



The Planning Inspectorate Yr Arolygiaeth Gynllunio

The Planning Act 2008

East Anglia One Offshore Wind Farm

Examining Authority's Report of Findings and Conclusions

and

**Recommendation to the
Secretary of State for Energy and Climate Change**

**Gideon Amos OBE RIBA MRTPI
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Panel Member**

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Examining Authority

Date: 18 March 2014

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Examining Authority's findings and conclusions and recommendation in respect of the proposed East Anglia One Offshore Wind Farm and connection works.

File Ref: EN010025

The application, dated 8 November 2012, was made under section 37 of the Planning Act 2008 and was received in full by The Planning Inspectorate on 21 November 2013.

The applicant is East Anglia One Limited.

The application was accepted for examination on 14 December 2012.

The examination of the application began on 25 June 2013 and was completed on 23 December 2013.

The development proposed comprises:

- construction and operation of 325 wind turbine generators (WTGs) with a maximum tip height of 200 metres;
- up to five offshore substations (converter / collector stations); one meteorological mast;
- inter-array cables between the WTGs and the offshore substations and export cables to take the electricity generated by the WTGs to shore;
- onshore electrical works consisting of underground cables running from mean low water at Bawdsey to a new onshore converter station adjacent to the National Grid substation at Bramford in Suffolk;
- and an underground connection between East Anglia One converter station and the National Grid collector station;
- also including the option to lay the cable ducts for future projects, East Anglia Three and Four, from Bawdsey to the location of the future onshore converter stations for East Anglia Three and Four at Bramford.

Summary of Recommendation:

The Panel, as Examining Authority under the Planning Act 2008, recommends that the Secretary of State for Energy and Climate Change should make the Order in the form attached, once the development consent obligation referred to in Chapter 4 has been signed.

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ERRATA SHEET – East Anglia One Offshore Wind Farm – Ref. EN010025

Examining Authority`s Report of Findings and Conclusions and Recommendation to the Secretary of State for the Department of Energy and Climate Change, dated 18 March 2014

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

Page No.	Paragraph	Error	Correction
Report			
14	2.29	“REP-321”	“REP-275”
107	4.330	“[APP-088 Figs 1.1.- 2.2 Appendix E]”	“[APP-088 Figs 14.1 – 14.6 and APP-090 Figs 14.7 – 14.27]”
108	4.333	“DRW”	“DWR”
110	4.342	“REP-318”	“REP-321”
110	4.343	“(Requirement 8 (1) Schedule part 1)”	“(Requirement 8 (1) Schedule part 3)”
170	5.57	“Article 22”	“Article 21”
179	5.103	“(SCG)”	“SoCG”
Appendix E			
		“Emergency Cooperation Plans”	“Emergency Response Cooperation Plans”
		“FHCB”	“FHBC”
		“Marine and Coastguard Agency”	“Maritime and Coastguard Agency”

1 INTRODUCTION

- 1.1 The application, dated 8 November 2012, was made under section 37 of the Planning Act 2008 (PA2008) and was received in full by The Planning Inspectorate on 21 November 2012.
- 1.2 The applicant is East Anglia One Limited [APP-002] whose shareholder is East Anglia Offshore Wind Limited (EAOWL). EAOWL has two parent companies: Vattenfall Wind Power Limited and Scottish Power UK PLC. [APP-189]. The application was accepted for examination on 14 December 2012. The examination of the application began on 25 June 2013 and was completed on 23 December 2013.
- 1.3 The development proposed comprises:
- construction and operation of 325 wind turbine generators (WTGs) with a maximum tip height of 200 metres;
 - up to five offshore substations (converter / collector stations); one meteorological mast;
 - inter-array cables between the WTGs and the offshore substations and export cables to take the electricity generated by the WTGs to shore;
 - onshore electrical works consisting of underground cables running from mean low water at Bawdsey to a new onshore converter station adjacent to the National Grid substation at Bramford in Suffolk;
 - and an underground connection between East Anglia One converter station and the National Grid collector station;
 - also including the option to lay the cable ducts for future projects, East Anglia Three and Four, from Bawdsey to the location of the future onshore converter stations for East Anglia Three and Four at Bramford.
- 1.4 On 28 March 2013 the Secretary of State for Communities and Local Government appointed the following Panel of four Examining Inspectors as the Examining Authority (ExA) for the application under section 65 of the PA 2008 as amended [PD-003]:
- Gideon Amos OBE RIBA MRTPI - Lead Member of the Panel
 - P J 'Jim' Claydon BSc MSc DipTP MRTPI - Panel Member
 - Wendy McKay LLB (Hons) Solicitor (Non-practising) - Panel Member
 - Andrew Mead BSc (Hons) MRTPI MIQ - Panel Member

- 1.5 Except where reporting upon specific decisions or responsibilities devolved to the ExA by the PA2008, the ExA is hereafter described in this Report as the Panel.
- 1.6 This document is the Panel's Report to the Secretary of State for Energy and Climate Change (SSECC). It sets out the Panel's findings and conclusions and the recommendation, as required by s83(1) of PA 2008.
- 1.7 The application project is a Nationally Significant Infrastructure Project (NSIP) as defined by s14(1)(a) and s15 of PA 2008.
- 1.8 The application is Environmental Impact Assessment (EIA) development as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (EIA Regulations). It was accompanied by an environmental statement (ES) which in the view of the Panel met the definition given in Regulation 2(1) of these Regulations. Additional clarifying environmental information was received during the pre-examination stage [REP-132 to REP-135] and during the course of the examination. This is referred to further in the subchapter on Issues in the Examination within Chapter 4. In reaching its recommendation, the Panel has taken into account, according to the terms required by EIA Regulation 3(2), the environmental information as defined in EIA Regulation 2(1) (including the ES and any other information on the environmental effects of the development).
- 1.9 The applicant gave notice [CERT-001] under s56 PA2008 to the persons prescribed that the application had been accepted and gave them an opportunity to make Relevant Representations. It certified [CERT-002] on 11 March 2013 that this had been carried out. 119 Relevant Representations were subsequently received [REP-013 to REP-131].
- 1.10 A list of procedural decisions made by the ExA [PD-001 to PD-017] is shown in the examination library appended to this Report.
- 1.11 A Preliminary Meeting was held on 25 June 2013 at which the applicant and all other interested parties and statutory parties were able to make representations about how the application should be examined. The timetable for the examination [PD-004], a procedural decision of the ExA under Rule 8 of the Infrastructure Planning (Examination Procedure) Rules 2010 (EPR), was issued to interested parties on 4 July 2013. It was accompanied by the ExA's questions in writing and notification of the publication of the note of the Preliminary Meeting.
- 1.12 An onshore inspection of sites to which the application related was carried out at the proposed landfall at Bawdsey, along the proposed cable route and at the site for the substation in the

company of interested parties, on 10 and 11 September 2013 [ASV-01 to ASV-05].

- 1.13 In addition, the Panel conducted and published records of the following unaccompanied onshore site inspections:
- Inspection 1 - Bawdsey Beach to Ramsholt Dock and Great / Little Bealings, on 25 June 2013 [USV-01];
 - Inspection 2 - Falkenham to Somersham Road, Bramford, on 23 July 2013 [USV-02];
 - Inspection 3 - Sub-station and proposed converter station site, Bramford, and related viewpoints on 24 July 2013 [USV-03], and;
 - Inspection 4 - Revisiting sites at Bramford, Martlesham and Burstall, some after dark, following issues raised in relevant representations and at Hearings, on 19 November 2013 [USV-04].
- 1.14 As set out in the timetable for the examination [PD-004], as notified on 5 August 2013 [PD-006] and in order to ensure adequate examination of certain issues (as required under s91 PA2008) an issue specific hearing (ISH) on the draft Development Consent Order (DCO) and Related Matters was held over a number of days to consider the following issues:
- 17 September 2013 - Ornithology, Protected Species and Habitats including Relevant DCO provisions, held at Novotel, Ipswich;
 - 18 September 2013 - Marine and Coastal Processes, Offshore Construction and Phasing; Shipping, Fishing and Navigation Safety; Fishing (Marine), held at Novotel, Ipswich;
 - 19 September 2013 - Onshore Construction Process and Phasing; Onshore Noise and Vibration, held at Novotel, Ipswich;
 - 24 September 2013 - Heritage and Archaeology; Landscape and Visual Impact, held at the Corn Exchange, Town Hall, Ipswich;
 - 25 September 2013 - Traffic and Transport; Drainage and Water Supply, held at Novotel, Ipswich, and
 - 26 September 2013 - Socio Economic Issues and Other Consents required for the Wind Farm to become operational, held at Novotel, Ipswich.

- 1.15 As required under s93 of PA2008, following a request from an interested party, an open floor hearing was held on 12 September 2013 at the Corn Exchange, Town Hall, Ipswich.
- 1.16 As required under s92 of PA2008, following a request from an affected person, a compulsory acquisition hearing was held on 8 October 2013 at Trinity Park, Ipswich.
- 1.17 Under s60 of PA2008 an invitation was issued to the relevant local authorities to submit a Local Impact Report (LIR). A joint LIR was submitted by Suffolk County Council, Mid Suffolk District Council and Suffolk Coastal District Council [REP-231].
- 1.18 The Panel issued one round of written questions on 4 July 2013 [PD-004] and three requests for further information or written comments under Rule 17 of the EPR, which each constituted an amendment to the examination timetable. The requests were issued on 5 August 2013 [PD-007], 9 September 2013 [PD-009] and 29 November 2013 [PD-016]. Issues relating to the status and import of the information received are considered within the Issues in the Examination subchapter of Chapter 4 below.
- 1.19 Under Regulation 5(2)(g) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (APFP), where required, an application must be accompanied with sufficient information to enable the relevant Secretary of State to meet his statutory duties as the competent authority under the Habitats and Marine Regulations¹ relating to European Sites. A Habitats Regulations Assessment (HRA) Report [APP-045] was therefore submitted with the application. In order to inform the Panel's Report and recommendation to the SSECC on the application under s74 of PA 2008 and to provide standalone information for him to carry out his statutory duties, the Panel requested as part of its first written questions [PD-004] that the applicant complete model matrices. These model matrices were available on the Planning Portal website. They were populated with data summarising the screening for likely significant effects and the implications for the integrity of the site. The applicant submitted the matrices to inform the Report on the Implications for European Sites (RIES) [REP-265] at deadline II. The matrices were subsequently updated to produce the RIES as appended to this Report. The RIES compiles, documents and signposts the information received with the application and during the examination of the application [PD-015].
- 1.20 All interested parties were provided [PD-013] on 5 November 2013 (as set out in the timetable for the examination [PD-004])

¹ The Conservation of Habitats and Species Regulations 2010 (as amended); the Habitats Regulations Conservation of Habitats and Species (Amendment) Regulations 2012, the Offshore Marine Conservation (Natural Habitats, etc.) Regulations 2007 (as amended) and the Offshore Marine Conservation (Natural Habitats etc.) (Amendment) Regulations 2012. These regulations define European Sites and are set out further in Chapter 2 below.

with an opportunity to provide comments upon the RIES. A number of comments on the RIES were received and these are available to the SSECC through the Examination Library appended to this Report see REP-322 to REP-340. This information would enable the SSECC to carry out Appropriate Assessment (AA), if required, as part of his statutory duties as the competent authority under the Habitats and Marine Regulations.

- 1.21 In addition to consent under PA2008, a list of the other consents required was provided, by the applicant, as part of the application [APP-047]. An updated account of the other consents required was provided after the hearings [REP-313]. The Panel's consideration of the likelihood that such consents would be forthcoming is reported within the DCO and Other Matters chapter of this Report.
- 1.22 In the course of the examination, a copy of an (unsigned) draft s106 agreement was submitted to support the provision of landscaping works. The conformity of the agreement with National Policy Statement (NPS) policy is considered in the Issues in the Examination subchapter and the need for the agreement is considered in the Landscape and Visual Impact subchapter, both within Chapter 4 below. No other s106 agreements or highways or other legal agreements or unilateral undertakings accompany the proposal.
- 1.23 At the outset of the examination, a certificate was sought under s127² of PA2008 [APP-37]. Acting under delegated authority from the Department for Transport, the Group Manager National Infrastructure appointed the Lead Member of the Panel to make a report on the matter to the Secretary of State for Transport [S127-01]. Written questions were asked about this matter and a hearing date was arranged [PD-004]. However, during the examination agreement was reached between Network Rail and the applicant resulting in the withdrawal of the representations relating to the compulsory acquisition of statutory undertakers land and interests [S127-01 to S127-03]. Given the withdrawal of these representations a certificate was no longer required. Additionally, there was the potential for s127 certificates being required for land in relation to Anglian Water and National Grid. Prior to the hearing, both these Statutory Undertakers withdrew their representations relating to s127 issues before any applications for such certificates were made [S127-04 to S127-06].
- 1.24 In the chapters below the Report sets out, respectively, the main features of the proposal and its site, the legal and policy context, the Panel's findings and conclusions on all important and relevant issues relating to development consent (including where relevant

² Because the relevant provisions (s23) of the Growth and Infrastructure Act 2013 only came into effect for applications made on or after 25 June 2013 the reference to the need for a certificate remained within s127 of PA2008 and continued to be effective in relation to this application.

the adequacy of the environmental assessment), conclusions on compulsory powers applied for and finally the Panel's recommendation to the SSECC. The Order as recommended to be made by the SSECC is attached as an appendix, as are, the Examination Library, lists of Other Consents Required, of Events in the Examination, of abbreviations and the Report on Implications for European Sites.

2 MAIN FEATURES OF THE PROPOSAL AND SITE

THE PRESENT APPLICATION

Details of the applicant and the application

- 2.1 The Application was made by East Anglia One Ltd, a joint venture company owned by Vattenfall Wind Power Ltd and Scottish Power Renewables, for development consent to construct a new offshore wind farm and associated offshore and onshore infrastructure with a total generating capacity of up to 1,200MW.

Description of the Site

- 2.2 The proposed application site for the principal works is on the bed of the North Sea approximately 43.4km off the coast of Suffolk [APP-056]. The closest coastal town is Lowestoft at 45.4km. The principal authorised development (the wind farm itself) would be within the UK's Renewable Energy Zone (REZ) and would lie entirely outside the 22.2km limit (12 nautical mile (nm)) limit of the United Kingdom's territorial waters. The site is 142km from the coast of the Netherlands and 152km from the coast of Belgium.
- 2.3 Water depths within the wind farm site project area range from approximately 31m to 53m below chart datum. The seabed is formed predominantly of sand and gravelly sands. The wind farm would occupy an area of 300km² and would be up to approximately 15km wide in the east-west direction and 34.3km in length in the north-south direction [APP-024 & APP-159]. The Western site boundary adjoins the Bacton-Zeebrugge high pressure gas pipeline. The Eastern boundary is delineated by the International Maritime Organisation deep water shipping route.
- 2.4 An offshore cable route is proposed between the wind farm site above and the landfall site at Bawdsey, Suffolk. The proposed offshore cable corridor would be 73km in length and 9km in width [APP-056] to accommodate 4 individual cables and up to 2 fibre optic cables to Bawdsey, Suffolk.
- 2.5 The onshore site consists of a landfall site at Bawdsey, Suffolk, an onshore cable corridor of 37km in length and 55m wide to accommodate 4 plus 2 cables and up to 8 ducts. It is proposed that the ducts would be used to serve future wind farm projects [APP-181] applications for which have not yet been made. The corridor runs west from the landfall site to the eastern boundary of Ipswich before diverting around the north of the town to a substation site at Bramford, Suffolk.

Description of Principal Works Proposed

- 2.6 The works that would be authorised by the recommended Order are listed in Parts 1 and 2 of Schedule A, within each of which

these works are limited to the extents that they were assessed as recorded in the ES.

- 2.7 The principal works that would take place and for which development consent is required are set out as Work No. 1 in the recommended Order (Schedule A, Part 1, Authorised Development). Proposed Work No.1, was also described in the application version of the DCO and in the ES [APP-028 & APP-048 to APP-178]. Work No.1 would comprise up to 325 wind turbine generators with a maximum blade tip height of up to 200 metres above lowest astronomical tide (LAT), hub height of up to 120 metres above LAT and a rotor diameter of 170 metres. Whilst the ES envisaged up to 5 different foundation types the application draft of the DCO [APP-028] and the recommended Order attached would authorise the fixing of each of the turbines to the seabed by any 1 of 3 foundation types namely, jacket foundation, gravity base foundation or suction caisson. These terms are defined in the interpretation Article 2 of the recommended Order and are further described in the ES documents. The detailed design parameters for the wind turbine generators would be as set out in Requirements 3, 4 and 7 of the recommended Order.
- 2.8 In addition to the above, proposed Work No.1 would comprise up to 3 High Voltage Alternating Current (HVAC) collector substations fixed to the seabed by jacket or gravity base foundations. They would be used to collect power from multiple wind turbine generators and electrically convert it for transmission. The collector stations would be up to 40m by 30m by 60m in size. The parameters for the collector stations would be set out within Requirements 4, 5 and 7.
- 2.9 Work No. 1 would further include up to 1 meteorological monitoring station, described as a meteorological mast in the recommended Order. The mast would be used to collect meteorological and oceanographic data and would be fixed to the seabed by jacket, gravity base, suction caisson or monopile foundations. Page 20 of Chapter 4 of the ES [APP-056] shows a limit of 120m in height above LAT for such masts. However this limit would not be secured by the recommended Order. The Panel was unable to identify the reasons for this. The Marine Management Organisation (MMO) will therefore need to take into account this maximum mast height assessed in the ES in determining the final height of the meteorological mast pursuant to Condition 11(a)(v) of Deemed Marine Licence (DML) Schedule I of the recommended Order. Requirements 4 and 7 set parameters for the meteorological mast.
- 2.10 Also as part of Work No. 1 in the recommended Order up to 680km of inter-array cables would be laid. Requirement 6(4) places a limitation on the amount of cable protection material to be laid in relation to these cables. The inter-array cabling forms Work No1(d) and Requirement 6(2), as proposed by the applicant,

in the recommended Order is that its total length should be no more than 680km. This total length is consistent with the sum total of lengths of inter-array cables listed as assessed on page 21 of Chapter 4 of the ES [APP-056]. It is proposed [APP-056] that the final total length would be determined by final design considerations including the voltage capacity and turbine layout. Requirement 6 would set parameters for the laying of cables.

- 2.11 Determination of the final layout of cables would be by DML (Schedule I) Condition 11(a)(vi) of the recommended Order. However, the ES [APP-056] also shows that the upper limit in terms of voltage of the inter-array cables would be 275kv, exceeding this limit would therefore require further environmental assessment. Final detailed design of aspects of the proposed wind farm structures would be secured by Condition 11 of DML (Schedule I).

Associated Development Proposed: Offshore

- 2.12 Associated development that would take place is set out in Work No. 2 to Work No. 41 of the recommended Order. However, of these only Work Nos. 2 and 3A would be offshore associated development (Schedule A, Part 1, Authorised Development).
- 2.13 This offshore associated development would include up to 2 High Voltage Direct Current (HVDC) offshore converter stations, which would receive generated electricity from the collector stations above Requirement 5(3) of the recommended Order is that they should be a maximum length of 75m and a maximum width of 120m). They would be fixed to the seabed by one of two foundation types (namely jacket foundation or gravity base foundation).
- 2.14 It would also include HVDC subsea export cables between the above converter stations and mean high water spring tide / landfall at Bawdsey, including one or more cable crossings, subject to the limitations imposed by Requirement 6(3) in the recommended Order. These cables are set out as Work No. 3A and the total length of such cabling would be limited to 400km by Requirement 6(1) of the recommended Order.
- 2.15 The ES [APP-056] has assessed the laying of up to two fibre optic cables, maximum 100km long which it states may be embedded in a power cable or bundled alongside one, i.e. with no additional laying operation. These are not specifically identified in the recommended Order. However the Panel finds that minor cabling may be capable of being approved through the discharge of DML Condition 11 in Schedule I of the recommended Order, authorised by the Order as further associated development (k).

Associated Development Proposed: Onshore

- 2.16 The onshore associated development, set out in Work Nos. 3B to 41 inclusive, would principally consist of underground cables running from mean low water at Bawdsey, Suffolk to a new onshore converter station adjacent to the National Grid substation at Bramford and an underground connection between the two substations at Bramford. It would also include the laying alongside the cables of ducts for future offshore wind farm projects, East Anglia Three and Four, from the landfall at Bawdsey to the location of the future onshore converter stations for East Anglia Three and Four also at Bramford, Suffolk.
- 2.17 Associated development would also comprise further associated development as set out in the two paragraphs immediately following Work No. 41 in the recommended Order. This would include, for example, ramps, means of access, fencing and other works the scope of which has been assessed as set out in the ES.

Articles Affecting the Development

- 2.18 Development consent would be granted by Article 3. However, the proposed works set out in the recommended Order would be subject to a range of other provisions in the Order. Article 2 of the application version of the DCO and the recommended Order defines the terms "onshore converter station" and "offshore substation" for example and requirements 3 to 7 set out detailed offshore design parameters.
- 2.19 The HVDC substations would enable high voltage direct current to be used to convey the power output of the offshore wind turbine generators to shore. In response to ExA Question 14.12 to 14.14 [REP-142] the applicant confirmed that the electricity generated would be transferred to the Onshore Converter Station using direct current and the recommended Order would not allow transmission of electricity in alternating current.
- 2.20 Proposed ancillary works are set out in part 2 of Schedule A of the recommended Order and would include temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised development. Buoys, beacons, fenders and other navigational warning or ship impact protection works; and temporary works for the benefit or protection of land or structures affected by the authorised development.

Development described in the environmental statement

- 2.21 For the purposes of the Environmental Impact Assessment (EIA), as set out in the Environmental Statement (ES), the project was assessed against a maximum development envelope of 325 wind turbine generators on jacket, gravity base and suction caisson foundations.

- 2.22 It should be noted that although indicative locations for the offshore structures have been developed and assessed as set out in the ES, the recommended Order would preserve flexibility in the final project design using the Rochdale envelope approach. This is set out in the Explanatory Memorandum [APP-029]. The application for the development using the Rochdale envelope approach, that is in summary, one in which detailed design would be a matter for post consent discharge of requirements and DML conditions, was a matter considered throughout the examination. In particular the Panel examined the adequacy of the ES and the efficacy of requirements and conditions, one of which is brought to the SSECC's attention in the Design and Visual Impact subchapter of this Report.
- 2.23 The application includes works to connect the offshore wind farm to the national grid. Converter stations and subsea export cables and onshore works required to connect the project to the national grid are detailed as Associated Development in Works 2 - 41 of the DCO. Documents 7.4 and 7.5 of the ES [APP-105 to APP-176] include an assessment of these works. In response to the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (APFP Regulation 6(1)(b)(i)) the applicant was required to provide a statement of details of the proposed route and method of installation for the cable. This is present at APP-181.

AMENDMENTS TO THE APPLICATION

- 2.24 Shortly after acceptance of the application and appointment of the ExA, the applicant gave notice that it wished to change the application in a number of respects. The Panel was concerned that if such changes were to include any extensions of the proposed Order Limits the provisions of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (which relate to additional land) could have been engaged with the need for a revised timetable for, and possible extension of, the examination. The ExA therefore decided [PD-003] to ensure sufficient time was available in the run up to the Preliminary Meeting for the applicant to prepare its proposed changes and make a decision on the final extent and form of the application they wished to have examined. This allowed the revised information to be notified to the Panel in advance of the Preliminary Meeting [HE-01] and, if accepted by the ExA, received into the examination as soon as possible after it opened.
- 2.25 Pursuant to this a number of updated documents were explained at the Preliminary Meeting [HE-02]. The Panel made a Procedural Decision at the Preliminary Meeting to accept the documents into the examination [HE-02]. In the event these comprised an updated Book of Reference (BoR) [APP-199 to APP-202] and Supplementary Environmental Information on traffic impacts [REP

132 to REP-135] but did not include any changes to the Order Limits. These were all received on 4 July 2013.

- 2.26 At the first main deadline in the examination, Deadline I, responses to the ExA's questions and written representations were received. At this stage (30 July 2013) revised works plans, land plans, hedgerow plans and access to works plans [REP-221 to REP-229] were received. The applicant's response to Deadline I [REP-142] at paragraph 12.1.3 described two changes to the order limits intended to reduce land take, specifically:

"reduction in the order limits and therefore land temporarily required at the landfall site in order to directly reduce land related impacts (Works 3C and 4)".

"a reduction in the land temporarily required at the Playford CCS site (Work 28B)".

The reduction in land temporarily required at Playford Construction Consolidation Site (CCS) led to a reduction in the Order limits proposed at that location also [see revised Work Plan 22 of 30 in APP-216] as compared with the relevant application Work Plan [APP-014].

- 2.27 All the necessary changes in Order Limits were included in updated Works Plans [APP-215 to APP-219]. Updated versions of Land Plans, other plans and the Book of Reference consequent upon these changes were also submitted [APP-221 to APP-237].
- 2.28 Following consideration of these changes the Panel finds that neither of them constituted a change that renders the application substantially different from that applied for.
- 2.29 A change to the DCO was made at Deadline I on 27 August 2013 [REP-204] splitting the Deemed Marine Licence (DML) into two Licences. One DML (Schedule I of the recommended Order) would licence the wind farm or 'generation assets' and the other DML (Schedule J of the recommended Order) would licence the offshore cable corridor or transmission assets. The principal enforcement body offshore, the MMO, stated that it supported the use of multiple DMLs in the Order [REP-321] and no other objections to this change were raised. The split DMLs contained many of the same provisions as the original DML and thus this was not considered a significant change to the application by the Panel.
- 2.30 On 6 and 9 September 2013, shortly before the hearings, the applicant again submitted a number of changes to the application documents. These comprised revised works plans, land plans, an updated BoR, plot by plot analysis, statement of reasons and other documents [APP-204 to APP-229]. As explained at the hearings [HE-31] by the applicant these had the effect of reducing the land take over which development consent and compulsory powers was sought. They did not have significant effects in terms of changing

the application and the Panel considered they did not constitute a significant change for that reason.

- 2.31 Minor changes, for example a further revised Book of Reference and related documents were submitted for Deadline III on 21 October 2013 [APP-231 to APP-243]. Other minor changes were submitted throughout the examination, particularly revising the proposed DCO in response to representations received. None of these were significant enough to require consultation beyond that which occurs as provided for under the EPR.
- 2.32 At the final stage of the examination a representation [REP-342] from the applicant stated that the number of wind turbine generators proposed in the DCO could be reduced from 325 to 240. However, the letter fell short of proposing such a change. The Panel finds, for the reasons set out in the subchapter on Biodiversity, European Sites and Habitats, that such a reduction is not necessary.
- 2.33 The Panel provided an opportunity, at the time, for all interested parties to comment on these changes to the proposed Order and considered all representations received on them prior to reaching its recommendation in Chapter 6. In summary the Panel concludes, as set out in this Report, that the application as amended by all the changes received is within the scope of the proposals as assessed in the EIA and none are substantive enough to constitute a different application from the one submitted. In addition, given the consultation carried out at the time by the ExA it is considered that all interested parties have had an adequate opportunity to comment upon them before the close of the examination. Therefore the Panel also finds that the SSECC would have power under s114(1) to make an Order in the form recommended.

PLANNING HISTORY

- 2.34 The Local Impact Report (LIR) [REP-231] stated that *"There is no relevant planning history to be described, with the Order Limits encompassing largely greenfield land or watercourses."*
- 2.35 However the LIR continued that *"The development does not directly affect any sites allocated in Local Plans, or for which planning permission has been granted. However, there is a land use conflict with emerging proposals to construct large scale greenhousing on land in Little and Great Blakenham parishes. Sita UK proposes to develop commercial greenhousing, making use of waste heat from the nearby energy from waste plant (currently under construction and due to become operational in December 2014), to cultivate fresh produce."*
- 2.36 The Panel examined the potential conflict of the Sita UK scheme in the examination and inspected the site of the proposed Sita UK

greenhouses [ASV-02 & ASV-05]. On the site inspection the Panel studied a map [ASV-02] showing how both schemes could be accommodated and inspected the area carefully. In a statement of common ground (SoCG) concluded between the applicant and Sita UK [REP-239], it was agreed that the schemes could both be accommodated. No other previous permissions or consents that would conflict with the proposed development were before the Panel. In view of this evidence, the Panel concludes there are no significant planning objections arising from the planning history of the application site.

