this paragraph shall prevent any disclosure of a document by a party pursuant to an order of a court in England and Wales or where disclosure is required under any enactment.

EXPLANATORY NOTE

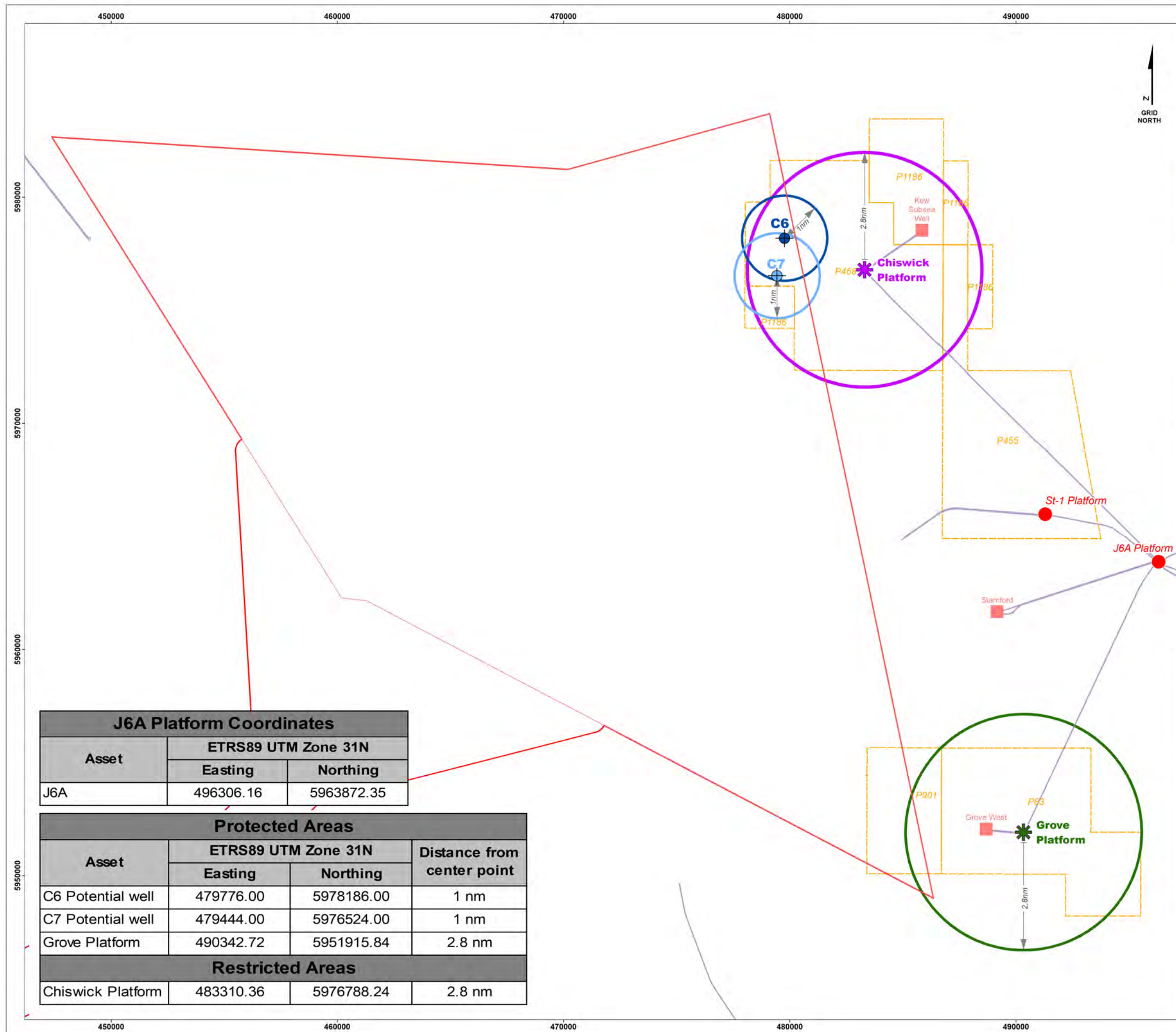
(This note is not part of the Order)

This Order grants development consent for, and authorises the construction, operation and maintenance of an offshore wind farm in the North Sea approximately 121 kilometres to the northeast of the north Norfolk coast and approximately 10 kilometres west of the median line between UK and Netherlands waters together with associated development. This Order imposes requirements in connection with the development and authorises the compulsory purchase of land (including rights in land) and the right to use land and to override easements and other rights.

This Order also grants deemed marine licences under Part 4 of the Marine and Coastal Access Act 2009 in connection with the wind farms. The 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 36 (certification of plans and documents etc) together with a copy of any guarantee or alternative form of security approved by the Secretary of State pursuant to article 43, may be inspected free of charge at the offices of Orsted at 5 Howick Place, London SW1P 1WG.

APPENDIX F: PROTECTIVE PROVISIONS PLAN



Hornsea Three

Order Limits

Array Area

Restricted Area

Chiswick Platform 2.8nm Restricted Area

Protected Area

Protected Area C6

Protected Area C7

Protected Area Grove Platform

Spirit Energy Assets

C6 (Potential well)

C7 (Potential well)

Chiswick Platform

Grove Platform

Active Platforms (Spirit Energy)

Active Sub Surface Infrastructure (Spirit Energy)

Licensed Blocks (Spirit Energy)

Pipelines Offshore

Active Pipeline

Agreement For Lease © Crown Copyright 2019, all rights reserved
Contains Spirit Energy Planned Wells. Spirit Energy, 2019
Contains OS Open data © Crown copyright and database right 2019
Pipelines, Wells, License blocks, Surface & Subsurface Infrastructure © UK Oil & Gas Data, 2019

Reference System : ETRS89
Projection : UTM31N

Scale@A3: 1:165,000
Vertical reference: LAT

0 2 4 6 8 Kilometres

0 1 2 3 4 Nautical Miles

REV	REMARK	DATE
00	Initial Issue	14/03/2019
---	---	---
---	---	---

Hornsea Three
Protective Provisions Plan

Doc no: HOW030325
Created by: XAMIJ
Checked by: KALEY
Approved by: ANGUY