3 LEGAL AND POLICY CONTEXT

3.1 The assessment of principal issues as set out in the Rule 6 letter [PD-003] set out the Panel's initial assessment of the main issues. This Report sets out in more detail all the important and relevant matters as prepared in the context of the following law and policy.

3.2 The Panel considered that policy in relation to cabling for multiple wind farms constituted a principal issue. The applicant stated in the Cable Statement [APP-181] that the project will:

"include the option to lay the cable ducts for future projects, East Anglia THREE and FOUR, from the landfall at Bawdsey to the location of the future onshore converter stations for East Anglia THREE and FOUR at Bramford, Suffolk".

National Policy Statements (NPSs) EN-1, EN-3 and EN-5 provide the primary basis on which the Panel has reached its findings and conclusions and its recommendation on the application including on associated development included in the application. NPS EN-1 (paragraph 1.4.3) refers to s115 of the PA2008 that allows a development consent order to include consent for development which is associated with a generating station. In April 2013 the Secretary of State for Communities and Local Government issued *"Planning Act 2008: Guidance on associated development applications for major infrastructure projects"* (the AD Guidance) to which Examining authorities must have regard in reaching a view as to whether development constitutes associated development.

3.3 The Associated Development (AD) Guidance (Associated Development Principle 5(iv) on page 3) states that the following issues should be considered in relation to whether overcapacity infrastructure is capable of being associated development:

- whether a future application is proposed to be made by the same or related developer;
- the degree of physical proximity of the proposed application to the current application;
- the time period within which a future application is proposed to be submitted;
- whether impacts of planned future generating stations would be reduced, and
- need for overcapacity.

3.4 The case for the inclusion of ducting for future projects was made primarily in the applicant's document, *"Associated Development Guidance – Onshore Cable Ducts"* [REP -196]. This matter is

considered further in the Main Issues in the Examination subchapter below.

3.5 As set out in NPS EN-1 certain Development Plan policies, if available, need to be considered by the Panel and the SSECC. These include:

- Relevant development plan policies in relation to heritage assets (according to NPS EN-1 paragraphs 5.8.6 and 5.8.13);
- Relevant development plan policies in relation to flooding (according to NPS EN-1 paragraph 5.7.12);
- Relevant development plan policies in relation to Green belts (according to NPS EN-1 paragraph 5.10.4);
- Relevant development plan policies in relation to land use (according to NPS EN-1 paragraphs 5.10.7 and 5.10.13);
- Relevant development plan policies in relation to landscape designations (according to NPS EN-1 paragraphs 5.9.5 and 5.9.14), and
- Policy in development plans in relation to infrastructure connection may be relevant as an obvious reason (referred to in paragraph 4.9.3 of NPS EN-1).

These matters are covered in detail in the Landscape and Visual Impacts subchapter of this Report. The general relevance of Development Plan policies is considered further below.

3.6 The ES Volume 1 Chapter 2 – Policy and Legislative Context [APP-051] and associated figures [APP-052] sets out in detail the applicant's description of the legislative and policy framework that the applicant considers relevant to the proposal.

PLANNING ACT 2008 AS AMENDED

3.7 S104(1) of PA2008 applies "*in relation to an application for an order granting development consent if a national policy statement has effect in relation to development of the description to which the application relates.*" The application is for a Nationally Significant Infrastructure Project, namely an offshore generating station with a gross electrical output capacity of up to 1,200 MW comprising up to 325 wind turbine generators. The Panel finds that the proposal falls within the terms of s14(1)(a) in that it consists of the construction of a generating station and within s15(3) as the capacity exceeds 100 megawatts and therefore that s104 of the PA2008 applies. Furthermore, national policy statements have effect in relation to this application.

- 3.8 S104(2) PA2008 sets out the matters to which the SSECC must have regard in deciding an application submitted in accordance with PA2008. In summary, the matters set out in s104(2) include any relevant NPS, any appropriate marine policy documents, any local impact report and any other matters the SSECC thinks are both important and relevant to the decision.
- 3.9 S104(3) of PA2008 requires that the SSECC must decide the application in accordance with any relevant NPS, except to the extent that the SSECC is satisfied that, in summary, doing so would:
- lead to the United Kingdom being in breach of its international obligations;
 - lead to the SSECC being in breach of any duty imposed on him under any enactment;
 - be unlawful under any enactment; or
 - the adverse impact of the proposed development would outweigh its benefits, or
 - that any prescribed condition for deciding the application otherwise than in accordance with the NPS would be met.
- 3.10 This Report sets out the Panel's findings and conclusions and recommendation taking these matters fully into account.

NATIONAL POLICY STATEMENTS

- 3.11 The NPSs most relevant to this application are EN-1, EN-3, and EN-5 which were designated by the SSECC on 19 July 2011 in accordance with s5 of PA2008. They therefore provided the primary basis for the Panel's examination of the application.

Overarching NPS for Energy (EN-1)

- 3.12 This NPS sets out national policy for energy infrastructure, including the role of offshore wind which is expected to provide the largest single contribution towards the 2020 renewable energy targets. Part 4 of EN-1 makes clear that the assessment of applications for energy NSIPs "*should start with a presumption in favour of granting consent*" and sets out the assessment principles to be applied. The Panel has applied the tests set out in EN-1 as one of the primary basis for its examination of the application.
- 3.13 Section 4.2 of NPS EN-1 sets out the policy principles applicable to the use of a Rochdale envelope approach in energy development consenting. It states: "*[w]here some details [of a proposal] are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and*

assess, on that basis, the effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed."

- 3.14 NPS EN-1 (paragraph 5.3.5) summarises the government's biodiversity strategy objectives as follows:

"A halting, and if possible a reversal, of declines in priority habitats and species, with wild species and habitats as part of healthy, functioning ecosystems," and

"The general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies."

- 3.15 NPS EN-1 goes on to suggest that decision-makers should consider these objectives in the context of climate change, where, *"failure to address this challenge will result in significant adverse impacts to biodiversity"*. This policy direction is relevant to a renewables/low carbon generation project such as the proposal considered in this Report. The decision-maker is enjoined (paragraphs 5.3.7-5.3.8) to

"avoid significant harm to biodiversity", whilst ensuring that, "appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity: and to biodiversity and geological interests within the wider environment".

- 3.16 NPS EN-1 is clear in this regard that the most important tier of biodiversity sites are those identified through the means of international conventions and European Directives. Decision-makers are also enjoined to afford the same tier of protection to candidate Special Areas of Conservation, potential Special Protection Areas (pSPAs) and to listed Ramsar sites,

- 3.17 For development with impacts on the marine environment decision-makers are bound by duties imposed under sections 125 and 126 of the Marine and Coastal Access Act 2009. Therefore, decision-makers must have regard to the effects of a proposal on any Marine Conservation Zone (MCZ) as may be relevant. The NPS requires decision-makers to have regard to sites that are protected nationally, regionally and locally for their biodiversity significance. The NPS also draws attention to the need to safeguard the interests of other habitats and species that have their own, sometimes individual protection, under a range of legislative provisions.

- 3.18 Where harm is unavoidable NPS EN-1 (paragraph 5.3.18) suggests that the applicant should include appropriate mitigation, discussed in the following terms:

"during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;

during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;

habitats will, where practicable, be restored after construction works have finished, and

opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site ..."

- 3.19 Further aspects of NPS EN-1 are referred to as relevant throughout this Report.

NPS for Renewable Energy Infrastructure (EN-3)

- 3.20 This NPS sets out additional policy specific to renewable energy applications, including proposed offshore wind generation stations exceeding 100MW. Section 2.6 of EN-3 sets out detailed assessment principles for offshore wind proposals, and these have been applied by the Panel as one of the primary bases for its examination of the application.

- 3.21 Section 2.6 of NPS EN-3 goes on to consider the implications of the Rochdale envelope approach in the context of renewable energy development. As a matter of policy, NPS EN-3 makes clear that matters such as the below may not be able to be specified precisely in an application. Nor is this an exclusive list:

"precise location and configuration of turbines and associated development;

foundation type;

exact turbine tip height;

cable type and cable route, and

exact locations of offshore and/or onshore substations..."

The NPS provides them as an example, but does not seek to closely prescribe which matters must be precisely assessed and which matters are capable of assessment within a more flexible Rochdale envelope based approach.

- 3.22 NPS EN-3 sets out more detailed considerations relevant to offshore wind farms. In terms of generic impact, NPS EN-3 makes clear that the designation of an area as a Natura 2000 site (a European site) *"does not necessarily restrict the construction or*

operation of offshore wind farms in or near that area” (paragraph 2.6.69). It makes clear that mitigation should be considered in terms of the careful design of the development itself and of the construction techniques employed. Ecological monitoring is likely to be appropriate, both to enable the better management of the proposal itself and also given the lack of scientific knowledge to provide further useful information relevant to the management of future projects.

- 3.23 In terms of impacts on birds, NPS EN-3 policy considerations relevant to this project include (paragraph 2.6.101) effects relating to:
- collisions between birds and rotating blades;
 - bird disturbance due to construction activities;
 - bird displacement during the operational phase, resulting in the loss of foraging areas, and
 - impacts on bird flight-lines and associated increased energy use by birds.
- 3.24 The use of collision-risk modelling and policy on the approach to be taken by decision-makers to such analysis, is considered in full in the NPS. It is a widely used predictive technique in assessing the impact of offshore wind farms on birds.
- 3.25 NPS EN-3 policy also identifies however that it has been possible to locate wind farms in ecologically sensitive areas following careful siting of turbines and that mitigation is possible through careful design. It does however caution against the use of shut down routines to mitigate seasonal collision impacts as *"unlikely to offer suitable mitigation."*
- 3.26 In terms of impacts on marine mammals, NPS EN-3 policy considerations relevant to this project include effects relating to (paragraph 2.6.92):
- feeding areas;
 - migration or commuting routes;
 - baseline noise levels;
 - predicted construction and operational noise levels, and
 - the duration of any potentially disturbing activity.
- 3.27 Decision-makers are asked to pay close regard to the proposed methods of construction and decommissioning, particularly ensuring that foundation design and piling are managed to

minimise significant disturbance effects on marine mammals, also having regard to the potential for in-combination effects with other projects. The conservation status of marine European and other protected species (and therefore the relative significance of disturbance to them) is a relevant consideration.

- 3.28 The NPS highlights that, once construction is complete, sub-sea structures such as offshore wind farm foundations are not considered to pose a high risk to marine mammals due to collisions. It suggests that the key mitigation measures for marine mammals are likely to be implemented during the construction phase, including monitoring for the presence of key species prior to start-up, and using routines such as soft start-up for piling.
- 3.29 Further aspects of NPS EN-3 are referred to as relevant throughout this Report.

NPS for Electricity Networks Infrastructure (EN-5)

- 3.30 This NPS (paragraph 1.8.1 and 1.8.2) sets out policy relevant to electricity transmission (400Kv and 275Kv) and distribution systems from transmission systems to the end user (130Kv to 230Kv). It also covers substations and converter stations. The NPS is therefore relevant to this application insofar as it applies to sub-sea interconnecting cables, sub-sea export cables, onshore undergrounded cables, offshore collector stations and converter stations and the onshore converter station.
- 3.31 The Panel notes that NPS EN-5 paragraphs 1.8.1 and 1.8.2 indicates that this NPS does not cover the offshore collector substations and inter-array cabling that forms part of the principle development (Work No 1 in Part 1 of Schedule A of the recommended Order) because the NPS is directed at associated development. However, the Panel finds no conflict between these elements of the principal works and the provisions of NPS EN-5. The final bullet point in paragraph 12 of the Department for Communities and Local Government (DCLG) Guidance on associated development applications for major infrastructure projects (April 2013) indicates that infrastructure such as substations is capable of being either integral to a project or associated development, depending on a number of considerations.
- 3.32 EN-5 section 2 sets out additional technology-specific considerations on the following generic impacts:
- biodiversity and geological conservation;
 - landscape and visual; and
 - noise and vibration.

- 3.33 In addition, EN-5 specifically identifies electric magnetic fields (EMF) as a consideration to be taken into account, but advises in paragraph 2.10.16 that: *"Where EMF exposure is within the relevant public exposure guidelines, re-routeing a proposed overhead line purely on the basis of EMF exposure, or undergrounding a line solely to further reduce the level of EMF exposure are unlikely to be proportionate mitigation measures."*
- 3.34 EN-5 also provides a simplified route map for dealing with EMF identifying that evidence should be provided that the line complies with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) limits at the nearest residential property.
- 3.35 The Noise, Electro-magnetic Field and Health Impacts subchapter of Chapter 4 sets out the Panel's findings and conclusions on these issues.

PRECEDENT ORDERS

- 3.36 The Panel was aware of the Orders made to date under the PA2008. Some precedents from these Orders were placed before the Panel, these are considered in the DCO chapter of this Report. One direct precedent is that the definition of *"maintain"* in Article 2 of the recommended Order is drawn from the SSECC's Triton Knoll Offshore Wind Farm Order 2013.

EUROPEAN DIRECTIVES & RELATED UK REGULATIONS

Renewable Energy Directive 2009

- 3.37 The Renewable Energy Directive sets out legally binding targets for Member States with the expectation that by the year 2020, 20% of the European Union's energy mix and 10% of transport energy will be generated from renewable energy sources. The UK's contribution to the 2020 target is that by then 15% of energy will be from renewable sources. The UK Renewable Energy Strategy 2009 (Renewable Energy Strategy) sets out how the UK proposes to meet the targets.

Habitats Directive (Council Directive 92/43/EEC)

- 3.38 The Habitats Directive (together with the Council Directive 79/409/EEC on the conservation of wild birds (Wild Birds Directive)) forms the cornerstone of Europe's nature conservation policy. It is built around two pillars: the Natura 2000 network of protected sites and the strict system of species protection. The directive protects over 1000 animals and plant species and over 200 habitat types (for example: special types of forests; meadows; wetlands; etc.), which are of European importance.

Birds Directive (Council Directive 2009/147/EC)

- 3.39 The Wild Birds Directive is a comprehensive scheme of protection for all wild bird species naturally occurring in the European Union. The directive recognises that habitat loss and degradation are the most serious threats to the conservation of wild birds. It therefore places great emphasis on the protection of habitats for endangered as well as migratory species. It requires classification of areas as Special Protection Areas (SPAs) comprising all the most suitable territories for these species. Since 1994 all SPAs form an integral part of the Natura 2000 ecological network.
- 3.40 The Wild Birds Directive bans activities that directly threaten birds, such as the deliberate killing or capture of birds, the destruction of their nests and taking of their eggs, and associated activities such as trading in live or dead birds. It requires Member States to take the requisite measures to maintain the population of species of wild birds at a level which corresponds, in particular, to ecological, scientific, and cultural requirements while taking account of economic and recreational requirements.
- 3.41 The applicant submitted an Appropriate Assessment Report with the application [APP-045] that identified the following sites – all Special Protection Areas (SPAs) - and also identified key species to be included within the assessment:
- The Outer Thames Estuary SPA;
 - Flamborough Head and Bempton Cliffs (FHBC) SPA;
 - The Alde-Ore Estuary SPA (also Ramsar site and Sites of Special Scientific Interest - SSSIs), and
 - The Deben Estuary SPA (also Ramsar site and SSSI).

The proposed extension to the FHBC SPA is referred to in the subchapter on Biodiversity, European Sites and Habitats below.

- 3.42 Further to this, as a result of the Panel's request under Rule 17 of 5 August, the applicant submitted further information on Habitats Regulations Assessment [REP -252]. These matters are considered in the relevant subchapter below.

Conservation of Habitats and Species Regulations 2010 (as amended) the Habitats Regulations

Conservation of Habitats and Species (Amendment) Regulations 2012

- 3.43 The Conservation of Habitats and Species Regulations 2010 replaced The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) in England and Wales. The Conservation of Habitats and Species Regulations 2010 (which are the principal

means by which the Habitats Directive is transposed in England and Wales) updated the legislation and consolidated all the many amendments which have been made to the regulations since they were first made in 1994.

- 3.44 The Conservation of Habitats and Species Regulations 2010 apply in the terrestrial environment and in territorial waters out to 12 nautical miles. The EU Habitats and Wild Birds Directives are transposed in UK offshore waters by separate regulations – The Offshore Marine Conservation (Natural Habitats &c.) Regulations 2007 (as amended).
- 3.45 The Conservation of Habitats and Species (Amendment) Regulations 2012 came into force on 16 August 2012.
- 3.46 These Regulations amend the Habitats Regulations. They place new duties on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds. They also make a number of further amendments to the Habitats Regulations to ensure certain provisions of Directive 92/43/EEC (the Habitats Directive) and Directive 2009/147/EC (the Wild Birds Directive) are transposed clearly.

Offshore Marine Conservation (Natural Habitats, etc.) Regulations 2007 (as amended)

Offshore Marine Conservation (Natural Habitats etc.) (Amendment) Regulations 2012

- 3.47 The Offshore Marine Conservation (Natural Habitats, etc.) Regulations 2007 (as amended) (the 2007 Offshore Habitats Regulations) transpose the Habitats and Wild Birds Directives (see above) into national law. They came into force on 21 August 2007. These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles (nm), within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area. The Habitats Regulations form the legal basis for the implementation of the Habitats Directive and Birds Directive in terrestrial areas of the UK and territorial waters out to 12 nm.
- 3.48 The Offshore Habitats Regulations fulfil the UK's duty to comply with European law beyond inshore waters and ensure that activities regulated by the UK that have an effect on important species and habitats in the offshore marine environment can be managed. Under these Regulations, any competent authority has a general duty, in the exercise of any of their functions, to have regard to the EU Habitats and Wild Birds Directives.
- 3.49 The Offshore Marine Conservation (Natural Habitats, etc.) (Amendment) Regulations 2012 came into force on 16 August 2012.

- 3.50 The Offshore Marine Conservation (Natural Habitats, etc.) (Amendment) Regulations 2012 amend the 2007 Offshore Habitats Regulations. They place duties on competent authorities in relation to the offshore marine area, to take steps to meet the objective of preserving, maintaining and re-establishing habitats for wild birds, and use all reasonable endeavours to avoid any pollution or deterioration of habitats for wild birds. They also provide for a duty on the Secretary of State to take such steps to encourage research and scientific work relating to the offshore marine area as s/he considers necessary for the purpose of the protection, management and use of wild bird populations.
- 3.51 Wherever an application for Development Consent has the potential to have a significant effect on the conservation objectives of a Natura 2000 site, whether directly or in-combination with other plans or projects, the 2007 Offshore Habitats Regulations require that an Appropriate Assessment (AA) is undertaken by the competent authority (Regulation 61(1) of the Habitats Regulations) prior to any decision being made. Under the Habitats Regulations, an application can only be consented where it can be demonstrated that there will be no adverse effect on the integrity of a Natura 2000 site.

Water Framework Directive

- 3.52 On 23 October 2000, the "Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy" or, in short, the EU Water Framework Directive (WFD), was adopted.
- 3.53 The WFD was published in the Official Journal (OJ L 327) on 22 December 2000 and entered into force the same day. Some amendments have been introduced into the Directive since 2000³.
- 3.54 Twelve "Water notes" which intend to give an introduction and overview of key aspects of the implementation of the Water Framework Directive are available to download⁴.
- 3.55 NPS EN-1 at paragraph 5.15.3 states that an ES should describe:
- "Existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics; and any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive."*
- 3.56 The applicant describes and justifies their water quality data in ES Chapter 7 – Marine Water Quality [APP-068]. The Panel has given

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:02000L0060-20090625:EN:NOT>

⁴ http://ec.europa.eu/environment/water/participation/notes_en.htm

further consideration to these matters in the Drainage and Water Supply subchapter of Chapter 4 of this Report.

European Marine Strategy Framework Directive

- 3.57 The Marine Strategy Framework Directive⁵ (MSFD) forms the environmental pillar of the Integrated European Marine Policy which aims to provide a coherent legislative framework for the joined-up governance of the marine environment. It sets a primary aim of achieving “good environmental status” of European Seas by 2020.
- 3.58 The MSFD is transposed into UK legislation through the Marine Strategy Regulations 2010. Key requirements of the legislation are the:
- “establishment of a monitoring programme to measure progress toward Good Environmental Status (as defined by 11 high level descriptors) by July 2014 and;*
- establishment of a programme of measures for achieving Good Environmental Status by 2016.”*
- 3.59 The Panel has therefore had regard to the MSFD in its examination of the application.

UK/ENGLISH & WELSH PRIMARY LEGISLATION

MARINE & COASTAL ACCESS ACT 2009

- 3.60 The Marine and Coastal Access Act 2009 (MCA Act) introduced the production of marine plans and designation of Marine Conservation Zones (MCZ) in UK waters as well as establishing the Marine Management Organisation (MMO). The UK Marine Policy Statement (MPS) and marine planning are dealt with below. Under the MCA Act the Secretary of State for Environment Food and Rural Affairs designated, on 21 November 2013, 27 MCZs around the English coast to form part of a network of Marine Protected Areas (MPAs). Further designations are proposed in two phases over the next three years. No designated MCZs would be affected by the proposed development. The Marine Management Organisation (MMO) is responsible for enforcing against the general offence of damaging an MCZ. The MMO has no role in final decisions regarding MCZ site selection process and proposed MCZs are put forward to the Department for Environment, Food and Rural Affairs (DEFRA) for decision. At present there are 27 designated MCZ’s (the first tranche) with further tranches due to follow, although no details of these further tranches were available at the time of examination. The closest designated MCZ in relation to the

⁵ Directive 2008/56/EC establishing a framework for community action in the field of marine environmental policy

proposed development is the Blackwater, Crouch, Roach and Colne Estuary MCZ. In their SoCG [REP-237] the MMO confirmed its agreement with the applicant that impacts on the first tranche of MCZs are not predicted to occur as a result of the development proposed.

UK Marine Policy Statement

- 3.61 The UK Marine Policy Statement (MPS) was prepared and adopted for the purposes of s44 of the Marine and Coastal Access Act 2009 and was published on 18 March 2011 by all the UK administrations as part of a new system of marine planning being introduced across UK seas.
- 3.62 The MPS is the framework for preparing Marine Plans and taking decisions affecting the marine environment. It contributes to the achievement of sustainable development in the UK marine area. The UK marine area includes the territorial seas and offshore area adjacent to the UK, which includes the area of sea designated as the UK Exclusive Economic Zone (the Renewable Energy Zone until the Exclusive Economic Zone comes into force) and the UK sector of the continental shelf. It includes any area submerged by seawater at mean high water spring tide, as well as the tidal extent (at mean high water spring tide) of rivers, estuaries and creeks⁶.
- 3.63 The MPS is the framework for marine planning within the UK. It provides the high level policy context, within which national and sub-national Marine Plans will be developed, implemented, monitored, amended and will ensure appropriate consistency in marine planning across the UK marine area. The MPS also sets the direction for marine licensing and other relevant authorisation regimes.
- 3.64 The MPS has provided the overarching policy context for the Panel's consideration of the application offshore works and Deemed Marine Licence (DML). Under s104(2)(aa) of PA2008 the SSECC must have regard to "*the appropriate marine policy documents...*". This is the MPS and any relevant marine plan.

East Inshore and East Offshore Marine Plans

- 3.65 The planning process for the East Marine Plans began on 1 April 2011 and the plans are yet to be adopted, therefore they remain in draft form. Chapter 1 paragraph 10 of the Draft East Inshore and East Offshore Marine Plans states that "*these draft marine plans do not come into effect until they are adopted by the Secretary of State and published. In the meantime applications for consents will be determined in accordance with the MPS and relevant NPSs, but, in line with case law based on the terrestrial*

⁶ See Marine and Coastal Access Act 2009 s.42(3) and (4)

planning system, these draft plans, may need to be taken into account as relevant considerations." The Panel has taken this into account.

- 3.66 The East Inshore and East Offshore areas are the first areas in England to be selected for the production of marine plans. The East Inshore area includes a coastline that stretches from Flamborough Head to Felixstowe. The offshore elements of the proposed East Anglia One wind farm will be entirely within the areas covered by the marine plans.
- 3.67 The Panel notes that the plans contain a number of objectives and policies that must be taken into consideration. Particularly Objective 3 at paragraph 52, which states that the plan should:
- 3.68 *"realise sustainably the potential of renewable energy, particularly offshore wind, which is likely to be the most significant transformational economic activity over the next 20 years in the East marine plan areas, helping to achieve the UK's energy security and carbon reduction objectives."*
- 3.69 Policies elaborate the 10 objectives of the plans and cover economic growth and employment benefits, renewable energy, support for communities, conservation of heritage assets and seascape, conservation of the marine ecosystem, protection of and recovery of biodiversity, support for MPAs, support for climate change adaptation and mitigation and integration with other plans. The draft policies are consistent with the Marine Policy Statement and have been taken into account in the examination of this proposal.

NATIONAL PARKS & ACCESS TO THE COUNTRYSIDE ACT 1949

- 3.70 The National Parks and Access to the Countryside Act 1949, as amended, provides the framework for the establishment of National Parks and Areas of Outstanding Natural Beauty (AONBs). It also establishes powers to declare National Nature Reserves, to notify Sites of Special Scientific Interest (SSSIs) and for local authorities to establish Local Nature Reserves.
- 3.71 A National Park and/or AONB have statutory protection in order to conserve and enhance the natural beauty of its landscape. National Parks and/or AONBs are designated for their landscape qualities. The purpose of designating a National Park and/or AONB is to conserve and enhance their natural beauty; including landform, geology, plants, animals, landscape features and the rich pattern of human settlement over the ages.
- 3.72 Section 5 of the Act requires that -

"(1) The provisions of this Part of this Act shall have effect for the purpose—

(a) of conserving and enhancing the natural beauty, wildlife and cultural heritage of the areas specified in the next following subsection; and

(b) of promoting opportunities for the understanding and enjoyment of the special qualities of those areas by the public."

- 3.73 Following the Sandford Committee's Review of National Parks, s11A (2) of the Act, an amendment in the Environment Act 1995, now requires that -

"In exercising or performing any functions in relation to, or so as to affect, land in a National Park, any relevant authority shall have regard to the purposes specified in subsection (1) of section five of this Act and, if it appears that there is a conflict between those purposes, shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the area comprised in the National Park."

- 3.74 In relation to this application, the Panel has given consideration to the effects of the proposed application on the Suffolk Coasts and Heaths AONB, both in terms of landscape value and ecological matters. The Biodiversity matters and the Landscape value issues are detailed in the relevant subchapters of this Report. Further consideration of the statutory provisions that apply in relation to AONBs is set out in the text below on the Countryside and Rights of Way Act 2000. There are no designated National Parks within the vicinity of the development.

WILDLIFE & COUNTRYSIDE ACT 1981

- 3.75 The Wildlife and Countryside Act 1981 (as amended) is the primary legislation which protects animals, plants, and certain habitats in the UK. The Act provides for the notification and confirmation of SSSIs. These sites are identified for their flora, fauna, geological or physiographical features by the countryside conservation bodies (in England, Natural England). The Act also contains measures for the protection and management of SSSIs.
- 3.76 The Act is divided into four parts: Part I relating to the protection of wildlife, Part II relating to designation of SSSIs and other designations, Part III on public rights of way and Part IV on miscellaneous provisions. If a species protected under Part I is likely to be affected by development, a protected species license will be required from Natural England.
- 3.77 This has relevance to consideration of impacts on SSSIs and on protected species and habitats. Designated SSSIs are listed at paragraph 41 of ES Chapter 24 – Ecology and Ornithology [APP-117]. As detailed in paragraph 189 of that document the cable route crosses the Bawdsey Cliff SSSI and the Deben Estuary Ramsar, Special Protection Area and SSSI. Further consideration

in relation to the impacts upon protected species is set out in Chapter 4 of this Report.

COUNTRYSIDE & RIGHTS OF WAY ACT 2000

- 3.78 The Countryside and Rights of Way Act brought in new measures to further protect AONBs, with new duties for the boards set up to look after AONBs. These included meeting the demands of recreation, without compromising the original reasons for designation and safeguarding rural industries and local communities.
- 3.79 The role of local authorities was clarified, to include the preparation of management plans to set out how they will manage the AONB asset. There was also a new duty for all public bodies to have regard to the purposes of AONBs. The Act also brought in improved provisions for the protection and management of SSSIs.
- 3.80 This is relevant to the examination of effects on and mitigation in relation to impacts on any AONB affected by the proposed development. Chapter 29 of the ES, paragraph 118 [APP-162] sets out that "*approximately 11.7km (33%) of the cable route is through Suffolk Coasts and Heaths Area of Outstanding Natural Beauty (AONB)*".
- 3.81 The Panel considers the effects of the proposed development on AONBs regarding landscape and visual effects in Chapter 4 of the Report.

NATURAL ENVIRONMENT & RURAL COMMUNITIES ACT 2006

- 3.82 The Natural Environment and Rural Communities Act (NERC) made provision for bodies concerned with the natural environment and rural communities, in connection with wildlife sites, SSSIs, National Parks and the Broads. 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.
- 3.83 This is of relevance to biodiversity, biological environment and ecology and landscape matters in the proposed development, reported in Chapter 4.

TRANSBOUNDARY EFFECTS

- 3.84 Under Regulation 24 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (EIA Regs), which transposes Article 7 of EU Directive 85/337/EEC (as amended) into UK Law as it applies to the PA2008 regime, and on the basis of the information available from the applicant, the SSCLG was of the view that the proposed development was likely to have significant effects on the environment in another European Economic Area (EEA) State.

- 3.85 In reaching this view the SSCLG applied the precautionary approach (as explained in the Planning Inspectorate Advice Note 12: Transboundary Impacts Consultation). Transboundary issues consultation under Regulation 24 of the EIA Regulations was therefore considered necessary in relation to Belgium and Netherlands: SACs (marine mammals); Natura 2000 sites (birds), commercial fisheries and navigation. France, Germany, Norway and Denmark: Natura 2000 sites, commercial fisheries and navigation.
- 3.86 In accordance with Regulation 24 of the EIA Regulations, the Planning Inspectorate (on behalf of the SSCLG) published a notification in the London Gazette on 16 March 2012 which provided information to EEA States, including Belgium, Netherlands, France, Germany, Norway and Denmark, about the proposed project and its likely significant effects, and asked the EEA States to indicate by 27 April 2012 whether or not they wished to participate in the procedure for examining and determining the application under PA2008 and Regulation 24 of the EIA Regulations. Regulation 24 of the EIA Regulations transposes Article 7 of EU Directive 85/337/EC, as amended into UK Law.
- 3.87 Letters were also sent to the relevant bodies in the countries listed above. Replies were received from Germany (Bundesamt für Seeschifffahrt und Hydrographie) [TB-01], Netherlands (Ministerie van Infrastructuur en Milieu) [TB-02] and Norway (Ministry of the Environment) [TB-03]. Norway raised the issues of the impacts on migrating species, of possible impacts on Norwegian fishing interests, and pointed out that a cumulative impact assessment should be taken into account.
- 3.88 The Panel agrees with the SSCLG and also finds that the proposed development is likely to have significant effects on the environment in the EEA State identified above. The Panel therefore considered the replies to the SSCLG received as above, making them examination documents. Representatives of both the Government of the Netherlands and of the Netherlands' fishing industry were invited to the Preliminary Meeting, became interested parties to and took part in the examination.
- 3.89 The representations made by the above Government bodies and by other interested parties based within these nations [for example REP-074] have been taken into account in the examination by the Panel, in the context of the ongoing duty of the SSECC to have regard to transboundary matters as set out in Regulation 24 of the EIA Regs.

UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY 1992

- 3.90 As required by Regulation 7 of the Infrastructure Planning (Decisions) Regulations 2010, the Panel has had regard to this Convention and in particular Article 14 in its consideration of the likely impacts of the proposed development and appropriate objectives and mechanisms for mitigation and compensation. In particular the Panel finds that compliance with the UK provisions on environmental impact assessment and transboundary consultation, referred to above, satisfies, with regard to impacts on biodiversity, the requirements of Article 14.

LOCAL IMPACT REPORT

- 3.91 In deciding the application the SSECC, under s104(2)(b) PA2008, must have regard to any local impact report.
- 3.92 There is also a requirement under s60(2) of PA2008 to give notice in writing to each local authority falling under s56A inviting them to submit Local Impact Reports (LIRs). This notice was given via the Rule 8 letter on 4 July 2013 [PD-004].
- 3.93 A joint Local Impact Report was submitted by Suffolk County Council, Suffolk Coastal District Council and Mid-Suffolk District Council [REP-231]. The principal matters raised in the LIR are:
- Support for the applicant's use of ducting overcapacity but concern that this is fixed in the DCO;
 - Impacts on air quality and noise and vibration arising from the construction phase;
 - Minimising the ecological impacts of the development via mitigation;
 - The effect on coastal processes adjacent to the cable landfall point;
 - Flooding and surface water runoff;
 - Effects on the historic environment including listed buildings;
 - The special landscape characteristics of the AONB;
 - Highways and traffic;
 - Loss of agricultural land and disruption to agricultural activities, and
 - The project's potential for creating localised socio-economic benefits.

3.94 The Panel have had regard to all these matters raised in the Local Impact Report, as referred to and considered in the relevant sections of this Report.

THE DEVELOPMENT PLAN

3.95 Para 4.1.5 of NPS EN-1 indicates that the decision-maker may consider Development Plan Documents (DPDs) or other documents in the Local Development Framework (LDF) both important and relevant to his consideration of the application.

3.96 In paragraph 94 of ES Volume 1 Chapter 2 Policy and Legislative Context [APP-051] the applicant states that the onshore cable route falls under the jurisdiction of Suffolk County Council, Suffolk Coastal District Council and Mid-Suffolk District Council. In addition, the local plan policy of Babergh District Council and Ipswich Borough Council is of relevance due to their proximity. Table 2-1 sets out a list of relevant local plans, which comprise:

- Mid-Suffolk District Council – Adopted Core Strategy DPD (2008);
- Relevant saved policies of the Mid Suffolk District Local Plan 1998 (until all DPDs are adopted);
- Saved policies from the Suffolk Coastal Local Plan, (incorporating the first and second alterations), 2007;
- Interim Planning Policy - Suffolk Coastal Core Strategy DPD, March 2010;
- Suffolk Coastal District Council - SPG5 Nature Conservation, SPG6 Historic Parks and Gardens and SPG10. Conservation Area Appraisals;
- Suffolk Coastal District Council - SPG12 Area Specific Guidance may also require consideration, but this will be dependent on the Cable Corridor, and
- Babergh Local Plan Alteration No. 2 (2006).

3.97 It should be noted that the Suffolk Coastal Core Strategy was formally adopted by the Council on 5 July 2013.

3.98 In addition, section 3 of the joint Councils' LIR sets out further local policy considerations. These consist of:

- Mid Suffolk Core Strategy Focussed Review (2013);
- Mid Suffolk District Council - Section 106 Developers Guide to Infrastructure Contributions in Suffolk (2013);

- Suffolk County Council - Local Transport Plan 2011-2031 and Rights of Way Improvement Plan 2006-2016;
- Suffolk County Council - Air Quality Management and New Development (2011);
- Suffolk Flood Risk Management Strategy (adopted in February 2013);
- The Suffolk Shoreline Management Plan;
- The Suffolk Growth Strategy (2013);
- New Anglia Local Enterprise Partnership – New Anglia Plan for Growth, and
- The Suffolk Coast and Heaths AONB Management Plan.

3.99 Where relevant the Panel took these documents into consideration particularly through consideration of the LIR [REP-231] in examining the onshore elements of the proposed development.

NATIONAL PLANNING POLICY FRAMEWORK

3.100 On 27 March 2012 a final approved National Planning Policy Framework (NPPF) was published. The NPPF replaced a number of policy documents including Planning Policy Guidance (PPG) and Planning Policy Statements (PPS).

3.101 The NPPF does not contain policies specific to NSIPs, but does set out that NSIPs should be determined in accordance with the PA2008 and relevant NPS. The NPPF however may be considered as a matter both important and relevant to the application, as set out in NPPF paragraph 3. Several core principles are set out in the NPPF, including the importance of sustainable growth and development, and of preserving the natural and built environment.

3.102 The NPPF was published after the 2010 and 2011 Scoping Opinions on the application were issued [APP-179 and APP-180] and before the application was made in November 2012. The Panel have therefore had regard to the NPPF in examining and reporting upon this application and the Framework is considered, where relevant, in Chapter 4 below.

OTHER LAW AND POLICY

National policy

3.103 Other relevant Government policy has been taken into account by the panel, including:

- Energy White Paper: Meeting the Challenge (May 2007);

- UK Low Carbon Transition Plan;
- National Strategy for Climate and Energy (July 2009);
- UK Renewable Energy Strategy (July 2009);
- Planning our electric future: a White Paper for secure, affordable and low carbon electricity (July 2011);
- Circular 11/95⁷: The Use of Conditions in Planning Permissions (as referred to in paragraph 4.1.7 of NPS-EN1);
- The National Infrastructure Plan 2011;
- The National Infrastructure Plan update 2012, and
- The National Infrastructure Plan 2013.

The Secretary of State's powers to make a DCO

3.104 The Panel was aware of the need to consider whether changes to the application meant that the application had changed to the point where it was a different application and whether the Secretary of State would have power therefore under s114 of PA2008 to make a DCO having regard to the development consent applied for. This matter is considered above in Chapter 2. In addition the Panel concludes that all the changes proposed to the DCO by the applicant during the course of the examination and now included in the recommended Order are acceptable. Significant changes made by the applicant are considered throughout Chapter 4 below.

⁷ A Ministerial Statement on 6 March 2014 announced the publication of National Planning Policy Guidance which cancelled this Circular. However, the guidance it contained on the tests for planning conditions is reproduced in paragraph 4.1.7 of NPS EN-1 in relation to requirements.

4 FINDINGS AND CONCLUSIONS ON POLICY AND FACTUAL ISSUES

MAIN ISSUES IN THE EXAMINATION

Initial Assessment of Principal Issues

- 4.1 The ExA made its Initial Assessment of Principal Issues [PD-003] on 28 March 2013, within the statutory time period for doing so⁸. The ExA identified issues under 12 headings: Assessment approach and policy background; Biodiversity biological environment and ecology; Fisheries; Marine and coastal physical process; Noise, vibration, electro-magnetic field and health impacts; Operational and navigational safety; Offshore and onshore heritage; Landscape, seascape, visual impacts and design; Highways and traffic; Drainage and water supply; Socio-economic effects and Compulsory powers. The initial assessment was distributed to all interested parties [PD-003] making clear that the ExA would take into account all important and relevant matters and that examination of the issues identified would include examination of any transboundary impacts on other EEA states.
- 4.2 Two interested parties made points at the Preliminary Meeting relating to the initial assessment of principal issues. A representative of the Ministry of Infrastructure and the Environment in the Netherlands sought assurances, at the meeting, on a formal safety assessment in relation to shipping routes and their widths, on the potential impacts on harbour porpoise and on populations of guillemot and razorbill at the Brown Ridge. The Brown Ridge is an area off the coast of the Netherlands currently under consideration to become a Special Protection Area. Ms Ann Toettcher of Bawdsey Manor raised issues relating to coastal erosion of Bawdsey Cliff. Reporting about the examination of, and findings and conclusions reached by the Panel upon, these matters is to be found in the relevant subchapters below (those on Operational and Navigational Safety, Biodiversity and Other Protected Sites and Habitats and on Marine and Coastal Physical Processes respectively).

Issues arising from Written Submissions

- 4.3 A number of further issues were raised in written representations. However, these all fell within the categories of issues identified in the initial assessment. One such area arising from written representations, but not specifically identified in the initial assessment, was that of the enforceability of the Order, its requirements and DML conditions. This matter was examined thoroughly during the course of the Hearings on the DCO through consideration of specific requirements and conditions. In

⁸ Rule 5 of the Infrastructure Planning (Examination Procedure) Rules 2010

particular this was necessary following the applicant's proposed splitting of the DML into two licences, for generation and for transmission assets respectively.

Issues arising in the Local Impact Report

- 4.4 The joint Local Impact Report [REP-231] of the local authorities provided a comprehensive early assessment of all the main impacts that the ExA had identified. It set out the various development plans, the status and relevant policies of each and then gave a clear assessment of impacts under different areas with a conclusion on each. Comments were made on the LIR by the applicant [REP-253]. The applicant's comments addressed all the key concerns raised in the LIR through proposals to amend the Order or through making reference to how such matters were already covered by the Order.
- 4.5 Matters raised in the LIR which were not readily agreed by the applicant merited and received further examination by the Panel. In addition, a number of matters apparently agreed by the applicant in response to the LIR were the subject of further examination to satisfy concerns of the Panel. These included marking of heavy goods vehicles, preparatory highway works (see Highways and Traffic subchapter), the duration and timing of certain construction activities (see Noise, Vibration, Electro-magnetic Fields and Health subchapter), securing appropriate restoration of the ground above onshore cables and securing the simultaneous construction of onshore ducts with the laying of onshore cables serving the proposed East Anglia One offshore wind farm (see Development Consent Order and Other Matters subchapter).

Associated Development

- 4.6 The principal issue arising from the application in relation to the inclusion of the Associated Development in the DCO was whether the additional ducts proposed for future offshore wind farms East Anglia Three and Four, could be considered associated development under s115 of the PA2008. This provision states:

"115 Development for which development consent may be granted

(1) Development consent may be granted for development which is—

(a) development for which development consent is required, or

(b) associated development.

(2) "Associated development" means development which—

(a) is associated with the development within subsection (1)(a) (or any part of it),

(b) is not the construction or extension of one or more dwellings, and

(c) is within subsection (3) or (4)."

- 4.7 The Panel finds that the ducts for future wind farms East Anglia Three and Four are associated development because they are associated with the proposed East Anglia One Wind Farm since they use the same cable corridor as the cables which serve the principal development. Moreover, they are not excluded by any part of s115 above.
- 4.8 The revised DCLG Guidance on Associated Development Applications for Major Infrastructure Projects (April 2013) (AD Guidance) states in Associated Development Principle 5(iv) on page 3, that the following issues should be considered in relation to whether overcapacity infrastructure is capable of being associated development:
- whether a future application is proposed to be made by the same or related developer;
 - the degree of physical proximity of the proposed application to the current application;
 - the time period within which a future application is proposed to be submitted;
 - whether impacts of planned future generating stations would be reduced, and
 - need for overcapacity.
- 4.9 The case for the inclusion of ducting for future projects is made primarily in the applicant's document, Associated Development Guidance – Onshore Cable Ducts [REP-196]. The Panel examined the matter through written questions [PD-004] and through questioning at the ISH.
- 4.10 At the Compulsory acquisition hearing (CAH), the Panel explored further whether the ducts for East Anglia Three and Four were appropriately described as "*associated development*" in the light of the revised AD Guidance.
- 4.11 Paragraph 5 (iv) states in full that: "*Associated development should be proportionate to the nature and scale of the principal development. However, this core principle should not be read as excluding associated infrastructure development (such as a network connection) that is on a larger scale than is necessary to serve the principal development if that associated infrastructure provides capacity that is likely to be required for another proposed major infrastructure project.*"

- 4.12 At the CAH, the applicant drew particular attention to footnote 3 to paragraph 5 (iv) of that guidance which provides: *"For example, in the case of an application for an offshore generating station, the SofS may consider it appropriate for a degree of overcapacity to be provided in respect of the associated transmission infrastructure, so that the impacts of one or more other planned future projects which could make use of that infrastructure would be reduced by taking advantage of it."*
- 4.13 The development consent applications for East Anglia Three and Four would either be submitted by the same or by a related developer. A high degree of physical proximity would exist between the schemes. The onshore cable ducts to accommodate East Anglia Three and Four would be laid along the same route as the onshore cables for East Anglia One to connect to their respective converter stations adjacent to the East Anglia One converter station at Bramford. It is anticipated that the applications for development consent for East Anglia Three and East Anglia Four would be made within a reasonable timescale. In particular at the ISH [HE-31] it was made clear that studies were well advanced for the future wind farms.
- 4.14 The applicant's representation [REP-196] submitted as part of its responses to the ExA's questions also demonstrated that the applicant had considered a number of alternatives and having taken into account the environmental effects, considered that construction of ducts for future wind farms along with laying of cables for East Anglia One to be the most appropriate.
- 4.15 The AD Guidance, at paragraph 5 (i), states: *"Associated development should either support the construction or operation of the principal development, or help address its impacts."* At the CAH, the applicant emphasised that the East Anglia Three and Four related aspects of the scheme had been included following engagement and consultation with other parties, including the local authorities and at their express suggestion. Suffolk County Council (SCC) confirmed that the preferable option would be to install the ducts for East Anglia Three and Four along with the cables for East Anglia One. This would have the benefit of avoiding a repeat cable-laying operation along the route in the future thereby reducing the overall disturbance caused to individuals and local communities. The LIR [REP-231] and representations from the local authorities [REP-276] made clear the reduced impacts that would arise from simultaneous construction of the ducts for future wind farms with the cabling for East Anglia One.
- 4.16 There is obviously a key relationship between the laying of the ducts for East Anglia Three and Four and the East Anglia One project. The inclusion of the ducts as associated development for the project would assist in addressing the cumulative impacts of the scheme. Having regard to the recently revised AD Guidance and, in particular footnote 3 to paragraph 5(iv), there can be no

doubt that what is proposed represents the type of overcapacity provision that is envisaged in the guidance.

- 4.17 The Panel concludes, as a matter of fact and degree, that the connection between the East Anglia One project and the laying of the ducts for East Anglia Three and Four is such that the latter can be appropriately regarded as development which is associated with the former.

General Conformity with National Policy Statements

- 4.18 Conformity of the specifics of the application proposal with Overarching National Policy Statement for Energy (EN-1) and with the National Policy Statement for Renewable Energy Infrastructure (EN-3) is considered in detail throughout this Report.
- 4.19 On the question of general conformity with relevant NPSs and the need for the development the fact that the proposal is an offshore generating station with a capacity of over 100 Megawatts was established at acceptance stage [PD-002]. The proposed development therefore falls under PA2008 ss14 and 15(3) definition of a Nationally Significant Infrastructure Project. The relevant NPSs are therefore EN-1 (Overarching Energy), EN-3 (Renewable Energy) and EN-5 (Electricity Networks).
- 4.20 The need for generating stations of the type described in the application is established in NPS EN-1 where it states: "*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).
- 4.21 NPS EN-1 makes clear areas in which development plan policies may be relevant, for example in paragraphs 5.7.12 and 5.10.13 (allocated sites), 5.8.6 (non designated heritage assets), 5.8.13 (the role of heritage assets in the environment), 5.9.5 (landscape assessment) and 5.9.14 (local landscape designations). Where relevant these are considered further in the subchapters below.
- 4.22 One development consent obligation under s106 of the Town and Country Planning Act 1990 (as amended by s174 of the Planning Act 2008) and under s111 of the Local Government Act 1972 [REP-312] was submitted in the course of the examination [REP-312] in its engrossed but unexecuted form. The agreement is proposed to be made under s111 because it would facilitate works on land in which the applicant does not currently have an interest. The purpose of the obligation is to fund specified landscaping works.
- 4.23 It was reported by the applicant that the terms of the agreement had been agreed [REP-318 see paragraph 10.1] with the local authorities. Having examined, at the ISH, how the tests referred to in paragraph 4.1.8 of NPS EN-1 would be met [HE-06] and

considered the engrossed Obligation submitted, the Panel finds it to be relevant to planning, necessary to make the proposed development acceptable in planning terms, directly related to the proposed development, fairly and reasonably related in scale and kind to the proposed development and reasonable in all other respects. The Panel also finds that the obligation meets the policy requirements for planning obligations set out in paragraph 204 of the NPPF. This matter is considered further in the subchapter on Landscape and visual impact and in the Panel's recommendation set out in Chapter 6, that the Order be made subject to the s106 agreement having first been executed and completed.

- 4.24 The recommended Order (Requirements 3 to 7) would allow for wind turbine generators up to 200m in height and up to 170m in rotor diameter. Turbines of this size would be larger than any currently deployed around the UK, onshore or offshore. However, with regard to technical viability required by NPS EN-1 (paragraph 4.1.9) the project description chapter of the ES [APP-056] makes clear that the project could just as well be developed using smaller wind turbine generators of the kind which are currently available. None of the other aspects of the onshore or offshore elements of the development are technically unusual and therefore the Panel finds every reason to conclude that the project is technically viable.
- 4.25 Questions were asked by the Panel at the hearings about the financial viability of the proposal [PD-006]. In response, company accounts were provided [REP-193 & REP-194]. In relation to the availability of funding for compulsory acquisition (CA) and compensation, a funding statement [APP-189] was submitted with the application. This matter was fully examined by the Panel in its consideration of the applicant's proposed compulsory acquisition powers in the draft DCO. The examination of compulsory acquisition powers is reported upon in Chapter 5 below.
- 4.26 With regard to the importance of securing grid connection for the generating station, as set out in paragraph 4.9.1 of NPS EN-1, the applicant had obtained from National Grid the offer of a grid connection at Bramford. This had been obtained by the applicant prior to the application being made. As stated in the Cable Statement accompanying the application *"East Anglia Offshore Wind Limited, EAOL's parent company, secured a Grid Connection Agreement from National Grid in 2010. The Grid Connection Agreement is for a connection located at Bramford in 2016."* The ES [APP-053] also sets out the site selection process and consideration of alternative sites for the Onshore Converter Station (OCS) proposed at Bramford.
- 4.27 The alternatives considered by the applicant were set out in the ES [APP-053 to APP-055] as required by the EIA Regs. The alternatives considered by the applicant to the compulsory

acquisition of land are set out in the Statement of Reasons [APP-030] and are considered in Chapter 5.

- 4.28 The Panel asked questions about the site selection for the connection location and grid connection at Bramford [PD-004] (see ExA Questions 1.11 and 12.15 in relation to compulsory acquisition powers). The local authorities (LAs), comprising Suffolk County Council, Mid Suffolk and Suffolk Coastal District Councils, in a response to ExA question 1.11 [REP-185] expressed concern about the selection by National Grid of the proposed grid connection at Bramford stating that "*We are concerned that not only is National Grid offering connection agreements in the absence of a thorough analysis of cumulative environmental impacts (i.e. those of the projects connecting to Bramford, with those of its own scheme), but, by offering connections at Bramford, it is at the same time providing a justification for its own project.*"
- 4.29 In response the applicant countered in comments on this response [REP-253] that "*a full review of potential connection location options across the South East of England was undertaken by National Grid prior to offering EAOL a connection agreement in 2010. This concluded that Bramford presented the most economic and efficient connection point while balancing environmental considerations (as per National Grid licence obligations) for the connection of East Anglia ONE to the National Transmission Network*"
- 4.30 Whilst the availability of an alternative connection location (and therefore an alternative OCS site) would be capable of being important and relevant to the SSECC's decision on this application, the Panel was not presented with, nor did it see any evidence of exceptional circumstances that would have justified examination of alternatives to the scheme applied for, as referred to in Regina (Scott) v North Warwickshire Borough Council [2001] EWCA Civ 315. In particular the proposed OCS did not present clear planning objections which would not be mitigated. The proposed site at Bramford was also already established as suitable for large substations by the existence of those already adjoining the site. For all these reasons the Panel did not consider there were clear planning objections that needed to be overcome through considering alternative proposals.
- 4.31 In addition, the application for the OCS at Bramford was subject to cumulative assessment with other development, as set out in the ES [APP-053]. In these circumstances there were no grounds for the Panel to reconsider any process that National Grid had gone through, on which in any case the Panel had no substantive evidence. Furthermore, whether or not it could be held that National Grid carried out, in the LAs' words "*a thorough analysis of cumulative environmental impacts*" in selecting its connection offer, the Panel would in any case remain obliged to reach its

findings and conclusions and make a recommendation on the application for a connection at Bramford, as set out in the application, as required by s74 of PA2008.

- 4.32 Representations were received from Little Bealings Parish Council [REP-121] that the proposed cable route through the village would be disruptive to the communities concerned and the horizontal directional drilling would be damaging to trees and hedgerows. It recommended the alternative cable corridor A floated in the Consultation Report [APP-042 Appendix 39] should be adopted.
- 4.33 The Panel therefore inspected the alternative route [ASV-05] in the company of interested parties. However, as with its consideration of alternative grid connection locations above, the Panel did not find any clearly unmitigated planning objections⁹ to the route proposed in the application. For this reason and because the route applied for would be more direct, would disturb less land and fewer landholdings, the Panel found that there were no exceptional circumstances that would justify it in commencing an examination of any alternative routes.

General Conformity with Marine Policy Statement and Marine Plans

- 4.34 The marine policy context generally is set out in Chapter 3 above. The Panel's examination of conformity of specific aspects of the development with the Marine Policy Statement (MPS), there being no relevant Marine Plans yet being in place, is reported upon where relevant in the subchapters below. However, the MPS makes clear at paragraph 3.3.1 that a *"A secure, sustainable and affordable supply of energy is of central importance to the economic and social well being of the UK."* It continues that *"Contributing to securing the UK's energy objectives, while protecting the environment, will be a priority for marine planning."*

Environmental Statement and Environmental Impact Assessment (EIA)

- 4.35 NPS EN-1 section 4.2 covers matters relating to the adequacy of the ES. The ExA has taken into consideration all the environmental information (as defined by Regulation 2(1) of the EIA Regs) in reaching its recommendation.
- 4.36 At the Preliminary Meeting (as set out in Chapter 2 above), the applicant explained and the Panel decided to accept Supplementary Environmental Information [REP-132 to REP-135] relating to traffic impacts. Despite descriptions to the contrary [HE-02] the Panel concludes this was not *"further information"* as defined in Regulation 2(1) of the EIA Regs. This is because it did

⁹ As referred to in *Langley Park School for Girls v Bromley London Borough Council* [2009] EWCA Civ 734

not follow a decision by the Panel under Regulation 17, and the information was not otherwise considered by the ExA to be such that it was required to be included in the statement in order for it to be an Environmental Statement.

- 4.37 No other changes to the application post submission gave rise to the need for any additional environmental information. This was because most other such changes were in the main, reductions in the extent of development sought and involved fewer or lesser environmental impacts and did not extend the Rochdale envelope parameters against which the project had been assessed.

Habitat Regulations Assessment Issues

- 4.38 A number of European Sites (species and habitats) would potentially be affected by the proposed development. These are considered in detail in the relevant subchapter on Biodiversity in this Report. Pursuant to these issues questions were asked by the Panel on habitats issues in writing [PD-004] and at the hearings [HE-21 to HE-40]. A statement of common ground was received [REP-236] relating to habitats issues and additional information was received at every stage of the examination. Given that there remained no agreement between the applicant and Natural England on aspects of the development even after the Hearings the ExA decided to issue a request for information or written comment towards the end of the examination, in November 2013, under Rule 17 [PD-016]. Responses to this request [REP-341 & REP-342] clarified some of the issues and cited potential for reducing the total number of wind turbine generators proposed from 325 to 240. These matters are considered fully below. This request was in addition to two other requests also made under Rule 17 in August and in September 2013 that asked for omitted information on habitats assessment to be provided [PD-007 & PD-009].
- 4.39 The principal mitigation proposed by the scheme was that the onshore cables from landfall at Bawdsey to connection with the national grid at Bramford, would be underground rather than proposed to be constructed on pylons [REP-318]. Mitigation of particular impacts however are proposed in the ES and in its written question 1.1 [PD-004] the ExA requested the applicant to provide a table showing how each mitigation measure would be secured by the DCO or otherwise. This was duly provided [REP-206] and helps to enable the Panel to make its recommendation in relation to the Order as set out in Chapter 6.

BIODIVERSITY: EUROPEAN SITES & THE HABITATS REGULATIONS

- 4.40 The Panel's consideration of issues related to environmentally protected habitats and species includes a review of the effects of the proposal on European protected species and habitats, enabling

the Secretary of State to carry out any necessary AA and consideration of the effects of the proposal on other protected sites and species.

Representations received during the examination in relation to biodiversity matters

- 4.41 During the examination, concerns about the effects of the proposal on environmentally protected sites, species and habitats arose in representations from (but not limited to) the Statutory Nature Conservation Bodies (SNCBs) comprising Natural England (NE) and the Joint Nature Conservation Committee (JNCC) [REPs-105-62, 267, 268, 278, 281, 325 & 350], the Royal Society for the Preservation of Birds (RSPB) [REPs-053, 166, 254, 329 & 349], the Suffolk Wildlife Trust (SWT) [REP-099 & REP-169] and the Marine Management Organisation (MMO)[REP-101]. Statements of common ground (SoCGs) were signed between the applicant, and JNCC/NE and others [REPs-236 & REPs-240 to 243].
- 4.42 The relevant principal specific concerns raised at the relevant representation stage were about the following issues:
- Assessment of collision risk to lesser black-backed gull (LBBG) of the Alde-Ore Estuary SPA due to East Anglia One (EAO) alone and in-combination with other projects;
 - The cumulative impact from East Anglia One offshore windfarm and other Round 3 wind farm projects on gannet of the Flamborough Head – Bempton Cliffs (FHBC) SPA;
 - Uncertainty about the impact on gannet, great black-backed gull (GBBG), LBBG, kittiwake, herring gull, avocet, and brent goose at a number of named SPAs caused by the project alone and in combination with others;
 - Whether there could be an adverse effect on the integrity of the Alde-Ore SPA, the Deben Estuary SPA, the Outer Thames SPA and the FHBC SPA in combination with other projects;
 - The impact of construction activities on Deben Estuary SPA (SSSI and Ramsar site);
 - The displacement of auks;
 - The impact on birds at the Brown Ridge area;
 - The cumulative impact of the proposal and others in the North Sea on harbour porpoise population;
 - The spread of non-native species in the southern North Sea, including the need for monitoring;

- The effect of the cable installation on Eurasian marsh harrier and Cetti's warbler which are known to have nested along the route;
 - The impact on bat commuting/foraging due to disruption at four specific hedgerows; the need to protect other important hedgerows and the need for otter and water vole habitat mitigation, and
 - The need for post construction on-shore ecological monitoring.
- 4.43 The issues above were examined by the Panel and are addressed in this subchapter and in the following subchapter.
- 4.44 The applicant is required by Regulation 5(2)(g) of the APFP Regulations (as amended) to provide sufficient information to enable the competent authority to make an AA of the implications for the European site if required. The Panel is not the competent authority for the purposes of the Habitats Regulations Assessment (HRA); the SSECC as decision maker performs this role.
- 4.45 Therefore the function of this section of the Report is (i) to place the SSECC in a position where all the information necessary to the carrying out of his duties as competent authority has been complied with and placed within a clear analytical framework; and (ii) to identify and respond to the relevant issues raised throughout the examination.

Background

- 4.46 In response to the requirements of Regulation 5(2)(g) of the APFP Regulations, the applicant provided an HRA Report [APP-045]. The information provided within this Report was determined to be sufficient to accept the application for examination.
- 4.47 During the examination, it quickly became apparent to the Panel that the information and assessment provided within this Report [APP-045] was an area of dispute principally between the applicant and the SNCBs. The disagreement and questions from the Panel as the examination progressed led the parties to submit several new and additional pieces of information to support their positions. The Panel considered this information in detail and determined that the applicant's information originally provided within the ES [APP-081 to 085] and HRA report [APP-045] was altered to such an extent as to require the submission of a revised report.
- 4.48 A Rule 17 request was made [PD-009] and on 30 September 2013, updated information was provided by the applicant [REP-269]. This consisted of an Addendum to the Ornithology Chapter of the ES and a new HRA report (Version 2 – September 2013). Aside from compiling the latest ornithological information in a

single location, this new information also provided confirmation of issues agreed between the SNCBs and the applicant for requiring a formal AA.

4.49 The SNCBs and the applicant advised that AA was required in relation to features at two sites as follows:

- Alde Ore Estuary SPA (herring gull & lesser black-backed gull) and
- Flamborough Head and Bempton Cliffs SPA (gannet and kittiwake)

Project location

4.50 The East Anglia One turbine array is located in the south east of the East Anglia One Zone, which is Zone 5 of the Crown Estate's Round 3 offshore wind farm leasing area and covers an area of about 300 km². It is approximately 43.4 km from the UK shoreline at its closest point and 45.5 km from Lowestoft, the nearest coastal town. The site is roughly triangular in shape and is about 33 km north – south and 14 km east – west. Onshore, the project includes underground export cables running in a linear arrangement from the landfall at Bawdsey, close to the Deben Estuary, to a new converter station at Bramford, Suffolk.

4.51 Elements of the proposal would be constructed within European protected sites: the Outer Thames Estuary SPA and the Deben Estuary SPA and Ramsar site. No other part of the area within the proposed Order limits would adjoin or be within any European site. However, the proposal would be ecologically connected to numerous European sites which, for example, provide habitats for species that may be affected by the development. These potential impacts have been considered as part of the HRA process.

4.52 The impacts generated by the proposal which could affect European sites are considered to be: direct habitat loss; indirect habitat loss; collision risk; disturbance/displacement and barrier effect.

Report on the implications for European sites (RIES)

4.53 The secretariat of the Planning Inspectorate has worked with the Panel to produce a "*Report on the Implications for European Sites*" (RIES) for the proposal [PD-015]. The report has been compiled from relevant material throughout the examination. When completed, the RIES was made available to interested parties for comment. Responses were submitted by the applicant [REP-335], NE [REP-325] and the RSPB [REP-329] and these are dealt with below.

4.54 The RIES identified the European sites, potential impacts, mitigation measures and the main issues which were considered

within the HRA process. NE has not expressed any concerns about the sites considered in the HRA report prepared by the applicant. Consequently the Panel is satisfied that all the European sites which could experience significant effects caused by the project alone or in-combination with others have been assessed.

- 4.55 The RIES compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the examination by both the applicants and interested parties. The Panel's conclusions relevant to the steps taken by the applicant in carrying out the HRA are discussed below.

Screening assessment

- 4.56 The screening assessment undertaken by the applicant considered numerous sites with the potential to be affected in the ways described at paragraph 1.12 above. It is important to note that the applicant's original HRA report [APP-045] concluded that AA was required to consider impacts on interest features at both the Deben Estuary SPA and Outer Thames Estuary SPA. However, following the submission of further supporting information and the updated HRA report [REP-269], the applicant was able to conclude that AA for these sites and features was not necessary. Further details are provided below.

Deben Estuary SPA

- 4.57 During the examination, it was agreed between the applicant and NE/JNCC that the project either alone or in combination with other projects would not have a likely significant effect on the Deben Estuary SPA, subject to the implementation of measures within the Ecological Mitigation Plan (EcMP). The necessary EcMP measures would have the objectives of reducing the impact on dark bellied brent goose and avocet [see the SoCG - REP-240]. The mitigation of peak noise impact from construction which might disturb avocet would also be covered in the EcMP. The EcMP would require the prior approval of the local planning authority in consultation with NE [DCO Schedule A Part 3 Requirement 19].

Outer Thames Estuary SPA

- 4.58 It had been considered that red-throated divers in the Outer Thames Estuary SPA could be temporarily displaced or disturbed by cable laying activities. The applicant estimated that based on a worst case circle of influence of 2km around a cable laying vessel, during the wintering period, 9 red-throated divers could be displaced [REP-269 App 1 p199]. It was accepted by NE/JNCC during the examination that levels of displacement or disturbance were such that the project either alone or in combination with other projects would not have a likely significant effect on the Outer Thames Estuary SPA. The Panel agrees with that conclusion.

- 4.59 As stated in the Wild Birds Directive section of Chapter 3 above, many other sites were considered as part of the HRA screening stage and full details can be found within the RIES [PD-015] and the applicant’s HRA report [REP-269].
- 4.60 As a result of the screening assessment, the applicant concluded that significant effects could not be excluded at the following European sites and therefore AA would be necessary:
- 4.61 Table 1.1: Sites and Species Screening

Site	Species in respect of which the potential for likely significant effect cannot be excluded	Impact type
Alde-Ore Estuary SPA	herring gull (alone and in-combination)	Collision risk
	LBBG (in-combination)	Collision Risk
FHBC SPA	gannet (in-combination)	Collision Risk
	kittiwake (in-combination)	Collision Risk

Integrity assessment

- 4.62 The Panel considered the findings of the applicant’s HRA screening assessment and sought to examine the available information to ensure that sufficient information was available to the SSECC to produce an AA if required. This section of the report explains the issues identified and the recommendations made in relation to likely effects on the integrity of those European sites and features.
- 4.63 Throughout the examination, significant differences remained between the applicant and the SNCBs regarding the outcomes of the assessments of impact on site integrity. Table 1.2 below presents a summary of these differences.
- 4.64 Table 1.2: Summary of Differences

Site	Species with a potential adverse effect on integrity
Alde-Ore Estuary SPA	herring gull Agreement that adverse integrity effects can be excluded alone and in-combination

Alde-Ore Estuary SPA and Ramsar	LBBG No agreement that adverse integrity effects can be excluded in-combination with other projects.
Flamborough Head and Bempton Cliffs SPA	kittiwake No agreement that adverse integrity effects can be excluded in-combination with other projects
	gannet No agreement that adverse integrity effect can be excluded in in-combination with other projects

Alde-Ore Estuary SPA

- 4.65 The Alde-Ore Estuary SPA comprises the estuarine complex of the rivers Alde, Butley and Ore, including Havergate Island and Orfordness. There is a variety of habitats including intertidal mud-flats, saltmarsh, vegetated shingle (including the second-largest and best-preserved area in Britain at Orfordness), saline lagoons and semi-intensified grazing marsh. At different times of the year, the site supports notable assemblages of wetland birds including seabirds, wildfowl and waders. As well as being an important wintering area for waterbirds, the Alde-Ore Estuary provides important breeding habitat for several species of seabird, wader and raptor. During the breeding season, gull and tern feed substantially outside the SPA.
- 4.66 The SPA is classified under the Birds Directive as it is used regularly by 1% or more of the Great Britain populations of avocet, little tern, marsh harrier and sandwich tern in the breeding season and Avocet and Ruff over winter (Article 1). It also supports populations of LBBG during the breeding season and Redshank over winter (Article 2) as well as various assemblage species, including Herring Gull.
- 4.67 The conservation objectives for this site have been considered by the Panel and are as follows:
- “Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive” [REP-150].
- 4.68 Subject to natural change, to maintain or restore:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of the qualifying features;
- The distribution of the qualifying features within the site.

Herring gull

4.69 Natural England agreed with the applicant at the ISH that the project would not have a likely significant effect on the Alde-Ore Estuary SPA alone and that the level of predicted mortality of herring gull due to the project alone (less than 1 bird per annum) would be so small as not to alter materially any overall in-combination figure [REP-269 App 1 p 90]and [REP-273 para 23]. The Panel agrees with this conclusion.

Lesser black-backed gull

4.70 NE estimated that the predicted mortality to arise from other wind farms considered in-combination with the proposal would be 246, added to which would be 13-40 from the East Anglia One (EAO) site (5-14%). However, NE also estimated that the bulk of collisions would occur outside the breeding season and that the element of the proposal's contribution to the in-combination mortality total to which some degree of confidence can be attached (3-7) would be so small as to not materially alter the overall in-combination mortality figure, or the likelihood of an adverse effect on integrity of the Alde-Ore Estuary SPA [REP-150].

4.71 The applicant had initially estimated in the ES that 14 birds per annum attributed to the Alde Ore SPA would be killed during the breeding season. However, following tagging analysis of 24 lesser black-backed gull (LBBG) from the SPA, of which four were found to be present on the application site during the breeding season, the applicant estimated that less than 1 bird per annum attributed to the Alde Ore SPA would be killed during the breeding season. The reduced estimate is due to calculating the average number of weekly gull minutes spent in the application site and relating that to the SPA population of breeding adults [REP-269 App.1 p 100]

4.72 RSPB and NE commented on the small sample size of tagged birds which fed into the collision risk analysis [REP-254] and [REP-155]. Nevertheless, NE advised that due to a similar lack of certainty around the effectiveness of mitigation to deliver small reductions in mortality, there would be little benefit to be gained from

exploring mitigation options for the small number of additional mortalities. The Panel agrees with these conclusions.

- 4.73 Indeed the majority of the LBBG population breed at Havergate Island and Orfordness. The RSPB have commented [REP-254 p10] that Havergate Island is currently close to its carrying capacity in terms of the numbers of gulls which can be supported. In addition, the LBBG breeding population at Orfordness has plummeted from about 20000 – 23000 pairs/AON¹⁰ in 2000 to about 640 in 2012 for reasons thought to include predators, recreational access and vegetation [REP-254 Annex 1]. The SNCB has an obligation to implement measures at the SPA which are more likely to mitigate adverse impacts. These indications reinforce the Panel's view that the effect of the proposal on the LBBG population at the SPA in terms of collision risk will be insignificant when compared to other factors.

Flamborough Head and Bempton Cliffs SPA

- 4.74 The Flamborough Head and Bempton Cliffs (FHBC) SPA is located on the central Yorkshire coast of eastern England and has been designated since 1993¹¹. The site holds the only mainland breeding colony of gannet in the UK and supports large numbers of other breeding seabirds, including kittiwake and auks. The large majority of the SPA comprises sea cliff habitat with some grassland above the cliffs and a little deciduous woodland.

- 4.75 The site qualifies under Article 4.2 of the Birds Directive by supporting a population of European importance during the breeding season of kittiwake (83,379 pairs, 2.6% of the breeding Eastern Atlantic population: 1987). An additional qualifying feature was added in 2001: seabird assemblage of international importance: puffin, razorbill, guillemot, herring gull, gannet, kittiwake.

- 4.76 The conservation objectives for this site have been considered by the Panel and are as follows:

Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.

- 4.77 Subject to natural change, to maintain or restore:

- The extent and distribution of the habitats of the qualifying features;

¹⁰ Apparently occupied nests (AON)

¹¹ At the close of the examination, consultation was due on a proposal to extend the existing SPA at FHBC to rename it the Flamborough and Filey Coast SPA.

- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of the qualifying features;
- The distribution of the qualifying features within the site.

Kittiwake

4.78 In the SoCG [REP-236], NE commented that it does not believe that the project alone would represent an adverse impact on the integrity of the kittiwake feature of the SPA but in-combination with other projects, depending on those chosen, there would potentially be a likely significant effect [REP-236]. In the relevant representations, NE had stated that the concerns were based on collision risk impacts associated with the wind turbine generators which would form the array [REP-105].

Collision Risk Modelling - kittiwake

4.79 At the request of the Panel the applicant provided an explanation of details used in the collision risk model (CRM). Potential collision risk was modelled for kittiwake and gannet using (i) Option 1: the basic Band model based on information gathered on flight behaviour from the proposed wind farm itself; (ii) Option 2: the Band model with the proportion of birds flying at potential collision heights (PCH) derived from generic flight information from multiple boat surveys; and (iii) Option 3: the extended Band model using further modification to the PCH with the distribution of flight heights within the PCH [REP-269].

4.80 Table 1.3 Results of applying CRM Band Options 1 – 3 at 98% avoidance rate [REP-269:p58 Table 3.4]

Band Option	% at PCH	Flight height distribution used	Total no. of collisions (annual)	FHBC collisions (Annual)	Adult FHBC collisions (annual)	Change in no. of birds subject to mortality
1	23.1	No	1056	85	69	0.48%
2	14.3	No	780	63	51	0.36%
3	n/a*	Yes	33	3	2	0.01%

*uses flight height distribution data embedded within the spreadsheet formulae of the Band add-on CRM

- 4.81 Table 1.4 Predicted change in mortality for in-combination predictions relating to FHBC SPA breeding population for the three CRM Band Options [REP-269 p65 Table 3.8].

CRM Type (98% avoidance)	Population
FHBC SPA population (AONs x 2): Breeding adults	75,234
FHBC SPA Baseline Annual Mortality (applied at 19% pa): Breeding adults	14,294
CRM Band Option 1	
Predicted in-combination mortality attributable to FHBC SPA: Individual birds	191
Predicted in-combination mortality attributable to FHBC SPA: Breeding adults	156
Relative change in mortality - number of birds	1.09%
Baseline mortality – from present to predicted	19% to 19.21%
CRM Band Option 2	
Predicted in-combination mortality attributable to FHBC SPA: Individual birds	163
Predicted in-combination mortality attributable to FHBC SPA: Breeding adults	133
Relative change in mortality - number of birds	0.93%
Baseline mortality – from present to predicted	19% to 19.12%
CRM Band Option 3	
Predicted in-combination mortality attributable to FHBC SPA: Individual birds	86
Predicted in-combination mortality attributable to FHBC SPA: Breeding adults	70
Relative change in mortality - number of birds	0.49%
Baseline mortality – from present to predicted	19% to 19.09%

Project alone - kittiwake

- 4.82 The further written representations from NE advised that, based on a Potential Biological Removal (PBR) assessment it had conducted, a precautionary value of 250-350 kittiwakes could be sustainably removed from the SPA without substantially

compromising the population trajectory quantitatively or temporarily. As it has been predicted that the proposal would remove no more than 52% of that total, NE is of the view that there is sufficient margin of error to conclude that no reasonable scientific doubt remains as to the absence of an adverse effect on the integrity of the SPA due to collision risk mortality at the project alone [REP-155 p13 paragraph 44]. The Panel agrees with this conclusion.

In-combination - kittiwake

- 4.83 According to the applicant's in-combination assessment of the CRM, the maximum increase in baseline mortality as a result of the application scheme would be from the present 19% to 19.21% applying Band Option 1 which, the applicant claimed, would have little impact on the current population trends of the FHBC SPA kittiwake population. On that basis, the applicant considered that there would not be a significant adverse effect in-combination with other North Sea wind farms (Tiers 1 to 3).
- 4.84 The applicant predicted that in-combination with other projects which were operational or consented, no more than 78% of the 250-350 kittiwake that could be sustainably removed from the FHBC SPA without compromising the population trajectory quantitatively or temporally would occur. In that case, NE would be of the view that there is sufficient margin of error to safely conclude that no reasonable scientific doubt remains as to the absence of an adverse effect on the integrity of the FHBC SPA due to collision risk mortality of kittiwake at the proposal in-combination with the other wind farms within the North Sea as set out in table 3.7 of the applicant's technical report. However, this list did not include all the wind farms which NE considered should be taken into account within the in-combination assessment [REP-150 & REP-276].
- 4.85 The applicant considered that its clear and practical approach to in-combination assessments of the incorporation of information only where there is a reasonable degree of certainty reflects the approach, in the case of English projects, taken for the in-combination assessment for Triton Knoll Offshore Wind Farm (OWF) which was accepted in the determination of the DCO application by the SSECC. The applicant's approach is that projects have not been included in its in-combination assessment that are either pre-application or post-application (and where the decision on consent is likely to be made after that on EAO) or, in the case of the Scottish sites, are post application but without any statutory consenting timeline.
- 4.86 On the basis of its approach to in-combination assessment, the applicant concluded that there would be no adverse effect on integrity of the interest feature kittiwake of the FHBC SPA as a

result of collision risk from the proposal in-combination with other plans and projects. [REP-269 App 1 Note C].

- 4.87 However, NE was of the view that the revised assessment (274 fatalities) may be an underestimate due to: (i) exclusion of wind farms outside the North Sea with which FHBC kittiwakes may interact outwith the breeding season, (ii) uncertainty regarding the headline mortality figure at Hornsea (project 1), (iii) use of a very low apportionment percentage for Hornsea OWF given that FHBC is the closest large kittiwake colony, (iv) uncertainty over the headline collision figure given for the Moray Firth OWF, (v) uncertainty over the headline collision figure given for the Beatrice OWF and (vi) no figures being presented for other pre-consent wind farms within the Firths of Forth & Tay e.g. Inch Cape (on the verge of submission) and Firth of Forth Zone 3 (Seagreen submitted October 2012).
- 4.88 Therefore taking into account (i) the level of mortality already presented, ie 274 (or 223 adults), which would be equal to 90% of the precautionary PBR threshold of 250 adults and (ii) the scope for significant under prediction, NE concluded that there was not sufficient certainty to allow an adverse effect on the integrity of the SPA due to in-combination collision risk mortality to be ruled out [REP-150].

Gannet

Avoidance rates - gannet

- 4.89 The applicant has supplied details about collision risk using different avoidance rates (AR): (i) 98% is the rate recommended by SNH to be applied in the absence of any post-construction monitoring studies. However, (ii) a 99% AR was derived from detailed post-construction studies of the Egmond aan Zee offshore wind farm in Dutch waters¹².
- 4.90 The work at Egmond ann Zee identified a 64% macro¹³ AR for gannet (ie: the gannet changed its flight direction outside and did not enter the wind farm) and a 97.6% micro¹⁴ AR that was for all birds that entered the wind farm (ie: radar or visual tracks within the wind farm that did not approach within 50 m of a turbine rotor). Taken together these two ARs resulted in an overall AR of 99.136%. This was rounded down to 99% [REP-269].

¹² NE advice to the ExA at the Galloper OWF hearing, and subsequent Appropriate Assessment by the Secretary of State, on the appropriate avoidance rate to use for lesser black-backed gull was largely based on work at Egmond ann Zee.

¹³ Macro avoidance is where a bird sees the wind farm coming and so deviates to avoid the wind farm entirely.

¹⁴ Micro avoidance is where a bird enters the turbine array, but deviates through the array without entering the collision zone.

- 4.91 The use of 99% AR was the subject of objection by the RSPB due to insufficient evidence and the possible behavioural differences between birds migrating, commuting and foraging [REP-254 p18]. In addition, 98% is preferred by NE/JNCC due to the added precautionary element compared to 99%. Nevertheless, the most recent evidence as described above which is aimed at refining the AR suggests that 98% might be judged to be over-precautionary and 99% would not be unreasonable.
- 4.92 The significance of the choice of AR is illustrated by NE where the cumulative total for adult gannet mortality at FHBC is halved by the use of 99% AR compared to 98% [REP-325 Annex C]. For the reasons given above, although NE/JNCC commented that 98% would add an extra level of precaution, the Panel considers an AR of 99% to be more realistic and therefore reasonable, especially when it is a consequence of importing the consideration of macro avoidance whereby some birds when approaching an array choose not to fly through it.

Collision Risk Modelling - gannet

- 4.93 The applicant's CRM modelling was based on Band Options 1- 3 and used the same assumptions as for kittiwake above (para 4.80). Although Options 2 and 3 would refine the data by apportioning birds within a more accurate PCH, it was accepted by the applicant that use of Band Option 1 would be appropriate for the assessment of this proposal. However, the comparison in the table below shows the consequence of choosing Option 3 (5 annual collisions from FHBC at 99% AR, compared to Option 1 (46 annual collisions).
- 4.94 Table 1.5 Key results of applying CRM Band Options 1 – 3 at 99% and 98% avoidance rates [REP-269 p19 Table 3.4]

Band Option	% at PCH	Flight height distribution used	Avoidance rate	Total no. of collisions (annual)	FHBC collisions (Annual)	Adult FHBC collisions (annual)	Increase in annual mortality
1	25.4	No	98%	850	91	65	3.65%
1	25.4	No	99%	425	46	33	1.83
2	9.6	No	98%	324	35	25	1.39%
2	9.6	No	99%	162	17	12	0.69%
3	n/a	Yes	98%	92	10	7	0.40%
3	n/a	Yes	99%	46	5	4	0.20%

* uses flight height distribution data embedded within the spreadsheet formulae of the Band add-on CRM

- 4.95 The significance of selecting the appropriate AR and Band Option is apparent from the table which shows the number of adult FHBC birds which could be killed per annum ranging from 65 (98% AR; Band Option 1) to 4 (99% AR: Band Option 3). Given the consequences of adopting various assumptions, the Panel regrets that the applicant and specialist interested parties have not been able to further develop the SoCG.

Project alone - gannet

- 4.96 Nevertheless, NE commented that, using a 98% AR, a predicted mortality of 58 birds (applicant's estimate) or 78 birds (NE estimate) from the FHBC SPA colony during the breeding season due to collision at the proposal site alone would not have a significant effect on the SPA [REP-150]. This was confirmed in the SoCG where it was agreed that it would be unlikely there would be an adverse impact on the integrity of the gannet feature of the FHBC SPA due to the project alone [REP-150] and [REP-236]. NE has not departed from this conclusion, notwithstanding revisions to the data and the Panel agrees with it.

In-combination - gannet

- 4.97 However, NE also considered that the project in-combination with other plans and projects would potentially have a likely significant effect on the seabird assemblage of gannet [REP-237]. As is the case of kittiwake above, this effect would be caused by the risk of collision with the turbine arrays.
- 4.98 Due to the lack of agreement between the applicant and NE about the absence of likely significant effects as a result of collision risk from the proposal in-combination with other plans and projects, further work was provided to the Panel by the applicant on the risk posed to gannet [REP-269 App 1 Note B].
- 4.99 The applicant reconsidered the in-combination assessment and, using the same approach to the inclusion, or not, of projects as used in the kittiwake assessment concluded that the level of additional mortality (based on the published Population Viability Analysis (PVA) model for gannet) did not exceed the point at which there is a 5% probability of the FHBC SPA population going into decline. The PVA predictions indicated that the collision mortality by the proposal in-combination with other North Sea wind farms would not have an adverse impact on the integrity of the FHBC SPA population of gannets [REP-269].
- 4.100 However, NE had also revised their estimate to indicate a value for gannet in-combination mortality at FHBC SPA, including EAO, of 184 at 99% avoidance and 368 at 98% avoidance [REP-150]. NE commented that these mortality figures at either avoidance rate are all within the sustainable threshold suggested by the PBR model. However, a number of projects which could lead to

mortality of gannet from FHBC SPA were not included in the applicant's assessment [REP-155].

- 4.101 NE confirmed at the ISH [REP-278] that, on balance, it could be concluded that no reasonable scientific doubt remains as to the absence of an adverse effect on the integrity of the FHBC SPA due to collision mortality of gannets at the proposal acting alone or in-combination with other plans and projects considered by the applicant [Table 1.2¹⁵ REP-269].
- 4.102 Nevertheless, as discussed at the ISH, the issue is whether the list of other wind farms in Table 1.2 [REP-269] is complete. NE maintains that the omission of potential collision mortality at a number of other offshore wind farms excluded from the applicant's assessment means that the information provided is not sufficiently broad to encompass all of the in-combination effects which should be considered. Therefore NE advises that scientific doubt remains as to the absence of adverse effects on the integrity of the FHBC SPA in-combination [REP-276].

The tiered approach - gannet

- 4.103 The on-going discussion between the applicant and NE centres on the approach to the in-combination assessment and specifically which projects should be considered. At the ISH, NE/JNCC introduced the concept of the tiered approach as a method of resolving deliberations regarding which projects should be included in the cumulative assessment [REP-278 Annex]. Following the ISH, the ExA requested that the applicant respond to this approach, resulting in the submission of additional information in relation to in-combination impacts of collision risk for kittiwake and gannet at the FHBC SPA. The additional information did not include an assessment of the effects resulting from consideration of more numerous projects within the in-combination assessment than those already included in the applicant's assessments.
- 4.104 The applicant included all projects which are operational, in construction or have been consented but not constructed. NE suggested the tiered approach to the consideration of projects in the in-combination assessment would allow the SSECC to have a more strategic understanding of the various contributions of constructed and proposed wind farm projects to impacts on species whilst classifying the projects according to the certainty which can be attached to the data provided for each of them.
- 4.105 The SSECC would also be able to reach an informed view on which plans and projects to take into account in the in-combination assessment based on the information provided in the table. NE

¹⁵ The information has been assembled in the response by the applicant to the ExA's Rule 17 request and referenced as REP-269. The list of offshore wind farms included in the cumulative assessments by the applicant is seen at p 3 Table 1.2.

noted that the use of a tiered approach represents a development in its thinking on how to take account of the in-combination effects of offshore wind farms, which is particularly pertinent in the context of the larger Round 3 offshore wind farm applications. In introducing the concept NE did not state that projects in all tiers should be taken into account in the assessment relating to this application.

4.106 The categories suggested by NE/JNCC under the tiered approach are as follows [REP-278 p8 and Annex]:

- Tier 1: Built or operational projects, where they have not been included within the environmental characterisation survey;
- Tier 2: Projects under construction;
- Tier 3: Projects that have been consented (but construction has not yet commenced);
- Tier 4: Projects that have an application submitted to the appropriate regulatory body that have not yet been determined;
- Tier 5: Projects that the regulatory body are expecting an application to be submitted for determination;
- Tier 6: Projects that have been identified in relevant strategic plans.

4.107 The applicant accepted that the tiered approach appeared to be consistent with its own approach in that it recognizes the increasing levels of uncertainty for those projects which are further down the project pipeline, i.e., within Tiers 4 to 6. However the applicant maintained that any decision on consent for the application should account for only those offshore wind farms that are currently operational, in construction, consented or are at such a stage in the planning process that a clear timetable set out in statute for their consenting decision means that they are likely to receive consent in advance of EAO (Tiers 1-3).

4.108 Accordingly, information for later projects in Tiers 4 – 6 was provided for information only with appropriate caveats in relation to data robustness given for each dataset [REP-310]. Tables 2.1 – 2.6 [REP-310] allocate the projects to the appropriate tier. Tables 3.1 and 3.2 show an assessment of the cumulative CRM on gannet and kittiwake from North Sea and English Channel wind farm projects placed into tiers.

4.109 The response of NE/JNCC was to emphasise that Tier 4 projects (those within the planning system but not yet consented) should be included in the in-combination assessment [REP-325]. NE also

suggested two methods of considering in-combination impacts, one of which referred back to a strategic approach taken in dealing with in-combination assessments and mitigation measures for three projects in the Wash. This approach was rejected by the applicant [REP-335]. The other method, described by NE as the 'building block' approach, would assess each project cumulatively until the PBR threshold was exceeded [REP-325 Annexes C and D].

- 4.110 The applicant maintains that the tiered approach tables confirm that for both kittiwake and gannet the total collision numbers for projects within Tiers 1- 3 are within the precautionary threshold values. This is not disputed by NE, subject to a gannet AR of 99% being adopted.
- 4.111 NE claims that the projects at Tier 4 and upwards should be included in the assessment. This would then include Dogger Bank Creyke Beck, Rampion and Hornsea (1) OWFs in addition to the Inch Cape, Firth of Forth (alpha and bravo), Neart na Gaoithe, Moray and Beatrice OWFs in Scottish waters. The applicant has only sought to include details where there is a reasonable degree of certainty at the time of assessment. The Panel recognises the merits in this argument and notes that the SECC has previously adopted a similar approach in the decisions taken for Triton Knoll OWF [REP-335] and also for Kentish Flats Extensions and Galloper OWFs [REP-342] and may be minded to do so in this case.
- 4.112 Even if Tier 4+ projects are taken into account, the Panel finds that little weight should be given to the currently available data, due to the lack of certainty prior to detailed examination. For example, the Dogger Bank Creyke Beck OWF applicant has indicated an agreement with NE about the methodology of apportioning predicted collision mortalities. This would result in 13.9% of impacts at Dogger Bank Creyke Beck OWF being attributed to the FHBC SPA gannet colony, whereas NE [REP-325 Annex C] has stated 38% in the consideration of EAO [REP-347].
- 4.113 Similarly, there is continuing discussion between the applicants and NE at Hornsea (1) and Dogger Bank Creyke Beck OWF about the appropriate Band Option to choose for gannet and kittiwake CRM which could significantly alter the findings in terms of the impact of the wind farm on the respective colonies at FHBC. The Band collision modelling for the earlier permitted projects which comprise the Tiers 1 – 3 cumulative total at FHBC may well have been based on the Basic Option and so less refined than later modelling. This would result in the 199 gannet and 91 kittiwake predicted to have been or to be killed per annum from FHBC being overestimates. The wide range of predictions which is possible is illustrated in Tables 1.3 – 1.5 above where collision risk mortality significantly decreases if Band 3 is selected rather than Band 1.
- 4.114 Added to which, the applicant at Hornsea (1) OWF claims that the choice of "f" factor within the PBR modelling has been overly

precautionary [REP-348]¹⁶. There was no dispute between the EAO applicant and NE/JNCC about the 'f' factor and it was not tested at the examination. Other uncertainty could arise from consented projects included within the gannet and kittiwake tables not being built out to their permitted capacity (e.g. Galloper and Dudgeon OWFs) [REP-348].

- 4.115 The applicant has suggested that the details supplied by NE in REP-325 are inappropriate in that they are not consistent with those publicly available for Tier 4+ projects in relation to adult mortality associated with FHBC SPA and there is no reasonable explanation about their origin [REP-342].
- 4.116 In addition, the applicant and Forewind contend that unlike NE, Marine Scotland, the competent authority in Scotland, has advised that there is no connectivity between Scottish breeding gannets and EAO [REP-342] and [REP-347]. The Panel recognises that the applicant has had little opportunity to consider the new information in detail, but it forms a useful comparison for projects in an in-combination assessment.
- 4.117 In considering the projects for inclusion within the in-combination assessment, the Panel has been alerted to the inherent uncertainty that exists within some of the available data. Therefore, overall, the Panel considers that in the light of the many uncertainties, little weight can be placed upon the precision of the data particularly if projects beyond Tier 3 are taken into account. Additionally, the selection of modelling options other than the most conservative Band Option 1 model would alter the in-combination results substantially.
- 4.118 The Panel has taken into account the various viewpoints (not least that the proposal's own contribution when considered alone would be a very small proportion of the overall effect). The Panel concludes that given the current level of uncertainty surrounding the information supporting Tier 4 projects and the statutory timescales involved in the decision making process, the in-combination assessment to be carried out by the SSECC for EAO should only consider in detail presently those projects in Tiers 1 – 3.
- 4.119 Indeed NE notes that *"...We do recognise that there is a request from developers that the building block approach is adopted for the current Round 3 projects, especially with the uncertainty surrounding the figures used in the various impact assessments and the compounding factor that the worst case figure presented in the environmental statements for those currently operational or*

¹⁶ 'f' is an arbitrary value set between 0.1 and 1.0 applied to depleted populations where the management goal may be to facilitate growth back to a target population. Its purpose is to increase conservatism in the calculation of PBR or to identify a value for PBR that is intended to achieve a specific outcome for nature conservation (eg, population recovery).

under construction projects are not a true representation of the impact of the actual built development; which is likely to be less” [REP-325].

- 4.120 In addition at no stage has NE recommended, in the event that the approach outlined above be adopted, that consent should be refused, unlike its evidence in the case of Triton Knoll OWF Order 2013. In contrast to recommending one approach or the other NE presented what *“the implications would be for the in-combination assessment when adopting either the strategic or building block approach” [REP-325].*

Overall conclusions - gannet and kittiwake

Kittiwake

- 4.121 The Panel notes that should all other wind farms currently submitted for determination be taken into account, the potential mortality of kittiwakes from the FHBC is likely exceed the upper PBR threshold and thus compromise the population trajectory quantitatively or temporally. If this should occur, NE has advised that an adverse impact on integrity cannot be ruled out.
- 4.122 Nevertheless, for the reasons set out above, including what NE describes as the “uncertainty surrounding the figures used in the various impact assessments” [REP-325] the Panel finds that the proposal would not have an adverse impact on the kittiwake feature of the FHBC SPA in-combination with previously consented wind farms, and those wind farm applications which are not yet determined, but which were submitted before the application for EAO.

Gannet

- 4.123 The Panel has had regard to the submission made by NE stating that should the building block approach to the in-combination assessment be used at a 98%AR, an adverse impact on the integrity of designated features at FHBC SPA cannot be ruled out as the predicted cumulative mortality would exceed the upper PBR threshold by a significant margin.
- 4.124 The Panel also notes the reservation of NE that should other wind farms currently in examination by the Planning Inspectorate (Hornsea 1 and Dogger Bank Creyke Beck) be taken into account, even assuming an avoidance rate of 99%, the lower PBR threshold would be exceeded. Therefore notwithstanding the Panel’s view that information on these wind farms is unreliable, if it were taken into account reasonable scientific doubt would remain regarding the absence of an adverse impact on the gannet feature of the FHBC SPA.
- 4.125 However, NE advised [REP-325] that using the building block approach and using the 99% AR, the impact of the project in-

combination, upon baseline mortality would be below the lower PBR threshold and so an adverse impact upon integrity would be unlikely to occur. Because data on projects beyond Tier 3 are very imprecise, (described by NE as the "uncertainty surrounding the figures used in the various impact assessments" [REP-325]) and for all the above reasons, this is also the conclusion of the Panel.

- 4.126 Additionally the Panel notes that, based on the NE data [REP-350 Annex C] that even at 98% AR, if only the consented projects in Tiers 1- 3 are taken into account, the cumulative adult gannet mortality at FHBC would be 199, excluding EAO. The predicted adult mortality attributable to EAO according to NE is 74, thus the total in-combination impacts of projects in Tiers 1- 3 and including EAO would be 273. This figure is 13 birds less than the number of 286 which is the lower end of the range of 286 – 361 birds that could be potentially removed under PBR.
- 4.127 Therefore, the Panel concludes that even if the 98% AR were to be accepted by the SSECC, in contrast to the Panel's recommendation, consent should still be granted.
- 4.128 The Panel is quite clear that, should the gannet and kittiwake mortality data for the Tier 4 projects be taken into consideration as part of the in-combination effect, as considered by NE, none of the Tier 4 projects, including EAO, could proceed without a significant risk of adversely affecting the integrity of the FHBC SPA [REP-325 Annexes C & D].

Gannet and Kittiwake: Reduction in Turbines

- 4.129 At the final stage of the examination, the applicant submitted a representation [REP-342] stating:
- "Notwithstanding the above, we have now made sufficient progress with our procurement activities allowing EAOL to be able to offer a reduction in the number of turbines from the current maximum 325 presented in the draft DCO to 240 turbines. This reduction will help to minimise the overall impact of the project, and is offered to expedite decision making and is without prejudice to the conclusion of the RIES matrix of no effect on integrity and therefore no requirement for mitigation."*
- 4.130 The applicant however, did not clarify that this "offer" was in fact being proposed as a change to the application, simply stating *"the description of Work No1(a) in the DCO could be amended to '...comprising up to [240] wind turbine generators' in order to secure this option."* Nothing more definite nor any revised DCO was received from the applicant incorporating or proposing any of the amendments that would be necessary.
- 4.131 A reduction in turbine numbers from 325 to 240 offered by the applicant would appear to reduce the gannet and kittiwake FHBC mortality each by over 26% [REP-342]. If this factor was applied

to the NE FHBC gannet adult mortality of 74, the figure would fall to about 55. This would result in mortality attributable to Tiers 1 - 3 (including EAO) at 98% AR being 254, which would be 32 gannet less than the amount that could be removed according to the lower limit of PBR.

4.132 If this same exercise was conducted for kittiwake, according to NE, the cumulative adult kittiwake mortality from projects in Tiers 1 - 3 would be 91 birds. EAO would add 103 adult mortalities. Therefore, the combined total kittiwake mortalities of projects in Tiers 1 - 3 including EOA would be 194 which would be 56 birds less than the lower PBR of 250 mortalities. The reduction in number of turbines from 325 to 240 would therefore effect a mortality rate for kittiwake well below NE's preferred threshold for PBR of birds from the FHBC SPA colony.

4.133 However, on the question of reducing the number of turbines, the Panel was mindful of the need for renewable energy set out in NPS EN-1 which emphasises, as the opening paragraph 3.1.1 to its chapter on need, that:

"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."

4.134 NPS EN-1 goes on to state in paragraph 5.3.6 that:

"In having regard to the aim of the Government's biodiversity strategy the IPC should take account of the context of the challenge of climate change: failure to address this challenge will result in significant adverse impacts to biodiversity. The policy set out in the following sections recognises the need to protect the most important biodiversity and geological conservation interests. The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The IPC may take account of any such net benefit in cases where it can be demonstrated."

4.135 The Panel recognised that any benefits of a reduction in turbines to bird species would need to be considered in the balance. In particular the disbenefits of reducing generating capacity would need to be taken into account as would any disbenefits to biodiversity that might be demonstrated, arising for example from climate change resulting from a failure to secure sufficient supplies of energy from low carbon sources.

4.136 Given the fact that the "offer" from the applicant was not formally submitted in any draft DCO and the lateness in the examination of the arrival of the offer, the Panel places little weight upon it as a potential revision to the application.

4.137 Moreover, the Panel finds that the planning objections to the project as originally applied for are not sufficient to justify¹⁷, particularly in the absence of any recommendation to refuse from NE, promulgating this alternative scheme. The more so given that the Panel has concluded, as above, that the 325 turbines applied for would be acceptable. Additionally, because of the Panel's conclusion on this matter, alternatives are also not required to be considered under the Habitats Regulations.

4.138 Should the SSECC disagree with the findings of the Panel that 325 turbines are acceptable, as above, he may be able to take a view on the energy implications of a reduction in turbine numbers but may wish to consult persons including the SNCBs on other potential implications. In such circumstances the SSECC may wish to consider the advice of NE where it stated [REP-325]:

"We therefore believe that this is relevant in the case of East Anglia ONE and that a more strategic approach is required when considering in-combination impacts and potential mitigation measures for North Sea windfarms that could potentially adversely impact interest features of the Flamborough Head and Bempton Cliffs SPA (now subsumed in Flamborough Head and Filey coast pSPA), with an appropriate assessment taking into consideration all projects currently in the planning system."

Mitigation

The colony

4.139 NE commented that there was little the applicant could do to mitigate the impact on the gannet colony at the colony because of the difficulty of access to enable improved management and that the gannet colony was growing so rapidly suggesting little scope to improve the current situation [REP-350]. The RSPB concurred with the view of NE, commenting that the only means of mitigation for an impact on the FHBC SPA gannet colony would be by a reduction in the number of turbines [REP-349].

The site

4.140 The only possibility NE could envisage to mitigate at the wind farm site would be a reduction in the number of turbines which would undoubtedly reduce the overall bird mortality resulting from the development.

4.141 The applicant has stated that in view of the conclusion that there would be no adverse impact on integrity of any SPA from the project alone or in-combination with others, no mitigation is required. Nevertheless, the applicant has re-assessed the number of turbines needed and, due to progress on procurement, has

¹⁷ Langley Park School for Girls v Bromley LBC 2009 EWCA Civ 734

offered a reduction in turbine numbers from the 325 worst case scenario to 240 [REP-342] as discussed above.

- 4.142 However, since this element of the proposal was offered so late in the examination, there was no opportunity to examine it in detail. Therefore, there has been no confirmation of those figures from NE, who merely stated that any reduction in turbine numbers would undoubtedly reduce the overall bird mortality resulting from the development. Nor has there been any thorough assessment based on them by the applicant. Moreover, the Panel finds that, even if the turbines were reduced by 26% to 240 and based on Annexes C and D of REP-325 submitted by NE and the proportional reduction in mortality estimated by the applicant, the in-combination effect taking into account Tiers 1-4 projects would not be significantly altered.

Alternatives/IROPI/Compensation

- 4.143 The applicant has claimed that a significant effect upon the integrity of a SPA would not occur, either as a result of the project alone or in-combination with other projects. This is consistent with the findings of the Panel, in which case, the consideration of alternatives, IROPI and compensation are unnecessary for the decision of the SSECC on the proposal. Nevertheless, should the SSECC disagree, the following comments are offered.
- 4.144 NE considers that it would be difficult to provide compensation in the form of new colony habitat designed to offset adult mortality because both kittiwake and gannet preferentially choose to nest on cliff faces which have a limited extent along the east coast and/or are designated European sites where improved management might not be possible. The only alternative would be to build the wind farm in a different location and given the level of mortality predicted for this wind farm compared to others in the planning system this may be considered disproportionate.
- 4.145 The RPSB considers that if project based mitigation is not possible, the SSECC should take the approach as in his decision on the Kentish Flats Extension OWF application and the effect of the London Array OWF on Red-throated diver [REP-349].
- 4.146 In the case of EAO, when compared to other proposals currently at examination and subject to a later SSECC decision, it is broadly agreed that the EAO project would contribute a relatively small proportion of the overall increase in adult gannet mortality predicted to occur at FHBC. On this basis, the RSPB considers that the SSECC is entitled to conclude that there would not be an adverse effect on the integrity of the FHBC SPA as a result of the current proposal because, in practice, other proposals considered within the in-combination assessment will not be consented unless the SSECC is satisfied that the development would not adversely affect the integrity of the FHBC SPA.

- 4.147 However, should the assessment of no alternative solutions, imperative reasons of overriding public interest (IROPI and compensatory measures be considered, the RSPB believes that a strategic approach should be taken to the determination of EAO and other proposed North Sea OWFs in order to ensure that the resulting consented wind farms are those which maximise energy production whilst minimising ecological impacts.

BIODIVERSITY: OTHER PROTECTED SITES & HABITATS

Auks

- 4.148 Potential impacts on Auks (Common Guillemot and Razorbill) by displacement from the site of the proposal were raised by NE/JNCC in their relevant representations [RE-105], but during the examination JNCC were able to agree with the applicant that there would be no likely significant impact on auk species from the project alone [REP-150].
- 4.149 However, although NE/JNCC agreed with the applicant in the SoCG [REP-236 Section 3 ID 6k] that in-combination with other projects there would be no likely significant effect on the auk component of the sea bird assemblage at FHBC SPA, the JNCC disputed this at the subsequent ISH [REP-281]. The JNCC's statement that there had been no attempt to carry out a cumulative assessment was countered by the applicant claiming that the number of auks which would be displaced by the project is insignificant compared to the North Sea wintering population and the predicted displacement induced mortality caused by the project would be insignificant compared to the background level of mortality of auks in the North Sea, an in-combination assessment was not justified [REP-318].
- 4.150 The applicant subsequently submitted a technical note on auk displacement as part of the response to the Rule 17 request [REP-269]. The conclusion within the note was that due to the extremely small contribution to predicted displacement mortality in winter and spring, the project's impacts considered either alone or in-combination with other projects would not have significant impact on auks within the North Sea [REP-269 App1 pp158-159]. JNCC did not challenge the conclusions and the Panel sees no reason to disagree.

Brown Ridge

- 4.151 Although the Dutch government commented in their relevant representation that the guillemot and razorbill abundance at Brown Ridge qualifies it as an SPA [REP-081], it was acknowledged at a subsequent meeting the Netherlands government representatives held with the applicant that the area was still under consideration as an SPA but that the impact on auks from EAO was unlikely to be significant [REP-142 App 3J].

Marine Mammals

- 4.152 The JNCC initially claimed that the applicant's analysis of the cumulative impact of the proposal and others in the North Sea on harbour porpoise population had been inadequate [REP-105]. However, the applicant subsequently provided sufficient additional data on North Sea wind farms, including Hornsea (1) OWF and Dogger Bank Creyke Beck OWF, to enable the JNCC to agree that that the proposal alone and cumulatively would be unlikely to have a population level impact for Harbour Porpoise. The Panel agrees with that conclusion [REP-150].
- 4.153 NE is satisfied with the applicant's commitment to develop a Marine Mammal Mitigation Plan consistent with JNCC advice [REP-150 and REP-236]. NE stated that adherence to that advice should ensure that harbour and grey seal, which are notified features of The Wash SSSI and Humber Estuary SSSI respectively are unlikely to be killed or injured during construction of the wind farm [REP-150 p 61].
- 4.154 No other issues were raised by NE/JNCC about marine mammals. JNCC is also content that sandeels would not be impacted by the proposal [REP-150].

Ross worm (*sabellaria spinulosa*)

- 4.155 *Sabellaria spinulosa* reefs comprise dense sub tidal aggregations of this small, tube building polychaete worm. *Sabellaria spinulosa* can act to stabilise cobble, pebble and gravel habitats, providing a consolidated habitat for a large number of invertebrates and juvenile fish. They are solid (albeit fragile), massive structures at least several centimetres thick, raised above the surrounding seabed, and persisting for many years. As such, they provide a biogenic habitat that allows many other associated species to become established. A greater variety of marine life is found in association with ross worm reefs than on other similar areas of the seabed. Ross worm reef is classified as a UK Biodiversity Action Plan (UKBAP) Priority Habitat and listed in Annex 1 of the Habitats Directive.
- 4.156 There is one location within the site of the proposal where a reef of *Sabellaria* has been identified. JNCC accept that, providing the sea bed remains undisturbed, the ecological functions of the *Sabellaria* are unlikely to be affected [REP-281]. JNCC sought an alteration to the DMLs in order to allow the linking of a micro siting report to a pre-construction Annex 1 habitats survey so that adequate provision could be made for *Sabellaria* mitigation [REP-306]. This is secured in the recommended Order [Schedule I Pt 2 (11)(a) xiii); (i); 17(2)(b)][Schedule J Pt 2 (11)(a)(viii) (j) 17(2)(b)].

Spread of non native species

- 4.157 Concern was expressed by the MMO about the potential which would be offered by the underwater features of the proposal for the spread of non native species in the southern North Sea [REP-101 and MMO REP-190].
- 4.158 The applicant and MMO subsequently agreed in a SoCG that wording would be included in the DML to state that the required type of surveys would be dependent on the existing and available data at the time of construction and post construction [REP-237]. Therefore, the DMLs have been altered to secure appropriate surveys to validate predictions made in the ES with regard to habitat creation and the ability of structures to act as vectors for non native species [recommended Order Schedules I and J Pt 2 (19) (2)(b)].

Schedule 1 and other protected species

- 4.159 Cetti's warbler and the Eurasian marsh harrier were identified as birds listed under Schedule 1 of the Wildlife and Countryside Act 1981 which could be disturbed by the proposed terrestrial cable installation. Both species are known to have nested along the cable route and concern was expressed by NE and Suffolk Wildlife Trust (SWT) about possible disturbance [REP-105] and [REP-099].
- 4.160 Nevertheless, the subsequent SoCG [REP-241] between the local Councils, NE, SWT and the applicant indicated agreement that the proposal would not have a detrimental effect on Schedule 1 breeding species subject to the implementation of the mitigation agreed in the Ecological Management Plan (EcMP) [REP-241 Appendix 4].
- 4.161 The EcMP provides for various measures including pre-construction surveys, ensuring habitats close to the cable route would be unattractive to the nesting species, creating an exclusion zone around any nests that are established, with the ultimate safeguard of the cessation of works in order to avoid committing a criminal offence by the disturbance of a Schedule 1 breeding species.
- 4.162 It was similarly agreed in the SoCG that there would not be any likely significant effect on other onshore protected European species or where the granting of a NE licence is necessary, provided that the proposed mitigation is implemented.
- 4.163 The mitigation described in the Landscape and Ecological Management Strategy (LecMS) would avoid or minimise the disruption of bat commuting/foraging at specific hedgerows. It would protect other important hedgerows and, in the opinion of the Panel, would deal satisfactorily with otter and water vole habitat mitigation. It would also include provision for appropriate post construction on shore ecological monitoring.

4.164 The mitigation for European and non European protected species is secured in the recommended Order Schedule A Part 3 Requirements 19 and 27, both which provide for the prior approval of plans or schemes by the local planning authority in consultation with NE.

Other Designated Sites

4.165 The applicant's ES identified a number of ecologically designated sites at national, regional and local levels. In particular there are eleven nationally protected Sites of Special Scientific Interest (SSSI) within 2km of the proposed cable route (including the Deben Estuary and Alde Ore which have multiple designations) that were considered as part of the examination. The list of SSSIs identified by the applicant is as follows:

- Bawdsey Cliff SSSI
- Deben Estuary SPA, Ramsar & SSSI
- Newbourne Springs SSSI
- Alde-Ore Estuary SPA, Ramsar & SSSI
- Great Blakenham Pit SSSI
- Waldringfield Pit SSSI
- Little Blakenham Pit SSSI
- Sinks Valley, Kesgrave SSSI
- Ferry Cliff, Sutton SSSI
- Ramsholt Cliff SSSI
- Riverside House Meadow, Hasketon SSSI

4.166 The ecologically designated sites crossed by the preferred onshore cable corridor and therefore directly affected are the Bawdsey Cliff SSSI and Deben Estuary SPA, Ramsar and SSSI. In addition to Bawdsey Cliffs SSSI, NE lists the Humber Estuary SSSI, the Wash SSSI and the Deben Estuary SSSI which could be affected by the offshore elements of the proposed project [REP-150].

4.167 Within the applicant's list of SSSIs in proximity to the cable installation works, the only ecological issues which NE identifies concern brent goose and avocet at the Deben Estuary SPA and SSSI. These species are dealt with in the report above and NE concludes there would be no adverse effect on SPA site integrity should an AA be undertaken by the competent authority [REP-150 p60]. NE is also satisfied that the waterbirds which are a notified feature of the Deben Estuary SSSI would not be exposed to significant disturbance levels by the development.

4.168 NE is also satisfied that Harbour and Grey Seals, which are notified features of The Wash SSSI and Humber Estuary SSSI respectively, would be unlikely to be killed or injured during the construction of the wind farm, subject to adherence to guidance for marine mammal mitigation as would now be secured under the recommended Order (Schedule I Part 2 Condition 11 (f) and Schedule J Part 2 Condition 11 (f)). There is no evidence to

indicate that there would be any adverse effects on these or other SSSIs either individually or in-combination with other projects.

- 4.169 Designated geological features at Bawdsey Cliff SSSI are dealt with below in the Marine and Coastal Process chapter.

Other sites

- 4.170 The onshore SoCG between parties including the local Councils, NE, SWT and the applicant stated that, assuming agreed mitigation is implemented, the proposed development would not have a detrimental effect on other protected sites (eg County Wildlife Sites) or non designated countryside [REP-241].
- 4.171 The Panel finds that the LecMS, as secured in the recommended Order Schedule A Part 3 Requirement 19, would provide for appropriate measures to satisfy the requirement for the mitigation of onshore ecological impacts.
- 4.172 The Panel also finds that with the implementation of the agreed mitigation there would be no conflict with the development plan policies aimed at the protection and enhancement of habitats and their biodiversity value as outlined in the LIR [REP-231].
- 4.173 Accordingly, for the reasons given above, the Panel finds that there are no reasons to withhold the grant of consent on grounds of any impacts on European Sites or Species or on any other protected habitats or species.

FISHERIES

- 4.174 In assessing the impact of a proposed wind farm on fish and fishing interests there are two major considerations that are identified in National Policy Statements EN-1 and EN-3, namely impacts on fish from a biodiversity perspective and on commercial fishing in terms of disruption to established economic activity. Although some concerns were raised in relation to the effect on fish stocks, these were not sustained by evidence of significantly adverse impacts. However, considerable objection was raised by local and international commercial fishermen to both the proposed wind farm and connecting underwater cabling in respect of their potentially adverse effects on fishing.
- 4.175 Relevant policy in relation to fish is set out in EN-1 section 5.3 in terms of the biodiversity impact. Paragraph 5.3.7 clarifies that as a general principle development should aim to avoid significant harm to biodiversity including through mitigation and consideration of reasonable alternatives. EN-3 paragraphs 2.6.58 to 2.6.71 elaborate this policy specifically in relation to offshore wind while paragraphs 2.6.121 to 2.6.136 set out policy on commercial fisheries and fishing.

- 4.176 Paragraph 2.6.132 states that the decision-maker *"should be satisfied that the site selection process has been undertaken in a way that reasonably minimises adverse effects on fish stocks, including during peak spawning periods..."*
- 4.177 Paragraph 2.6.133 goes on to say that the decision-maker *"should be satisfied that the applicant has sought to design the proposal having consulted representatives of the fishing industry with the intention of minimising the loss of fishing opportunity taking into account effects on the other marine interests."*
- 4.178 In relation to mitigation paragraph 2.6.134 advises that *"any proposals should result from the applicant having detailed consultation with relevant representatives of the fishing industry."* Paragraph 2.6.135 goes on to suggest that *"mitigation should be designed to enhance where reasonably possible medium and long-term positive benefits to the fishing industry and commercial fish stocks,"* while paragraph 2.6.136 advises that the decision-maker will need to consider *"the extent to which disruption to the fishing industry, whether short-term due to construction or long-term over the operational period, including that caused by the future implementation of any safety zones, has been mitigated where reasonably possible."*
- 4.179 The Panel examined both the issues of impacts on fish species and displacement of commercial fishing, in the light of NPS policies through the ISH and written questions.

Fish

- 4.180 The MMO in their relevant representations required monitoring through pre-construction and post-construction benthic surveys [REP-101] but otherwise, in relation to fish stocks, raised no major concern with the proposed development.
- 4.181 Wightman Fishing Company Limited [REP-030] expressed objection to the wind farm because it held that construction would disrupt cod spawning grounds, specifically in the period January to March. However this objection was not supported by The Centre for Environment, Fisheries and Aquaculture Science (Cefas) at the ISH [HE-30] and no objectively based evidence was available to support this particular concern. The applicant held that research showed that the main cod spawning areas within the southern North Sea are at a sufficient distance from the project for there to be no significant piling noise and vibration related impacts. As a precaution EAOL decided not to use monopiles for turbine foundations to minimise the impacts of subsea noise and pile driving for EAO would only involve small pin-piles required for jacket foundations.
- 4.182 The Panel's examination of this issue is covered in more detail in the section of this report entitled *"The effects of noise from the*

offshore elements of the project on offshore receptors”, subsection ‘The effect on fish spawning and nursery grounds.’

Commercial Fishing

- 4.183 A number of commercial fishing interests raised objection to the development and specifically the potential interference with fishing by displacement from the wind farm site in the long term and as a result of the installation of cables, both within the wind farm and its connection to the shore. Orford and District Inshore Fishermen [REP-014] and a number of individual fishermen from Harwich, Felixstowe, Orford and Southwold expressed concerns based on experience of previous wind farm construction in the vicinity.
- 4.184 A particular issue arose in relation to the ability of fishermen to fish between the constructed turbines with VisNed (Dutch Demersal Fisheries Organisation) and National Federation of Fishermen’s Organisations (NFFO) [REP-074] claiming that it would be possible to fish, subject to appropriate layout of inter-turbine cabling, while East Anglian fishermen, including Wightman Fishing Company and Orford and District Inshore Fishermen, disputed this claim. The ISH [HE-29] revealed that the long term ability to fish within the constructed wind farm would, in part, be dependent on the size and power of vessels and the methods of fishing used.
- 4.185 Most of the concerns of fishermen have been settled through private agreements between the applicant and individual fishing businesses and by agreeing SoCGs. The SoCG with representatives of local East Anglian Fishermen [REP-232] includes a number of matters of agreement on:
- communication, including the appointment of a fisheries liaison officer and development of a liaison plan;
 - cable installation and protection;
 - wind farm construction and operation, and
 - fisheries monitoring.
- 4.186 An SoCG agreed with the Eastern Inshore Fisheries and Conservation Authority (EIFCA)[REP-234] covers only the inshore elements of the proposed development, namely the undersea transmission cables. While the EIFCA is satisfied that the applicant has used the best available information regarding adverse impacts on fish, it held that continued monitoring of fish populations should be undertaken, and expressed concerns about in-combination effects with other wind farm developments and aggregate dredging activity. In regard to cable armouring it suggests that *“the fullest dialogue with the fishing industry is attempted.”*

- 4.187 A similar SoCG was agreed with VisNed and NFFO [REP-244]. Although there were many areas of agreement some issues were not agreed including the extent of mitigation appropriate for the long term loss of fishing grounds, the establishment of a community fund for research purposes, the need for post-construction surveys across the inter-array cables and a broader cross-industry arrangement for compensation similar to that utilised in the oil and gas industries. NFFO submitted proposed changes to the Order at Deadline IV [REP-326] and these were not challenged by the applicant. In their submission NFFO expressed concern that the developer had not planned for elements of the design of the wind farm that "*take reasonable account of fisheries coexistence issues*" although the production of a working co-existence plan had been agreed in the SoCG (Matrix of Common Ground – ID4) [REP-232].
- 4.188 Consequently, and particularly given the agreement reached in relation to co-existence, the Panel have accepted the proposed change to the Order that a coexistence statement be required and has inserted an additional DML clause in Schedules I and J condition 11 ((k) and (l) respectively) to this effect. The wording added by the Panel is that proposed by the NFFO save for its reference to a "*scheme design and construction methods*". The word "*scheme*" is omitted because DML conditions are conditions of the licensed activities, rather than of any "*scheme*" as such. In addition "*scheme*" is not a defined term in the DMLs therefore its use would be imprecise and could cause confusion. The text of the NFFO's proposed amendments was published as an examination document [REP-326] on the Planning Portal website and thus all interested parties including the applicant, had an opportunity to respond to it.
- 4.189 Similarly agreement was reached in the SoCG (Matrix of Common Ground – ID 20) [REP-232] that a detailed cable laying plan would be provided which incorporates a cable burial risk assessment. NFFO have proposed and the Panel have accepted into its recommended Order, the addition of wording to this effect in the Order Schedules I and J condition 11(g)(ii).
- 4.190 An NFFO request for fishing surveys to verify that no seabed obstructions remain along the route of the inter-array cables has been accepted by the Panel and included in the DML Schedule I 11(g)(iii).
- 4.191 The Panel finds that these changes are necessary in view of NPS EN-1 policy and in view of the fact that the applicant submitted no objections to them.
- 4.192 The SoCG with the MMO [REP-237], in part, covers impacts on fish and fishing. The two parties agreed on the need for monitoring of underwater noise generated by the installation of foundations and

for monitoring of benthic environments. Detailed agreement was reached in response to Deadline V questions [REP-343].

- 4.193 On commercial fisheries EAOL and MMO reached agreement on the assessment of the impact of the wind farm. The detail of bathymetric survey was agreed in response to Deadline V questions [REP-343].
- 4.194 The DCO now recommended includes modifications made by the applicant in response to the representations made by interested parties and consultees, and as agreed in the SoCGs and the Panel concludes that these changes together with those proposed by NFFO and agreed by the Panel sufficiently mitigate the impacts on fish and fishing as required by relevant NPSs.

MARINE & COASTAL PHYSICAL PROCESSES

Introduction

- 4.195 EN-1 advises that the decision maker should be satisfied that the proposed development will be resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period. New development in areas of dynamic shorelines where the proposal could inhibit sediment flow or have an adverse impact on coastal processes at other locations should not normally be consented. Impacts on coastal processes must be managed to minimise adverse impacts on other parts of the coast. Applicants should have restoration plans for areas of foreshore disturbed by direct works and will undertake pre- and post construction coastal monitoring arrangements with defined triggers for intervention and restoration.
- 4.196 Representations were received from the local Councils individually and via the LIR, Bawdsey Parish Council, NE, the MMO, SWT, the Suffolk Coast and Heaths Partnership, the Deben Estuary Partnership and on behalf of the Bawdsey Manor Estate. The most significant issues raised were:
- Scour and sedimentation;
 - The cliff erosion at the Bawdsey landfall site and impact on coastal processes;
 - The impact on the Bawdsey Cliff SSSI, and
 - Decommissioning.

Scour and sedimentation

- 4.197 The MMO had no issues to raise about the evidence in the ES concerning coastal and marine processes. The MMO stated that the characterisation conditions were described accurately in the ES

with respect to water levels, currents, wind, waves, sediments and morphodynamics. Potential interactions (with respect to the physical environment) were identified with Greater Gabbard, London Array 1, Gunfleet Sands 3, London Array (Phase 2), Galloper and Kentish Flats 2 offshore wind farms which involve the wave regime and, in the case of Galloper, suspended sediment during construction.

- 4.198 However none of those potential impacts were assessed as significant by the applicant and the MMO did not dissent from those conclusions [REP-101, REP-190 & REP-237]. The MMO further accepted that given the predicted impacts of the project, the conditions provided within the DMLs for the management and monitoring of sediment dynamics, waste and debris were considered appropriate and adequate [REP-237].
- 4.199 NE and the LAs [REP-258] initially expressed concern about the use of scour protection on the export cables which could then interfere with longshore sediment transportation, especially near the shore area. However, NE accepted that if the cables were buried at an optimum depth, as intended by the applicant, this would remove the concern and the presence of a buried cable would be unlikely to alter coastal processes [REP-150 & REP-278].
- 4.200 NE also advised that during decommissioning any scour protection used by the applicant should be removed so that it does not form a permanent impediment to longshore sediment transportation on the seabed [REP-278]¹⁸. The recommended Order Schedule A Part 3 Requirement 9 provides for an offshore decommissioning programme for approval by the SSECC, although the Order as drafted does not include a clause to prohibit commencement until approval has been obtained. The SSECC may wish to consult the applicant on the inclusion of such an addition to the Requirement.

The landfall

- 4.201 The main, and substantive, concern of the local authorities, including Suffolk Coastal District Council (SCDC) [REP-122] was the potential for the development to interfere with coastal processes in the locality of the landfall point and the consequential implications for cliff stability should erosion rates be affected [REP-258].
- 4.202 Similarly, the councils raised issues about whether the process of undertaking the short Horizontal Directional Drilling (HDD) would have direct implications for cliff stability because of its unconsolidated nature. In addition, cliff stability might be affected

¹⁸ NE's advice on the potential impacts of the proposed development on geomorphology are set out in the Report of Siobhan Browne [Annex G of the NE and JNCC's Written Representations REP-278].

by any HDD trenching in the London Clay wave cut platform and carrying out works to gain access to the beach.

- 4.203 Bawdsey Parish Council [REP-088 & REP-140], the Suffolk Coast and Heaths Partnership [REP-106], the Deben Estuary Partnership [REP-119] and the Bawdsey Manor Estate [REP-016 & REP-139] also expressed concern about the instability of the cliff at the landfall, the possible impact on coastal processes and the erosion of the beach and the need for monitoring, with the Parish Council noting the recent significant increase in cliff erosion¹⁹.
- 4.204 The Panel heard evidence at the ISH about the means of constructing the landfall site and saw photographs of the type of plant which would operate should short HDD be used [REP-294]. The Panel also noted that there was no scientific evidence to indicate that the HDD would undermine the Red Crag cliff at the landfall location and lead to its collapse and the consequent incursion by the sea.
- 4.205 The applicant recognised that, due to coastal erosion of a maximum of 4 metres per annum, the engineering design should make provision for up to 100m of cliff recession during the lifetime of the project and any disruption to the existing coastal processes regime would be minimal [REP-243]. There was no challenge to those submissions. Furthermore, in the onshore SoCG [REP-241] between parties including the Councils, NE, and the EA, it was agreed that there was no objection to the location of the landfall.
- 4.206 The applicant [REP-302] agreed to an outline Bawdsey bed level monitoring and remediation strategy which would relate to the offshore infrastructure (Work 3B) associated with the landfall site. The delivery of the strategy would be secured through condition 11(i) of the DML (recommended Order Schedule J) and provisions include a bed level monitoring and remediation plan for that area of Work No. 3B below mean high water spring (MHWS) in accordance with the outline Bawdsey bed level monitoring and remediation strategy, monitoring bed levels of London Clay for the operational lifetime of the authorised scheme and a methodology for any remedial works in that area identified as necessary by such monitoring. The plan would have to be submitted to and approved by the MMO prior to the commencement of any part of the licensed activities
- 4.207 Therefore the Panel concludes there is no substantive evidence to indicate that coastal erosion would be exacerbated by the proposed landfall works and that the monitoring arrangements would be satisfactory.

¹⁹ Table 1 in the letter of 8 July 2013 from the applicant to the Bawdsey Manor Estate summarises the proposed works at the landfall [REP-246].

Bawdsey Cliff SSSI

- 4.208 The low lying Bawdsey Cliff has great geological interest and potential for studies of non-glacial Pleistocene environments. The specific designated feature of the Bawdsey Cliff SSSI is a long section of Butleyan division of Early Pleistocene Red Crag. The site constitutes the largest available exposure of Red Crag and is rich in marine Mollusca. NE noted that HDD techniques would take the landfall under the geological exposures of the Bawdsey Cliff SSSI, thus minimising direct impact during cable installation [REP-150].
- 4.209 The construction of a ramp to allow beach access to the construction site could cause some disturbance to cliff exposures. However, a landfall method statement describing details of the location and methods of construction would have to be agreed with the relevant planning authority prior to works taking place to ensure that they minimise the impact of the works on cliff stability and coastal erosion [REP-246 & REP-278]. As requested by NE, consultation on the landfall method statement would include that organisation [recommended Order Schedule A Part 3 Requirement 11].
- 4.210 The Panel concludes that the inclusion of wording in the requirement specifying that NE is consulted on the method statement should ensure that sufficient steps are taken to avoid the landfall works causing an adverse effect on the designated feature of the Bawdsey Cliff SSSI and also the vegetated shingle which is defined as a CWS [REP-105].

Decommissioning

- 4.211 Offshore decommissioning is provided for in the recommended Order Schedule A Part 3 Requirement 9 whereby a written decommissioning programme has to be submitted to the SSECC for approval prior to the commencement of development. The Councils commented that the operational period during which the ES had sought to identify significant effects was 25 years. Not only could EAO operate for 25 years, but East Anglia Three and East Anglia Four, if consented, could extend the operational life of the landfall site for an even longer period, possibly commencing at a much later date. Significant coastal erosion may have already occurred by this time and thus the baseline conditions would be quite different compared to the start of the EAO 25 year operational period.
- 4.212 Consequently, the LAs [REP-276] sought a requirement in the Order which would secure, after a period 25 years following the completion of Works 3b and 4, or no later than 2043, the submission by the undertaker of a report to the relevant planning authority which would describe;

- the extent of coastal change experienced in the preceding 25 years;
- whether any remedial works to protect the infrastructure have been required during this period;
- what these works constituted of and an assessment of their impacts on coastal processes;
- the length of the proposed extension to the operational lifespan of the wind farm, and
- the extent of the likely coastal retreat during this additional period and the likely need for, and nature of, any remedial works, and an analysis of their predicted impact on coastal processes.

4.213 This has been included as Requirement 32(1) in the recommended Order Schedule A Part 3, with minor amendments. The Panel's first minor amendment is that the words "*Within three months of*" have been inserted in place of the word "*Upon*", in relation to the date by which a decommissioning report should be submitted. This is because it is possible that operation of connection works could cease with little notice being available in which case submitting a report upon this cessation could prove unreasonable and would be difficult to enforce. For this reason the provision of three months within which to provide a decommissioning report, the Panel finds, would make the Requirement reasonable for the undertaker and enforceable for the relevant planning authority. The wording inserted by the Panel formed part of the text of the amendment in a consultation of all interested parties.

4.214 In addition, after the "*the cessation of commercial operation of the connection works,*" the words: "*or of Work No.3B or of Work No. 4*" have been inserted by the Panel. These words are inserted to ensure a decommissioning plan would be provided in the event of cessation of operation of the landfall works alone, even if other connection works remained in operation. Such a report would be necessary in these circumstances because the landfall works would otherwise remain *in situ* beyond the period assessed in the EIA.

4.215 In a further change to the drafting of this requirement, after the words "*After a period of*" the words "*24 years but before the expiration of a period of*" have been inserted by the Panel. This is because the previous wording (requiring a report after 25 years or by 2043) could allow the works to continue in operation beyond the 25 years assessed in the environmental impact assessment.

4.216 The Panel finds that as amended the requirement would now meet all the requirements of paragraph 4.1.7 of NPS EN-1.

- 4.217 There would also be a condition 11(i) within the DML (Schedule J) which would require the applicant to produce a monitoring and remediation plan in accordance with the outline Bawdsey bed level monitoring and remediation strategy and obtain prior approval from the MMO.
- 4.218 For the reasons set out above, the Panel finds that the proposal would not inhibit sediment flow nor have an adverse effect on coastal processes at the landfall site or other locations. Furthermore, the proposal would not adversely effect the designated feature of the Bawdsey Cliff SSSI. Satisfactory arrangements have been secured in the requirements of the recommended Order Schedule A and the conditions of the DMLs (Schedules I and J) to provide for monitoring the foreshore and sea bed in the proximity of the landfall and elsewhere within the site of the development offshore. Decommissioning is also secured in the recommended Order.
- 4.219 Therefore, the Panel concludes that there are no reasons why consent should be withheld by the SSECC on the basis of the effects of the proposal on marine and coastal processes and the Bawdsey Cliff SSSI.

NOISE, VIBRATION, ELECTRO-MAGNETIC FIELDS & HEALTH

National policy

- 4.220 The Overarching National Policy Statement (NPS EN-1), paragraph 5.11.1, explains that excessive noise can have wide ranging impacts on the quality of human life, health (for example owing to annoyance or sleep disturbance) and use and enjoyment of areas of value such as quiet places and areas with high landscape value. The NPS EN-1, paragraphs 5.11.4 to 5.11.7, set out what should be included in the applicant's noise assessment.

The ES: Noise and Vibration

- 4.221 The applicant provided in the Environmental Statement (ES), Volume 3, Chapter 26, "*Noise and Vibration*" [APP-152] an assessment of the predicted noise effects of the onshore electrical transmission works of the East Anglia One project.
- 4.222 The ES included an assessment of the impacts of the construction, operation and decommissioning with reference to the existing environment (the baseline) as represented by noise monitoring around the site. It summarised potential mitigation measures that could be implemented to reduce or avoid impacts, if needed. The potential vibration impacts were also assessed.
- 4.223 The effects of noise from the offshore elements of the project on offshore receptors were considered in the ES Volume 2, Chapter 8 'Underwater Noise and Vibration and Electromagnetic Fields' [APP-070]. The effects of noise from the offshore elements of the

project on onshore receptors were considered within the ES Volume 3, Chapter 26 [APP-152]. However, it did not include an assessment of aspects of the project that would be considered to have a negligible effect on receptors. Specifically the noise from the offshore wind turbines was considered to have a negligible effect on receptors, as the turbines, about 43km from shore, would not be audible at onshore receptors.

- 4.224 There has been no objection raised by any interested party (IP) to that approach. Indeed, the MMO accepted that, as operational wind farm noise has not been confirmed as causing harm or displacement to fish or marine mammals, the decision to not conduct an assessment of such operational noise was considered to be acceptable [REP-101].

Representations: Noise & Vibration

- 4.225 The potential for disturbance due to noise was raised by a number of IPs in their representations. The relevant LAs referred to potential adverse impacts on residential amenity during the construction phase of the proposed development. In particular, SCC raised concerns with the assessment of effects particularly as they related to transport, and consequently to the associated impacts on noise. The SCC pointed out that section 5.11 of NPS EN-1 requires the identification of noise sensitive premises and noise sensitive areas that may be affected. The ES [APP-152] did not identify these locations with respect to the construction traffic routes. There was inconsistency in the ES between the noise and vibration and traffic assessment reports as to exactly which routes would be likely to be affected. Schools and other noise sensitive buildings were not referenced within it nor did the assessment provide any quantification of the likely numbers of properties that would be affected on even those routes where the impacts were expected to be greatest [REP-008].
- 4.226 The Babergh and Mid-Suffolk District Councils (BDC and MSDC) identified issues in relation to noise, vibration and air quality which required resolution. They asserted that the information presented in the ES revealed a certain level of inconsistency in the assessment of these issues. It was not possible to be clear from that document how many residents might be affected by traffic movements, or noise or vibration from construction activities [REP-010].
- 4.227 The Great Bealings Parish Council pointed out that tunnelling work would be noisy and drew attention to the potential duration of those works and hours of operation in the vicinity of the Bealings [REP-85]. The Little Bealings Parish Council also raised the issue of 24 hour working with the associated increase in noise and vibration for the community [REP-121]. The Bawdsey Parish Council required strategies to be put in place for the re-evaluation and mitigation of noise and disturbance to local residents during

the construction period and not only for those properties which abutted the landfall site [REP-088].

- 4.228 There were also representations made by a number of individuals²⁰. For example, Margaret Wilson raised the matter of the quiet enjoyment of her garden being disturbed with noise from the drilling rig and “reverse indicators” on the construction plant. She also expressed concerns in relation to overnight working. Terence Doman, Charles Barrington, Anthony Fryatt and Ursula Richards expressed strong concerns in relation to construction noise. Charles Barrington also raised the issue of construction traffic noise, as did Stephen Hicks, whose specific concern related to the proposed use of the secondary depot at Playford by large construction vehicles. Alan Hall’s concerns related to the use of the converter station during the operational phase [REP-104, 076, 059, 078, 107, 117 & 120].

Post Submission Report 1 & Supplementary Environmental Information

- 4.229 In addition to the initial ES, the applicant subsequently provided a Post Submission Report 1 and Supplementary Environmental Information (SEI) dated May 2013 [REP-132]. The purpose of this report was to present two types of information in relation to the project. This consisted of firstly, SEI which had been the subject of consultation following the approach set out in Regulation 17 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 and, secondly, additional information provided to give further details of the traffic aspects of the project and to give details of the changed construction methods at the Bealings and at Martlesham. Information in both categories, of course, represents environmental information that should be taken into account under the EIA Regs. The information included draft outlines of several documents which would be finalised pre-construction, should the application be granted, namely, the Outline Traffic Management Plan, the Outline Access Management Plan and the Outline Travel Plan. These were all appended to the SEI [REP-135]. The Panel asked a number of questions relating to these documents which would be certified in their current form should the Order be made.
- 4.230 At the Noise and Vibration ISH, the relevant LAs confirmed that, in the light of the SEI and additional information which accompanied it, there was no longer any dispute that the applicant’s assessment of noise impacts likely to arise from the proposed development included the matters required by NPS EN-1. Furthermore, in relation to operational noise, NPS EN-1 paragraph 5.11.6, advises that, with respect to human receptors, this should be assessed using the principles of the relevant British Standards and other

²⁰ These comprise about 6% of the relevant representations made.

guidance. It is clear that this approach has been followed by the applicant and this was also agreed by the LAs at the ISH.

The decision-making aims of NPS EN-1

- 4.231 As regards decision-making, NPS EN-1, paragraph 5.11.9, sets out the aims that must be satisfied by a proposal before a DCO can be granted. That is to say:
- avoid significant adverse impacts on health and quality of life from noise;
 - mitigate and minimise other adverse impacts on health and quality of life from noise
 - where possible, contribute to improvements to health and quality of life through the effective management and control of noise.
- 4.232 Dealing firstly, with the last bullet point of NPS EN-1, paragraph 5.11.9, the applicant confirmed at the ISH that there was no suggestion that the proposal would contribute to improvements to health and quality of life through the effective management and control of noise.
- 4.233 Turning now to the first bullet point of paragraph 5.11.9, the position as set out in the ES and SEI is that there would be no significant adverse impact on health and quality of life from noise [APP-152 & REP-132]. The SoCG relating to noise and vibration impacts between the applicant, SCC, MSDC and SCDC [REP-242] indicated that this was the agreed position between these parties. SCDC and MSDC agreed with the results of the ES assessment of noise and vibration impacts. The SCC agreed with the assessment in relation to impacts associated with traffic and transport. The SCDC and MSDC also agreed that adherence to the draft DCO requirements regarding operational and construction noise and the documents specified therein would avoid significant noise and vibration impacts from East Anglia One. SCC agreed with that position in relation to impacts associated with traffic and transport. At the ISH, the relevant LAs confirmed their agreement to the position as stated in the SoCG.
- 4.234 Having regard to the second bullet point of NPS EN-1 paragraph 5.11.9, in terms of "*other adverse impacts*" on health and quality of life from noise, that is to say, those which are not significant, the aim must be to mitigate and minimise those impacts. In relation to mitigation, paragraph 5.11.11, directs the examining authority to consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the application.

- 4.235 The Outline Code of Construction Practise (CoCP) [REP-303] recognised that there would be potential for noise and vibration to be generated during the construction process. The applicant clarified at the ISH the proposed mechanisms for the control of noise and vibration impacts during construction. The draft DCO [APP-028] set out three relevant requirements, namely, Requirement 27 – *"Code of construction practice"* relating to the prior approval and implementation of the Code of Construction Practice (CoCP); Requirement 29 – *"Control of noise during construction"* relating to the prior approval and implementation of a noise and vibration management scheme; and Requirement 30 – *"Construction hours"* to control working hours. In relation to the operational phase, Requirement 31 sought to control the level of noise emissions from the proposed convertor station.
- 4.236 A *"Noise and vibration management scheme"* would be provided and implemented in accordance with Requirement 29. This scheme would be included as part of the CoCP, in fulfilment of Requirement 27 of the DCO. It would set out best practice noise mitigation measures and a procedure for monitoring those measures. Mitigation measures would be monitored throughout the construction phase as set out in the Environmental Management Plan (EMP). If non-conformity with any of the mitigation measures were identified, it would be recorded during a site audit and appropriate remedial actions would be implemented.
- 4.237 The recommended Order has revised the numbering of these requirements so that they are now respectively Requirement 20 – *"Code of construction practice"*, requirement 22 – *"Control of noise during construction"*, Requirement 23 – *"Construction hours"*, and Requirement 24 *"Control of noise during operational phase"*.
- 4.238 During the examination, the Panel, as required by NPS EN-1 paragraph 5.11.11, reviewed whether mitigation measures would be needed over and above those proposed by the applicant. Those aspects of the scheme which gave rise to specific concerns in relation to onshore noise and vibration impacts are considered in greater detail later on in this sub-chapter.

The Local Impact Report

- 4.239 In terms of Development Plan policy, the joint Local Impact Report (LIR) [REP-231] identified the relevant Development Plan policy concerning noise and vibration of MSDC to be Policy H16 (saved from the Mid Suffolk Local Plan 1998) and for SCDC it is DM23. The LIR confirmed that, as far as noise and vibration impacts were concerned, the relevant LAs regarded the project as being compatible with the existing local planning framework.

Onshore noise impacts during construction phase & proposed mitigation

- 4.240 The LIR [REP-231] raised a number of points in relation to the draft DCO requirements. It identified, as a key local issue, noise and vibration impacts during the construction phase relating to the works themselves, notably in the Bealings and Bawdsey areas, and the operation of the construction consolidation sites (CCSs) and associated HGV movements more generally.
- 4.241 As to onshore construction noise impacts, the LIR, at paragraph 13.9, acknowledged that draft DCO, requirement 29, which provided for a written scheme for noise management to be agreed with the LAs, and requirement 30 which limited working hours, should control noise impacts to an acceptable level. However, it was recognised that the works would inevitably give rise to localised disturbance to amenity.
- 4.242 The LIR proposed, at paragraph 13.9, that the applicant should ensure that contractors would be required, through the CoCP, to use "*best endeavours*" to minimise the duration of, and to sensitively time, disruptive activities and to deploy appropriate mitigation such as acoustic screening to further reduce disturbance.
- 4.243 The applicant's written response to the LIR [REP-253] indicated that this was agreed and that it would discuss with the relevant LAs appropriate updates to the CoCP. At the ISH, the applicant confirmed that this was, indeed, agreed and changes were proposed to the text of the Outline CoCP [REP-303] to reflect this. In addition, the applicant proposed that the wording of draft DCO requirement 27 should, itself, be changed so that it specifically set out all those plans, and the like, to be included within the CoCP. The Panel is satisfied that the proposed changes, as now set out in requirement 20 of the recommended Order, would be sufficiently robust and precise to minimise the adverse impact anticipated by the LAs.
- 4.244 The LIR, at paragraph 13.10, suggested that a clear process detailing how members of the public could provide feedback, or relate concerns, should also be included within the Noise and Vibration Management Scheme. At the ISH, the applicant agreed that a clear process would need to be put in place. The revised draft DCO [APP-246] therefore incorporated an amended requirement 27. This has been carried forward to the recommended Order in Requirement 20 that the various plans to be specified as forming part of the CoCP must include, "(d) a written scheme for noise and vibration management during construction" and, "(i) a project community and public relations procedure". In addition, wording was added into requirement 22 (formerly 29) to ensure that the written scheme for noise and vibration management would form part of the CoCP. In the light of

those changes which have been incorporated within the recommended Order, the Panel is satisfied that satisfactory provision for monitoring would be put in place as part of the approved CoCP.

- 4.245 The LIR, paragraph 13.11, referred to the lack of clarity on the technique to be utilised in the crossing of Lodge Road at the Bealings. At the ISH, in relation to the item *"Onshore Construction Process"*, the applicant confirmed that the horizontal directional drilling (HDD) technique would be used to cross Lodge Road at the Bealings. In response to the Panel's question 5.18.1, [REP-142] the applicant indicated that, *"For all HDD operations the flexibility is needed to implement 24 hour operation to ensure successful completion of each duct"*. However, it was confirmed at the ISH that the Bealings and Sandy Lane were excluded from that comment. It was agreed that the Outline CoCP [APP-183] at section 3, paragraph 2, which dealt with working hours, required amendment to reflect this.
- 4.246 The revised draft DCO (Version 3), requirement 30(3), [REP-260] specifically restricted construction hours at the Bealings (work No 26) and Sandy Lane (work No 21). It stated: *"Construction of Work No 21 or Work No 26 shall not take place other than between 0700 hours and 1900 hours Monday to Saturday, with no activity on Sunday or bank holidays, save as agreed with the relevant planning authority."*
- 4.247 In response to the Panel's question 5.20 which queried the operational need for the proposed hours of work, the applicant, at 5.20.1, stated that the hours of work were standard for this type of project and were considered reasonable [REP-142]. However, at the ISH, the applicant agreed that if working hours were, for example, to be reduced by one hour on Saturdays then that would have little effect on the duration of the overall working period. There is undoubtedly scope for some reduction in working hours on Saturdays without causing undue delay to the overall timescale of the programme of works. The imposition of more restricted hours of work at weekends would obviously be in the best interests of those living nearby.
- 4.248 Furthermore, in response to the Panel's question 5.28, at paragraph 5.28.1, the applicant stated that there would not be a significant impact based on a noise level of 67dB(A), if works were constrained to times between 0700-1900 Monday to Friday and 0700 – 1400 on Saturdays [REP-142]. This did not tie in with the hours of working that were then being proposed in the draft DCO (Version 3) [REP-260]. At the ISH, the applicant agreed to review the working hours as set out in Requirement 30 of the draft DCO. In the light of that review, Requirement 30, as set out in the draft DCO (Version 5) [APP-246], was amended so that the hours of work for Work No 26 (Lodge Road) would not take place other than between 0700 hours and 1900 hours Monday to Friday and

between 0700 hours and 1400 hours on Saturday with no activity on Sunday or Bank Holidays. The applicant's Deadline III response [REP-318], confirmed that this was in order to be consistent with its response to the Panel's question 5.28. This amendment has been carried forward in Requirement 23 of the recommended Order as proposed by the applicant.

- 4.249 The draft DCO (Version 3) [REP-260] contained the tailpiece to requirement 30(3), "*save as agreed with the relevant planning authority.*" In addition, 30(1)(e), made provision for different working hours generally by the inclusion of the words, "*as otherwise agreed in writing with the relevant planning authority*". At the ISH, the Panel asked the applicant why those tailpieces had been included and, in the light of the case of *R (Warley) v Wealden DC* [2011] EWHC 2083, whether was it appropriate to include those words in this requirement. The applicant agreed that it was not necessary for them to form part of Requirement 30 and this was confirmed by the Deadline III summary of amendments to the draft DCO [REP-282]. The revised Requirement 23 set out in the recommended Order now reflects this agreed position.
- 4.250 There have been representations from interested parties to the effect that the proposed construction period seemed relaxed with no attempt to reduce timescales [REP-059]. The Panel questioned whether the duration of the works along sections of the route could be controlled through the draft DCO. In response to question 5.23 – which related to the 4-6 weeks timescale for the works in the vicinity of the Bealings – the applicant, at paragraph 5.23.1, stated that the construction duration period for the Bealings and other sections of the route could not be secured within the draft DCO but, in submitting the written scheme for noise management, this matter would be discussed with the LAs [REP-142].
- 4.251 In response to the Panel's question 5.24, which related to the maximum duration during which a receptor might be affected by the construction programme, the applicant stated that compliance with BS 5228 (Code of practice for noise and vibration control on construction and open sites) would be ensured through the written scheme of noise management secured by draft DCO requirement 29 [REP-142]. The scheme would be required to include provision for monitoring the noise during construction works to ensure compliance with the noise limits and the effectiveness of attenuation measures.
- 4.252 At the ISH, the applicant explained the practical difficulties involved in the rigid application of a specific timescale for the duration of the works. The LAs acknowledged the impracticality of seeking to control the works in this way. The draft CoCP (now the Outline CoCP [REP-303]) sets out minimum standards that would be adhered to, including BS 5228. Although Requirement 22 (formerly 29) does not specifically seek to control the duration during which a receptor may be affected, the LAs were content

that it would be effective in securing compliance with BS 5228 and thereby avoiding any significant impacts on receptors.

- 4.253 The mitigation of construction noise in relation to birds within the Deben Estuary SPA is considered elsewhere in Chapter 4 of this Report under the heading "*Biodiversity – Part A Review of the likely significant effects on European Sites or European Marine Sites*".
- 4.254 In conclusion, the Panel is satisfied that the proposed 'Noise and Vibration Management Scheme' in combination with the control over working hours to be secured through the requirements of the recommended Order would provide adequate safeguards for local residents as regards noise and vibration impacts during the construction phase.

Noise associated with the operation of the Construction Consolidation Sites, related HGV movements & proposed mitigation

- 4.255 The applicant, in its Written Response II [REP-253], indicated that CCSs and haul roads provide recognised and well-established techniques used by contractors for this type of construction activity. They represent temporary infrastructure that enables more effective control over the marshalling of plant and machinery and the reduction of the traffic impact on local roads, by the creation of an alternative temporary road. By working with the Highways Authorities, appropriate routes to the CCSs have been identified. By designating primary and secondary consolidation sites, the size of HGV vehicles would be appropriate to the road classification to which it is adjacent. The haul road would then allow for the distribution of some of the traffic along it, as opposed to on the local network.
- 4.256 The LIR, at paragraph 13.5, explained that SCC had initially identified a number of concerns regarding the noise and vibration assessment in so far as it related to the impacts of construction traffic but the SEI had rectified those issues. SCC was now satisfied that the ES provided an appropriate assessment of effects. The noise and vibration impacts of the development, as they would relate to construction traffic, were stated in the LIR to be acceptable [REP-231].
- 4.257 However, the LIR, at paragraph 13.7, pointed out that the experience of certain households such as Rose Cottage at the intersection of the B1113 and Bullen Lane in Bramford would be detrimental and the applicant should consider the opportunities for mitigation in those cases. This matter was discussed at the ISH. The SCC explained that the erection of temporary fencing would provide an additional form of mitigation, but this might not necessarily be desirable as it could have an oppressive impact upon the occupants of the property in question.

- 4.258 The position of the applicant, (as set out in the Deadline III response, paragraph 8.1.4) was that the noise assessment demonstrated that HGV noise at this location would not be a significant issue and a barrier might be unsightly and unwanted by the residents [REP-318]. Nevertheless, the SCC and the applicant agreed that the effectiveness and feasibility of a barrier at this location would be investigated and discussed with the SCC and affected residents. A mechanism for doing this has been included in the Outline CoCP [REP-303]. This now states that, if required, specific measures to mitigate impacts at Rose Cottage would be identified following discussion with the occupant and the relevant local planning authority. The Panel considers that, if necessary, this is a matter of detail that could be incorporated within the Noise and Vibration Management Scheme at a later date.
- 4.259 The LIR, at paragraph 13.8, made reference to the Outline Traffic Management Plan [REP-308] that would be required as part of the Outline CoCP in compliance with requirement 27. It suggested that the pre-construction survey should also be used to identify any significant irregularities in road surfacing so that this could be treated in advance of the proposed construction work. The applicant has indicated its agreement to this in its Written Response II [REP-253]. At the ISH, the applicant confirmed that provision for this to be undertaken would be added to the Outline Traffic Management Plan. The SCC agreed that this would be the most appropriate way of achieving this aim.
- 4.260 The Panel's question 5.33 raised issues relating to the monitoring of the Construction Traffic routes [PD-004]. In the response, at paragraph 5.33.2, the applicant set out a number of general principles that would apply [REP-142]. The key principles, as set out in section 1.3 of the Outline Traffic Management Plan, provide for a scheme to be designed with the aim of enabling residents to identify if a vehicle was engaged on project work. The applicant stated that sanctions for contraventions of the Traffic Management Plan would be agreed with the relevant highway authority and set out in the final Traffic Management Plan to be agreed prior to commencement of works.
- 4.261 At the ISH, the Panel raised the matter of whether any reference to monitoring and sanctions should be specifically included within requirement 27. The SCC supported the need for clear monitoring and appropriate sanctions to be included as part of the proposed scheme. The revised Requirement 27, as set out in the recommended Order (Requirement 20), makes specific reference to the various plans that must be included within the CoCP. The draft Outline CoCP explains that Requirement 32 requires the production of three key traffic-related management documents which are not included within the CoCP, namely, a Traffic Management Plan, a Travel Plan and an Access Management Plan. This is now set out as Requirement 25 of the recommended Order.

- 4.262 The Outline Traffic Management Plan provides for the appointment of a designated East Anglia One local community liaison officer who would field and respond to any public concerns, queries or complaint. The Outline Travel Plan makes specific reference to monitoring and enforcement of the Travel Plan measures by the highway authorities. In the light of the various plans that would be secured by the DCO requirements, the Panel does not consider that it is necessary for specific reference to monitoring to be included within requirement 20 of the recommended Order.
- 4.263 The Panel concludes that, in the light of the mitigation measures proposed, the noise and vibration associated with the operation of the CCSs and related HGV movements along the Construction Access Routes would not be significant.

Onshore noise impacts during the operational phase & OCS noise

- 4.264 The LIR, at paragraph 13.13, [REP-231] drew attention to requirement 31 of the original draft DCO [APP-028] which contained provisions relating to noise limits at residences in the vicinity of the onshore convertor station (OCS) and stated that these limits would be acceptable to MSDC. The limits set out were for the rating level of operational noise not to exceed 35dB LAeq, 5min at Bullenhall Farm, Hill Farm and Woodlands Farm. At the ISH, the MSDC confirmed that the proposed noise limits accurately reflect its position in relation to the operational noise that would emanate from the convertor station. It accepted that 35dB(A) was a reasonable limit but asked the applicant whether it would be possible to achieve 30dB(A). The applicant explained that discussions with convertor station suppliers indicated that a high level of mitigation would need to be incorporated into the design of the convertor station even to achieve 35dB(A) and that it would not be practical to achieve 30dB(A).
- 4.265 The ES Volume 3, Chapter 26 (paragraph 40) [APP-152] explains that BS 4142²¹ provides a methodology for assessing industrial noise against ambient background noise levels. A "rating penalty" of 5dB is added to the industrial noise, if it contains characteristics that are likely to increase potential for it to cause annoyance. Such characteristics could include tonal components. Noise from electricity infrastructure can contain tonal components. As such, a 5dB rating penalty has been applied to predicted noise levels from the convertor station when assessed to BS 4142. The ES (paragraphs 134 and 135) assessed that the noise levels of the existing substation and a new Super Grid Transformer (SGT) (plus tonal penalties) would not contribute to the convertor station noise levels sufficiently to result in a significant impact. Since, at that stage, the design of future projects convertor stations was not

²¹ British Standard Method for rating industrial noise affecting mixed residential and industrial areas

known, noise predictions were not possible. However, it was anticipated that the future projects convertor stations would be designed so that the noise impact would be negligible at nearby high sensitivity residential receptors and therefore not significant.

- 4.266 At the ISH, the Panel questioned the necessity for Requirement 31(2) of the updated draft DCO [APP-251] given the NPS policy on the precision of requirements. The draft requirement stated: *"(2) In the event of a complaint relating to noise from Work No. 39, measurements shall be taken by a suitably qualified acoustician in the vicinity of the relevant property or properties specified at paragraph (1) above from which the complaint originated. Where access to the relevant property specified at paragraph (1) above is not granted to undertake such measurements, measurements shall be undertaken at a location that is considered by the suitably qualified acoustician to be representative of noise levels at the relevant property or properties specified at paragraph (1) above."* The Panel were also conscious that the model condition in Circular 11/95: *"The Use of Conditions in Planning Permissions"* did not include this part. The precision of that sub-section, including the reference to a *"suitably qualified acoustician"*, was also raised. The applicant agreed to review the precise wording of Requirement 31. The applicant subsequently agreed revised wording with MSDC that included the need for post-construction monitoring (Deadline III response) [REP-318]. The SCC, in its Deadline IV response submitted on behalf of, and after consultation with, SCDC and MSDC [REP-324], indicated that the LAs were content with the Panel's modifications to this requirement but noted that in 31(1) *"stage"* should be replaced with *"part"*. This change was been incorporated into the draft DCO (Version 7) [APP-249]. The relevant requirement within the recommended Order that seeks to control noise during the operational phase is now Requirement 24 which omits the imprecise aspects of the requirement as originally phrased.
- 4.267 The Panel is now content that the revised requirement 24 of the recommended Order would have the necessary degree of precision to achieve its objective of satisfactorily controlling noise emanating from the convertor station during the operational phase. In those circumstances, there would be no significant impact upon sensitive receptors, in particular, the residential properties at Bullenhall Farm, Hill Farm and Woodlands Farm. In reaching this conclusion, the potential cumulative impact of noise from the project combined with other existing and proposed development in the vicinity has been taken into account.

Effects of noise from the offshore elements of the project on offshore receptors

National policy

- 4.268 The NPS EN-1, paragraph 5.11.2, advises that noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. The National Policy Statement for Renewable Energy Infrastructure (NPS EN-3), paragraph 2.6.63 (Biodiversity), explains that the effects of offshore wind farms can include temporary disturbance during the construction phase (including underwater noise) and ongoing disturbance during the operational phase and direct loss of habitat. NPS EN-3, paragraph 2.6.73 (Fish), outlines the potential for the construction and decommissioning phases to interact with seabed sediments and therefore have the potential to impact fish communities, migration routes, spawning activities and nursery areas of particular species. In paragraph 2.6.90 (Marine Mammals), it advises that there are specific considerations from piling noise which apply to offshore wind energy infrastructure proposals with regard to marine mammals, including cetaceans and seals, which have statutory protection.

Representations

- 4.269 The potential for disturbance from the piling process to impact upon fish communities and cod spawning activities was raised by the Wightman Fishing Co Ltd in its relevant representation [REP-030]. A number of other interested parties also expressed concerns that disruption would be caused to the fishing grounds and the construction process would scare the fish away from the area whilst work was being carried out including Neil Macro, Chris Hockley, Robert Woodhouse, and Arthur Bennett [REP-023], [REP-029], [REP-045] and [REP-086].
- 4.270 The MMO, in its relevant representation, recommended that passive acoustic monitoring (PAM) be employed along with marine mammal visual observers in addition to soft start procedures identified in the ES [REP-101]. It proposed that such mitigation measures be detailed in the Marine Mammal Mitigation Protocol required by the Deemed Marine Licence (DML). The MMO also sought scientific references to support the claim in section 10.6.2.4 of Chapter 10 of the ES that: "*The use of multiple vessels carrying out simultaneous piling can actually decrease the overall noise footprint in terms of area affected over the wind farm construction period*" [APP-075].
- 4.271 The question of the effects on harbour porpoise was raised by the Dutch Government (Sibrand Hassing) [REP-081]. They suggested monitoring the produced sound levels and behaviour of harbour porpoise during the construction and exploitation phases.

ES: Underwater Noise & Vibration & Electromagnetic fields

- 4.272 The ES Volume 2, Chapter 8 "*Underwater Noise and Vibration and Electromagnetic Fields*" [APP-070] considered the impact of the construction, operation and decommissioning of the East Anglia One project and the cumulative effects of underwater noise with other projects where relevant. The assessment focused on impacts from piling which was deemed to be the single noisiest activity during construction. The assessment was carried out for the proposed windfarm turbine installation with a separate consideration of one operational meteorological mast installation.
- 4.273 The assessment explained (paragraph 8.2.3.3) that to minimise any impacts resulting from underwater noise, the applicant had ruled out the use of monopole foundations for wind turbines. The embedded mitigation measures for the reduction of impact in terms of instantaneous injury on marine mammals and fish resulting from underwater noise therefore included the use of lower hammer blow energy (associated with the use of pinpiles rather than monopiles), in addition to a gradual increase in piling hammer blow (soft-start) for every piling event.
- 4.274 The worst case scenario for the propagation of underwater noise with regard to wind turbine foundations was taken to be jacket structures with 2.5m diameter pin piles. The assessment concluded that the use of jacket foundations would result in noise propagation ranges that were expected to be less than those associated with large monopiles which required large hammer energy, although there would be substantial variation in the propagation range of the noise depending on the bathymetry of the area.
- 4.275 The predicted impacts from underwater noise to benthic and epibenthic species, fish and marine mammals were set out in the ES Volume 2, Chapters 9, 10 and 11 [APP-072, 075 & 079].

Benthic and Epibenthic Environment

- 4.276 The ES Volume 2, Chapter 9, recognised that if jacket foundations were installed, this could potentially have a negative impact on benthic and epibenthic species in the immediate vicinity of each wind turbine. It concluded that owing to the localised and temporary nature of the changes, the magnitude of the effect was considered to be low. As the sensitivity of the receptors was also considered to be low the potential impacts were considered to be not significant [APP-072].

Noise & fish ecology

- 4.277 The ES Volume 2, Chapter 10 explained that noise could affect fish in a number of ways, having the potential to result in injury, hearing impairment, behavioural reactions, auditory masking and mortality in extreme cases [APP-075]. Impact piling was the

construction-related activity with the potential to result in the most detrimental impact on fish. In addition to the impact piling, the assessment also took account of noise levels associated with the installation of one operational meteorological mast with monopole foundation. Since only one meteorological mast would be installed any potential effect associated with this would be short term (hours).

- 4.278 The mobile fish were considered to be of low sensitivity to noise-related death or injury and this impact was assessed to be not significant. Whilst larvae would not be able to flee the vicinity of piling, the probability and frequency of interaction with piling events was considered to be low. Larval stages were considered to be of medium sensitivity and lethal or injury noise-related impacts were assessed to be not significant.
- 4.279 The ES drew specific attention to sand gobies which were expected to be abundant in the area of the East Anglia One site. This species has limited mobility and might therefore, in some instances, not be able to avoid the areas where the highest noise levels were reached. However, given their abundance in the area, and the fact that numbers of sand gobies were expected to recover quickly if subject to localised lethal or injury impacts associated with piling, they were considered to be receptors of low sensitivity and the impact was assessed to be not significant.

Effect on fish spawning & nursery grounds

- 4.280 The ES Volume 2, Chapter 10, acknowledged that there was potential for juvenile fish and spawning fish to be disturbed by noise during the construction phase. However, it concluded that the fish species with defined nursery and spawning grounds were considered to be of medium sensitivity and the impact of construction noise on spawning and nursery grounds was assessed to be not significant [APP-075].
- 4.281 The ES identified the East Anglia One windfarm site and the offshore cable corridor as falling within, and in close proximity to, the spawning and nursery grounds of a number of species, including cod which are listed as a UK Biodiversity Action Plan (BAP) priority species and in the OSPAR list of threatened and/or declining species. The ES also recognised that there was potential for juvenile fish and spawning fish to be disturbed by noise during the construction phase.
- 4.282 In the light of those findings, the Panel's question 5.37 [PD-004] required the applicant to explain in greater detail why the impact of construction noise on cod spawning was assessed in the ES to be not significant. The Panel also raised the matter of restricting the piling works to outside the spawning season and asked what, if any, difficulties that would entail for the construction process and timetable.

- 4.283 The applicant in its response [REP-142] stated that: *"The East Anglia ONE site and the eastern end of the offshore cable corridor are within areas of low intensity of cod spawning. Fish eggs and larvae of a given species are distributed over relatively large areas of sea; taking the relatively small areas around each piling operation where mortality may potentially occur and the short term and intermittent nature of piling, the magnitude of the effect is considered to be low, particularly when considered in relation to the natural mortality rates during this life stage. Taking the above into account, larval stages are considered of medium sensitivity and lethal or injury noise related impacts have been assessed to be not significant."*
- 4.284 The SoCG between the applicant and the MMO [REP-237], indicated that they were in agreement that, assuming the inclusion of the embedded mitigation, impacts on fish ecology, including cod spawning, would be likely to be not significant. The applicant's position was that, as the impacts were considered to be not significant, there was no case for restricting the piling works to outside the spawning season. The MMO, in consultation with the Centre for Environment, Fisheries and Aquaculture Science UK (Cefas), agreed with this position, stating that, *"the relevant conditions provided within the deemed marine licence for the management and monitoring of impacts on offshore natural fisheries are appropriate and adequate"*.
- 4.285 The MMO, in response to question 5.37 [REP-190], advised that: *"Cod generally spawn in the North Sea between January and April with the eggs being free floating in pelagic waters, subject to movements by currents, as are the larvae. Cod are thought to be more sensitive to noise than some other fish species as the swim bladder terminates close to the ear. As the eggs and larvae are pelagic, they are unlikely to be subjected to/be in the vicinity of the construction noise for long periods of time. It is unknown whether piling could damage eggs and larvae but piling noise could disturb spawning aggregations of adults."*
- 4.286 The MMO also indicated that spawning and nursery ground maps showed that although there were spawning and nursery grounds off the coast of East Anglia, cod spawning grounds were widespread and higher intensity spawning was found in the northern North Sea [REP-190]. The International Council for the Exploration of the Sea (ICES) Working Group 2 on North Sea Cod and Plaice Egg Surveys in the North Sea provided further information on cod spawning and the data showed that compared to other areas of the North Sea, there was less spawning activity taking place within the impact range of the proposed East Anglia One wind farm site. Taking the available information into account, the MMO did not advise that piling works should be restricted to protect cod spawning as the most recent data showed that there were other more productive areas of the North Sea which supported spawning activity. Therefore, at the North Sea

regional/population level, the impact from construction noise would not be significantly adverse.

- 4.287 In response to question 5.37 the Orford and District Inshore Fisherman's Association [REP-172] stated that, *"This has been touched on in the Commercial Fisheries Working Group although the developer has questioned the areas of spawning put forward by those with knowledge and experience of the areas in favour of advice from others. Again we believe the accumulated knowledge and experience of the local fishing industry should be included in any assessment of areas of spawning and nursery grounds and the optimum period when work should be carried out in those areas."*
- 4.288 The applicant in its Written Response II [REP-253], in connection with concerns raised by Orford and District Inshore Fisherman's Association [REP-172] regarding the impact on fish spawning behaviour, contended that the decision to use only small pin-piles for jacket structures and not to include the larger monopiles, would result in reduced impacts on fish spawning. The applicant reaffirmed its position that there was no case for restricting the piling works to outside the spawning season.
- 4.289 At the ISH, in relation to fishing (marine), the issue of cod spawning was raised by Mr Wightman. He submitted that foundation piling would have an adverse impact on cod spawning behaviour. Further written information in relation to this was also provided in the Deadline III response from the Orford and District Inshore Fisherman's Association [REP-280].
- 4.290 The applicant's written response for Deadline III [REP-318] (page 46, paragraph 6.7) provided a written summary of the oral case made by it in relation to the potential impacts on cod spawning. The applicant made the point that currently available international survey evidence and peer reviewed research showed that the main cod spawning areas within the southern North Sea were at a sufficient distance from the project for there to be no significant piling noise and vibration related impacts on cod spawning behaviour. In view of daily swimming distances that cod could undertake, and the durations of the pre and post spawning stages, assessment of spawning areas on the basis of gonad condition was considered less reliable than egg and larval surveys.
- 4.291 The applicant's position in relation to the potential impact on cod spawning has been reached having regard to the advice of Cefas and in consultation with MMO. Neither Cefas nor MMO have sought a restriction on the piling operation with the aim of alleviating any adverse impact on all or any fish species, including cod. The Panel concurs with the applicant's stance that currently available international survey evidence and peer reviewed research as to the location of the main cod spawning areas should be preferred to anecdotal evidence on the basis of gonad condition.

4.292 The Panel concludes that, on balance, there is no evidence to suggest that there would be any significant noise and disturbance impacts on benthic and epibenthic species or fish resulting from the project. There is thus no justifiable case for restricting the period or times during which offshore piling operations would take place.

Noise & marine mammals

4.293 This section of the Report deals with the effects of noise on marine mammals. Further consideration is given to the impact on harbour porpoise and seals elsewhere in Chapter 4 of this Report, under the heading "*Biodiversity - other protected sites and habitats*".

4.294 The ES Volume 2, Chapter 11, [APP-079] identified that one of the key potential impacts to marine mammal populations during offshore wind farm construction would come from increases in noise inputs to the marine environment during noisy operations such as foundation piling.

4.295 Harbour porpoise were considered to be of high sensitivity and value as they are listed under Annex IV of the EC Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (Habitats Directive). As a result of the temporary nature of the impact and the very small percentage of the population affected despite the high sensitivity and value of harbour porpoise as receptors, impacts to the harbour porpoise population due to displacement were predicted to be not significant. The sound levels produced by piling would be loud enough to result in permanent injury to harbour porpoise if they were in close proximity to the piling location when piling started using the embedded soft start procedure. Due to the high value/sensitivity of the receptor and the medium magnitude of the potential impact, the potential injury of harbour porpoise from piling activity could result in an impact of moderate significance.

4.296 During piling, seals could potentially be displaced up to 300m from piling locations, and could be injured if within 50m of piling activity at the onset of piling for a single pulse, and potentially out to beyond 1km if considering the cumulative sound exposure level (SEL). Displacement impacts for seals were predicted to be not significant and given the very low level of seal use of the application site, and the very small zone within which seals could be injured by piling, no injury impacts to seals were predicted. Due to the likely very low number of collisions resulting from construction vessel movements the magnitude of the impact of collision risk was considered to be negligible. Despite the high value/sensitivity of harbour porpoise and medium value/sensitivity of seals, impacts from vessel movements were predicted to be not significant.

- 4.297 The SoCG between the applicant and MMO [REP-237] agreed that the ES adequately characterised the baseline in terms of underwater noise and vibration. The MMO also agreed that the impact assessment methodologies, as set out in each assessment chapter, provided an appropriate approach to assessing the potential impacts of the project on underwater noise and vibration. This included a reasonable approach to assessing the worst case in terms of noise footprint. Furthermore, it was agreed that, assuming the inclusion of the embedded mitigation described, impacts on underwater noise and vibration from the project were likely to be within acceptable limits of not significant.
- 4.298 In response to the Panel's question 5.35 on the employment of PAM, as recommended by the MMO [PD-004], the applicant pointed out that the draft DMLs (Schedules I and J, Part 2, condition 9(f)) included the requirement for a marine mammal mitigation protocol in line with the Joint Nature Conservation Committee (JNCC) guidelines for minimising acoustic disturbance to marine mammals where driven or part-driven pile foundations were used [REP-142]. This is now carried forward by way of condition 11(f) of the draft DMLs set out in the recommended Order.
- 4.299 The MMO's response [REP-190] was that it recommended that piling activities were monitored in this way to allow mobile sensitive receptors to move away from the noise source, and reduce the likelihood of exposing the animal to sounds which could cause injury. This would be in line with the 2010 JNCC guidelines entitled "*Statutory nature conservation protocol for minimising the risk of injury to marine mammals from piling noise.*"
- 4.300 The Panel concludes that condition 11(f) of the draft DMLs contained within the recommended Order would be sufficient to provide for marine mammal mitigation in relation to noise impacts and that it would be appropriate for the exact contents of the protocol to be based on current guidance nearer to the time of construction.

Impact of electro-magnetic fields, including human receptors, onshore & offshore

National policy: EMFs/human receptors

- 4.301 The advice in the National Policy Statement for Electricity Networks Infrastructure (NPS EN-5), paragraph 2.10.2, is that Electric and Magnetic Fields (EMFs) can have both direct and indirect effects on human health. It explains that although putting cables underground eliminates the electric field, they still produce magnetic fields, which are directly above the cable.
- 4.302 The NPS EN-3, paragraph 2.6.75, states that where mitigation measures of the type set out in paragraph 2.6.76 are applied to

offshore export cables to reduce EMFs, the residual effects of EMF on sensitive species from cable infrastructure during operation are not likely to be significant. Once installed, operational EMF impacts are unlikely to be of sufficient range or strength to create a barrier to fish movement.

Representations: EMFs/human receptors

- 4.303 The Health Protection Agency (HPA) referred to the matter of EMFs in its relevant representation [REP-109]. The HPA sought additional clarification as to various matters set out within the ES in relation to EMFs.

The ES: EMFs/Onshore & Offshore

- 4.304 The ES, Volume 2, Chapter 8, "*Underwater Noise and Vibration and Electromagnetic Fields*" Table 8-6 [APP-070] set out the worst case assumptions for assessing EMF impacts. For East Anglia One, three core alternating current (AC) cables were under consideration for both the inter-array cables and the high voltage alternating current (HVAC) interconnector cables that would connect the offshore collector and offshore convertor stations. Direct current (DC) cables were proposed for the export cables with those under consideration for East Anglia One being bipole high voltage direct current (HVDC) export cables. The ES noted that the mitigation described by NPS-EN3, paragraph 2.6.76, included the use of armoured cables and cable burial at a sufficient depth, both of which methods were proposed to be employed in the East Anglia One project.
- 4.305 The ES, Volume 3, Chapter 23, "*Onshore Land Use*" [APP-113] explained that for public exposure, the UK policy was to comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998 guidelines in the terms of the 1999 EU Recommendation. For occupational exposure, the UK policy was to comply with the 1998 ICNIRP guidelines. The 1998 ICNIRP Guidelines cover only AC fields, not DC fields. For the latter, the 1999 EU Recommendation uses the values from the earlier 1994 ICNIRP Guidelines for static magnetic fields. The 1994 ICNIRP limit for static magnetic fields is 40 mT which is 40,000 μ T. In accordance with the EU Recommendation, the limit of 40mT applies in the UK only where the time of exposure is significant. The ES considered the potential for the onshore cables and convertor station to produce an EMF but due to the specification of the equipment proposed, it was not anticipated that there would be any significant EMF impacts.
- 4.306 The EIA, as set out in the ES, Volume 2, Chapter 10, "*Offshore Fish Ecology*" [APP-075] identified that the areas affected by direct current EMFs generated by the wind farm cabling worst case scenario were expected to be small, being limited to the area of the wind farm site and the offshore cable corridor, restricted to the

immediate vicinity of the cables (within metres) and attenuating quickly both horizontally and vertically with distance from the source. Taking the localised areas where EMFs above background levels were expected to occur, the magnitude of EMF-related effects was considered to be low.

- 4.307 The ES assessed the potential impacts arising from the proposed worst case cabling on elasmobranchs, diadromous migratory species and other fish species. It was not predicted that significant avoidance reactions would occur in elasmobranchs associated with EMFs generated by the project. EMF-related effects were only expected to result in temporary behavioural reactions rather than cause a barrier to migration or result in long term impacts upon feeding or confusion in elasmobranch species. The impact of EMFs on elasmobranchs was assessed to be not significant. That conclusion was also reached in relation to diadromous migratory species and other fish species.
- 4.308 The ES, Volume 2, Chapter 11, "*Offshore Marine Mammals*" concluded that during operation there would be the potential for disturbance or interference with marine mammal's navigation as a result of EMFs from inter-array and export cables. These impacts have been assessed and were considered to be not significant.

The EMF impacts and the adequacy of the embedded mitigation

- 4.309 The proposed grid connection works are set out in Chapter 2 of this Report. The SoCG between the applicant and MMO [REP-237], agreed that the ES adequately characterised the baseline in terms of EMFs. The MMO also agreed that the impact assessment methodologies provided an appropriate approach to assessing the potential impacts of EMFs. Furthermore, it was agreed that, assuming the inclusion of the embedded mitigation described, the impacts of the project resulting from EMFs were likely to be within acceptable limits of not significant.
- 4.310 In response to the Panel's question 5.43, the applicant provided additional details of the calculations and assumptions that led to the conclusion that there would not be any significant EMF impacts arising from the onshore cables and convertor station. These are set out in correspondence between EAOL and Public Health England (Appendix 3L, Written Response I) [REP-142]. The table set out therein provided exposure values for a typical cable design that would be used in the UK to connect an undersea cable to the convertor station. It showed a worst case scenario of an exposure value of around 100 μ T. As indicated above, the limit in the UK for static magnetic fields is 40mT, which is 40,000 μ T where the time of exposure is significant, and with certain exceptions. The letter from Public Health England dated 5 July 2013 confirmed that the matters raised by the HPA in its relevant representation relating to

EMFs have been addressed by the additional information provided by the applicant [REP-142].

- 4.311 Having regard to the environmental impact assessment of the worst case scenario, as set out in the ES, the embedded mitigation proposed and the further details set out in the applicant's Written Response I [REP-142], Appendix 3L, the Panel concludes that the project would not result in any significant adverse impacts arising from EMFs, either onshore or offshore.

The ES: Health-related land contamination impacts

- 4.312 The ES Volume 3, Chapter 20, "*Onshore Ground Conditions*" [APP-105] detailed the assessment of contaminated land for the project. The key sensitivities were identified as being Bawdsey SSSI at landfall and a historical landfill site at Tuddenham St Martin. Principal and secondary aquifers underlay the majority of the preferred onshore cable route. Contaminated sites located within or close to the proposed onshore cable route were set out. Some areas crossed by the onshore cable route were designated as source protection zones for public supply by the Environment Agency.
- 4.313 In the ES it was concluded that a CoCP would incorporate a number of requirements to apply best practice techniques to all aspects of the project. This would ensure that the majority of potential risks to ground or groundwater contamination would not result in significant impact. Detailed site investigation would be carried out where trenching was required through the historical landfill at Tuddenham St Martin to inform a site-specific remedial strategy using the most appropriate method. There was not expected to be any significant residual impact during the construction, operation or decommissioning phase with the proposed mitigation methods employed.

Representations: health-related land contamination impacts

- 4.314 The HPA in its relevant representation [REP-109] noted that the contaminated land proposals outlined in the draft DCO [APP-028] applied to only a small portion of the cable route. It recommended that a more general consideration of the potential human health impacts arising from land contamination would be appropriate. It advised that, where appropriate, suitable mitigation measures should be included in the construction proposals and/or the CoCP. The HPA also noted that there were no provisions within the draft DCO addressing unexpected land contamination which might be encountered during the construction phase. It recommended that the views of the local authority and Environment Agency should be sought on this matter to determine if a suitable precautionary phrase or condition should be incorporated into the draft DCO or CoCP.

Adequacy of the proposed safeguards for health-related land contamination impacts

- 4.315 In response to the Panel's question 5.46, the applicant provided additional details in relation to land contamination [REP-142]. These are set out in correspondence between EAOL and Public Health England (Appendix 3L, Written Response I) [REP-248].
- 4.316 The letter from Public Health England dated 5 July 2013 confirmed that the matters raised by the HPA in its relevant representation relating to contaminated land had been addressed by the additional information provided by the applicant [REP-248].
- 4.317 The Outline CoCP [REP-303] provides that at the one known contaminated site, at Tuddenham St Martin, a site investigation would be undertaken and used to define a Contamination Assessment and Mitigation Scheme that would be submitted, following consultation with the Environment Agency, for approval to the local authority prior to the specified works commencing. This specific scheme would be secured by Requirement 17 and the CoCP by Requirement 20, of the recommended Order.
- 4.318 The Outline CoCP has been amended in order to deal with unexpected land contamination. Site managers would be instructed in the potential for encountering unexpected contamination, and made aware of the procedure should such an event occur. The risk of exposure of site workers to contaminants in areas where contaminants were suspected or unexpectedly found would be minimised through the adoption of the good practice procedures listed.
- 4.319 The Outline CoCP also requires that prior to any work being undertaken that might have an effect on workers, the public or the environment, there would be an approved site specific Risk Assessment and Method Statement (RAMS). This would define mitigation measures to adequately address the identified risks and ensure that these were embedded in the work Method Statement.
- 4.320 The inclusion of a Pollution Prevention Plan and Emergency Incident Response Plan as part of the project CoCP would be secured by Requirement 20 of the recommended Order.
- 4.321 In the light of the measures set out in the Outline CoCP and the requirements contained within the recommended Order, the Panel concludes that adequate safeguards would be provided in respect of health-related land contamination impacts.

Health & safety of construction & operational personnel, offshore & onshore

- 4.322 The Outline CoCP [REP-303] sets out the commitment of the applicant to a number of health and safety principles. The applicant has also produced a separate draft Health and Safety

strategy for the project. This draft strategy is appended to the SoCG with the LAs [REP-242].

- 4.323 The Panel examined the adequacy of the proposals for offshore accommodation facilities. Questions were asked at the ISH seeking assurances about the provision of proper standards for the health and amenity of those who would be accommodated. In response, [REP-318] the applicant made clear that the Offshore Installations and Wells (Design and Construction etc) Regulations 1996 set out, in Schedule 1, standards of accommodation in terms of space, privacy and human comfort. The undertaker, as an operator of an offshore platform, would be under a duty to ensure that such standards were complied with.
- 4.324 The Panel concludes that appropriate measures would be secured through the CoCP so as to minimise the risks to the health and safety of all those personnel engaged in the offshore project and that there would be no significant risk to the health and safety of those persons or to others offshore who might potentially be affected. In addition, the adequacy of the offshore accommodation facilities and the health and amenity of those who would be accommodated would be ensured through the application of other existing legislation above.
- 4.325 With regard to health and safety of personnel onshore, health and safety legislation applies.

OPERATIONAL AND NAVIGATIONAL SAFETY

- 4.326 EN-3 advises that development consent should not be granted where the development would cause interference with the use of recognised sea lanes essential to international navigation²². Moreover, where a proposal is likely to affect major commercial navigational routes, for example, causing appreciably longer transit times, these adverse effects should be given substantial weight in the decision making. In addition, for less strategically important shipping routes, the decision maker should expect the applicant to minimise negative impacts to as low as reasonably practicable (ALARP).
- 4.327 EN-3 also advises that consent should not be granted where unacceptable risks to navigational safety would be posed and after all possible mitigation measures have been considered. The scheme should minimise effects on recreational craft with built in mitigation measures such as buffer zones. Regard should be paid to cumulative effects of other relevant proposed, consented and operational offshore wind farms. Moreover the Marine and

²² The applicant indicated that, for clarity, Ship Routing is a term used within the industry to identify International Maritime Organisation (IMO) designated routes. Lanes tend to be lanes within a Ship Route. These terms are often used outside the industry when discussing general routes between point A and point B and caution should be exercised when using them [REP-317]

Coastguard Agency (MCA) will use the Navigational Risk Assessment (NRA) when advising the ExA about any mitigation measures proposed.

4.328 At the ISH, the following matters and issues were raised.

- International Navigation;
- The degree to which the proposal would cause interference with any recognised sea lanes essential to international navigation;
- The extent to which the proposal would result in a longer transit time along other major commercial navigation routes. Have the adverse effects been minimised to be as low as reasonably practicable (ALARP);
- The degree to which the cumulative impact of the current proposal and other intended wind farms in the East Anglia Zone and the Southern North Sea have been taken into account, and
- The extent of post construction monitoring which should occur and whether this is adequately secured in the DCO.

4.329 Important navigational features in this part of the North Sea include the International Maritime Organisation (IMO) routeing measures. The IMO adopted Deep Water Route (DWR) via the DR1 light buoy is, at its minimum, 1nm to the east of the site boundary in a north south alignment and carries on average 9 vessels per day. In addition, there is another DWR further to the east away from the site which heads north east towards Brown Ridge which carries on average 17 vessels per day.

4.330 Therefore, the busiest area is to the south east of the proposed wind farm where the two routes combine to produce about 26 vessels per day [APP-088 Figs 1.1 – 2.2 Appendix E]. There is a clear distinction between northbound and southbound shipping within the DWRs, with the former tending to the east and the latter to the west and so the likelihood of the head on encounters between vessels is reduced.

4.331 The most heavily trafficked route which impinges on the wind farm site passes NNW/SSE between north east UK ports (eg Tees and Humber ports) and Belgium and the Netherlands (eg Vlissingen and Zeebrugge) which takes on average 17 ships per day, of which about 12 vessels per day pass through the site. The applicant anticipates that the majority of the shipping on those routes would pass further to the west following the development of the wind farm, with a worst case deviation of about 3nm based on vessels seeking to achieve a minimum passing distance of 2nm from it.

- 4.332 A lesser used ENE/WSW route takes about 2 to 3 vessels per day, with the greatest deviation about 3.3nm for those travelling between the Haven ports and Amsterdam. The deviation of a N/S route through the site with 1 to 2 vessels per day would result in an increased voyage distance of up to 2.1nm. In summary, on the basis of 3 x 10 day surveys, it was estimated that about 30 vessels per day passed through the wind farm site, including passenger and freight ferries; 77% were cargo vessels.
- 4.333 The increase in route distances for vessels displaced by the wind farm would be minimised by notices to mariners, enabling shipping to pre-plan any revised passage in advance of encountering it. No representations have been received claiming that there would be interference with sea lanes essential to international navigation, nor that the major commercial navigational routes would suffer appreciably longer transit times. Whereas the 1nm buffer between the eastern edge of EAO and the DRW was considered inadequate by the Dutch government it was found to be acceptable by the MCA and TH.
- 4.334 Concerns were raised by the MCA and the Chamber of Shipping (CoS) about the cumulative impact on navigation and shipping from the proposal and other offshore wind farms in the East Anglia Zone and the wider Southern North Sea. However, it was estimated by the applicant that the level of cumulative impact would be very low with only the Greater Gabbard site and, in particular the Galloper extension leading to a displacement of north-south shipping eastwards towards East Anglia One, but over 13nm distant. In addition, the applicant, together with the applicants for the Hornsea and Dogger Bank schemes have created the Southern North Sea Offshore Wind Forum in order to look at potential cumulative and in-combination effects. This has included commissioning a specific report on shipping and navigation.
- 4.335 The recommended Order includes provisions for post construction traffic monitoring in accordance with the outline navigation monitoring strategy (Schedule I condition 19(h)).

Navigational Risks

- 4.336 Further issues raised at the ISH were:
- The extent to which there are unacceptable risks to navigational safety and whether all mitigation measures have been considered
 - The extent of interference with recreational craft and the possible appropriate mitigation measures (such as buffer zones)

- Has a detailed Search and Rescue Response Assessment been undertaken and has it been secured in the DCO
 - Has the MCA used the Navigational Risk Assessment (NRA) to advise on any mitigation measures proposed
- 4.337 The applicant has prepared an NRA in accordance with the methodology published by DECC and following the Marine Guidance Note (MGN) 371 issued by the MCA [APP-091]. In the SoCG completed by the applicant, the MCA, Trinity House Lighthouse Services (TH), the Royal Yachting Association (RYA) and the CoS, the MCA states that the developer has proactively engaged in the development of the NRA taking due account of published guidance, a view supported by Trinity House (TH) [REP-238]. The CoS also accepts that the NRA was carried out in line with published guidance.
- 4.338 The NRA considered the impact of the proposed wind farm on recreational craft. A single medium use RYA cruising route between Lowestoft and The Netherlands passes through the site. Medium Recreational Routes are defined as “popular routes on which some recreational craft will be seen at most times during summer daylight hours.” All other cruising routes pass a minimum of 5nm from the proposed wind farm boundary. During a 10 day survey in July/August 2011, 59 recreational craft were recorded within 10nm of the site of which 43 passed through it.
- 4.339 Standard mitigation is that the blade tip of the turbines would pass 22m above MHWS to allow safe clearance for masts in the vicinity of a wind turbine generator. There would be ample space between the turbines for yachts to sail. Furthermore, the 1nm buffer zone to the DWR would allow yachts time to assess their surroundings on leaving the wind farm and vessels within the DWR to be able to identify and allow for any yachts sailing out from the wind farm. There were no residual concerns about any interference with recreational craft in the SoCG agreed with parties, including the RYA, other than safety zones.
- 4.340 Both the CoS and the RYA expressed concern about the 500m and 50m safety zones which are foreshadowed during construction and operation respectively in the NRA. However, no safety zones have been proposed in the current application. Any that will be required would be applied for post consent as part of a separate application process. Therefore, it is not considered by the Panel to be an issue in the assessment of the current proposal.
- 4.341 Negative impacts would be minimised by the implementation of various measures including Aids to Navigation (including lighting and marking), charted information, Notices to Mariners and Notices to Fishermen, appropriate cable protection (eg burial), appropriate cable installation procedures and post development

hydrographic surveys of the cable route and policies and procedures including Quality, Health, Security and Environmental documentation. Accordingly, for the less strategically important shipping routes, the Panel considers the negative impacts would be ALARP.

- 4.342 The Ministry of Defence (MOD) initially identified that the turbines would be detectable by, and would cause unacceptable interference to, the Air Defence radar at RAF Trimingham [REP-116]. However, following a reassessment and in view of the final location of the turbines not being established until after consent is granted, assumptions were made that the turbine blades would be 200m, that an acceptable lighting scheme could be established and that the development would fall within a design envelope delineated by 8 cardinal points [REP-318].
- 4.343 The recommended Order (Requirement 8 (1) Schedule A part 1) states that the undertaker must exhibit such lights, with such shape, colour and character as are required in writing by the Air Navigation Order 2009 and determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation and as directed by the Civil Aviation Authority (CAA). The recommended Order also stipulates that a turbine blade shall not exceed a height of 200m when measured from the lowest astronomical tide (LAT) to the tip of the vertical blade. The recommended Order and both Deemed Marine Licences recognise the design envelope cardinal points in the order limits. Therefore, the Panel concludes that the requirements of the MOD have been met and aviation safety has been safeguarded.
- 4.344 The SoCG states that the cable would be installed using a best practice approach [REP-238]. A detailed cable laying plan would be provided which would incorporate a burial risk assessment to ascertain suitable burial depths and cable laying techniques in accordance with the recommended Order Schedule I, Part 2 Condition 11 (g) and with the objective of achieving the maximum level of cable burial. The plan would be subject to submission to and approval in writing by the Marine Management Organisation (MMO), prior to commencement of activities.
- 4.345 Any additional rock material required to protect the cables, other than that already identified in the ES, would require a new DML and consultation with the MCA and TH. In order to manage any navigational risk which would occur due to loss of rock material during transshipment, the recommended Order Schedule I, Part 2 Condition 9 (14) requires the undertaker to report any loss to the District Marine Office within 48 hrs and must locate it and remove it unless otherwise agreed with the MMO.

DCO & Operational & Navigational Safety

- 4.346 In relation to the DCO the following issues were the subject of questioning by the Panel at the ISH:
- Whether the applicant had requested extinguishment, suspension or restrictions to public rights of navigation and have the appropriate details (as outlined in paragraphs 2.6.170 to 2.6.172 of EN-3) been included in the DCO, and
 - Whether the DCO would make provision for mitigation measures such as site configuration, lighting and marking of the development to take account of the requirements of Trinity House and whether there would be provision for an acceptable Active Safety Management System.
- 4.347 The ability to request an extinguishment of navigation rights arises from the Energy Act 2004, but only within territorial waters. Extinguishment within territorial waters is addressed by providing a layout plan to the relevant Secretary of State, and it is then open to the Secretary of State to exclude navigation rights. No provision is therefore included in the Order as there is no power to seek extinguishment outside territorial waters. There is no process whereby the applicant can stop vessels from sailing through the wind farm and only the structures themselves stop vessels sailing; the space between remains open to vessels.
- 4.348 TH agreed that adequate requirements for the provision of Aids to Navigation are secured in the Order as submitted and which is now the recommended Order in Schedules I and J (DMLs) Part 2 (8).
- 4.349 The applicant has examined the existing Emergency Response resources in the region and the related issues in relation to the design, construction and operation of the wind farm. The applicant has recognised that the wind farm would cover a wide area and would be distant from shore-based emergency response units. Consequently, having regard to the types, number and routes of traffic currently using the site and its surroundings, the applicant would constitute a rational first response to all emergencies occurring within, and close to, the wind farm.
- 4.350 Both DMLs include a requirement that the applicant must address all MCA recommendations in MGN371 including full details of the Emergency Cooperation Plans (ERCoP) for the construction, operation and decommissioning as appropriate to the authorized scheme. In addition, the applicant is required to prepare and implement a project specific Active Management System, taking account of safety and mitigation measures as referred to in the NRA [recommended Order Schedules I and J, Part 2 Condition 7(1)(2)].

OFFSHORE & ONSHORE HERITAGE & BUILT ENVIRONMENT

4.351 The Local Impact Report [see paragraph 10.3 in REP-231] makes clear that the majority of heritage assets that may be affected are archaeological heritage assets in the cable corridor. It identifies Suffolk Coastal District Local Plan policy DM21 and Mid Suffolk Local Plan policy HB1 as potentially relevant in the terms referred to in paragraph 5.8.13 of NPS EN-1.

4.352 With regard to the offshore environment NPS EN-3 states in paragraph 2.6.144 that the decision maker:

"should be satisfied that offshore wind farms and associated infrastructure have been designed sensitively taking into account known heritage assets and their status, for example features designated as Protected Wrecks."

The following two paragraphs of NPS EN-3 refer to the potential need for exclusion zones and for micrositing in respect of heritage assets such as wrecks. In the LIR no heritage related development plan policies were identified as relevant to the offshore element of the scheme.

Offshore

4.353 The applicant has provided full listings of all known heritage assets within the offshore study areas for the application [APP-097 to 100]. In the offshore environment there were no known prehistoric heritage features and the only significant heritage features were considered to be wrecks: civil and military, encompassing ships and lost aircraft. Provision is made in the generation assets DML (Schedule I to the recommended Order, Condition 11(a)(xi)) for exclusion zones to be designated for the protection of wrecks as agreed. Separate legislation provides for the protection of aircraft wrecks.

4.354 The offshore Outline Archaeological Written Scheme of Investigation [APP-188] sets out the mitigation to prevent significant impacts to known and potential archaeological receptors. The final scheme of investigation would be required to be in accordance with the outline scheme which would be certified under article 32 of the recommended Order attached. The Panel finds therefore that the design has been prepared in accordance with the requirements in paragraph 2.6.144 of NPS EN-3. There are no known prehistoric assets and impacts to known maritime and aviation assets would be avoided as highlighted following English Heritage's representations [REP-040]. Impacts to as yet unidentified assets would be addressed through the application of the Crown Estate Offshore Renewables Protocol for Archaeological Discoveries (ORPAD).

4.355 Also prompted by English Heritage's representations the Panel asked questions [PD-004] that clarified [REP-142] that impacts

not only on British but also on military and civilian shipwrecks of other nations had been assessed in the ES.

- 4.356 Once the design had been finalised a scheme specific Written Scheme of Investigation would be produced to deal with specific mitigation requirements along with method statements for individual packages of archaeological work as required.
- 4.357 Responding to questions from the Panel English Heritage confirmed at the Hearings [REP-318] that it was happy that the outline scheme sufficiently addressed archaeological exclusion zones with regard to Schedule I and J, Condition 11(h) of the DML.
- 4.358 English Heritage also requested at the ISH and in representations [REP-318] that in condition 11(h) of the DML the words "*after discussions with English Heritage*" be replaced with "*in consultation with English Heritage*". This latter form of wording was incorporated into the draft DCO by the applicant and now forms part of the Order as recommended to be made.
- 4.359 With regard to paragraph 2.6.6.8 of the Marine Policy Statement therefore the Panel finds that the offshore Outline Archaeological Written Scheme of Investigation [APP-188] would adequately safeguard the heritage significance of wrecks and other offshore heritage assets identified.

Onshore

- 4.360 The assessment of heritage impacts was recorded by the applicant in Chapter 25 of the ES [APP-123] and appendices [APP-124 to APP-151]. The supporting appendices to this assessment, including gazetteers of heritages assets, may be found at APP-146.
- 4.361 NPS EN-1 (paragraph 5.8.11) policy is that the decision maker should seek to identify and assess the particular significance of any heritage asset that may be affected. The Panel therefore examined this matter through written questions and through questioning at the Hearings [HE-06]. The Panel also inspected a number of sites of heritage features.

Archaeological Assets

- 4.362 The onshore connection cables make up the bulk of onshore development and would be installed in a linear fashion beneath ground using a range of intrusive construction techniques. Therefore, below ground archaeological assets represent the greater proportion of the heritage assets likely to be affected by the proposed development. A gazetteer [APP-146] fully identifies all known heritage assets within the cable route study area and the Panel finds that the significance of such assets can be considered archaeological in nature as supported by assessments

carried out by the applicant [REP-313], upon which there was agreement with English Heritage [REP-235].

- 4.363 At the outset of the examination [REP-097] English Heritage queried the proposed use of an archaeological control strip during the construction period as the primary means of identifying archaeological features and recommended more extensive use of trial trenching. The Panel asked written questions [PD-004] about this matter given that the applicant appeared to be pursuing a higher risk approach in that archaeological features that presented major obstructions to the cable corridor might only be identified late on in the process. In response the applicant and English Heritage agreed in the SoCG [REP-235] a strategy of pre-construction, non-intrusive geophysical surveys to target trial trenches. The Panel finds this would reduce the above risks and is therefore both acceptable and preferable.
- 4.364 In response to questioning from the Panel at the Hearings [REP-318] the applicant provided images to the Panel of archaeological preservation during construction. These assisted in demonstrating the robustness of mitigation proposed as part of the project including through archaeological preservation in situ, preservation by record, "*Strip, Map, and Record*" [REP-318], and community involvement. Each photograph was captioned and explained in more detail. Dr. Tipper (Suffolk County Council Archaeologist) outlined the flexibility of the construction approach allowing for preservation in situ through engineering techniques. Given the techniques graphically demonstrated for the Panel and the support for the techniques and actions provided by the County Archaeologist, the Panel finds the approach outlined in the Outline Onshore Archaeological Written Scheme of Investigation to be adequate.
- 4.365 Following questions from the Panel in writing [PD-004] and at the Hearings [REP-318] the applicant confirmed that should a heritage asset requiring preservation in situ lie across the entire working width of the development the process outlined would commit the applicant to measures to ensure preservation in situ. These could include going under the asset using trenchless techniques. Part 1 of schedule A of the recommended Order simply describes cables and ducts being "*laid underground*", with Requirement 10(7) stipulating the use of horizontal directional drilling (HDD) in at least a number of specified locations. Also, Requirement 10(6)(a) refers to HDD being "*proposed*" in relation certain works and the requirement then sets out a number of specified working widths.
- 4.366 The Panel finds that the recommended Order would not therefore restrict the use of further sections of HDD provided this could be carried out within the Order Limits. A further alternative, assuming no application under s153 of PA2008 to modify the Order was made, would be to take the cable corridor around an

archaeological asset as permitted following an application made under the Town and Country Planning Act 1990.

- 4.367 On the question of the likelihood of development taking place outside the order limits, the applicant stated that in order to sufficiently understand whether preservation in situ of an archaeological site was desirable, excavation would be required. It would be likely that in most cases the cable could then be routed through this excavated (neutralised) section. The likelihood that development outside the Order Limits would be required was therefore low. Suffolk Coastal District Council stated at the Hearings [REP-318] that, in principle, an application under the Town and Country Planning Act would be acceptable, and EAOL confirmed that arrangements for this would not be problematic nor a risk to the project.

Architectural Assets

- 4.368 In considering impacts on architectural heritage assets including Listed Buildings the Panel has had regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses²³.
- 4.369 The greatest proportion of the onshore works proposed would be installation of underground cabling and ducts, marker posts and kiosks. The Panel inspected a number of sites where such works could affect architectural heritage assets [USV-01 to 04 & ASV-01 to 04]. A notable example of such a site inspected was the Listed Grade II* Mockbeggars Hall which is situated beside a proposed construction consolidation site and would therefore be subject to impacts upon its setting of a temporary nature. However, because the recommended Order would require the land to be restored afterwards and because marker posts and kiosks would be limited to their description in the ES and by the requirements in recommended Order respectively, the Panel finds that the underground cabling, ducts, kiosks and marker posts would not affect heritage assets or their settings in any material way. Furthermore, no representations were received from English Heritage [see paragraph 2.2.10 of REP-235], Suffolk County Council or Mid Suffolk District Council that there would be any adverse impacts to any heritage assets arising from the temporary works, the underground cabling, the kiosks or from the marker posts. Indeed as an example, no relevant representation referred to Mockbeggars Hall and the Panel were not aware of having received any representation from any resident of or owner of that property.
- 4.370 Where the proposed cable route would make landfall at Bawdsey there would be temporary works and some permanent impacts

²³ As is required of under Regulation 3(1) of the Infrastructure Planning (Decisions) Regulations 2010

such as from kiosks. Nearby heritage features include the Scheduled Ancient Monument and Grade II Listed Martello Tower and Grade II Listed Buildings and Registered Park and Garden at Bawdsey Manor. The latter includes an extensive artificial Pulhamite cliff built in the 1890s by James Pulham. Also at Bawdsey Manor are undesignated World War Two buildings including those built for purposes of radar operations. The Panel inspected [ASV-04] the site of these buildings and examined the representations made in relation to impacts on coastal erosion that the works would have. However, it was made clear through agreement reached in the SoCG between the applicant and Natural England and the local authorities [REP- 242 paragraph 6.11] that there would be no significant impacts on the Bawdsey Manor estate or on the adjoining Pulhamite cliff as a result of the application proposals. In addition, as the Panel ascertained from its inspection [ASV-03], the point of landfall would not be within view even from the outer edges of the property at Bawdsey Manor. Furthermore, given that the principal landfall works would be temporary in nature the Panel finds, because of all the above reasons, that the proposed works at the landfall would not affect heritage assets or the settings of the heritage assets at Bawdsey.

- 4.371 The Onshore Converter Station (OCS) proposed at Bramford represents a smaller proportion of the overall works onshore. However, when constructed it would represent a new large and prominent local feature. The Panel inspected [USV-02] the sites of a number of architectural heritage assets that could be affected by the station as listed in the ES [APP-097 to 100]. More distant assets included the churches of St Mary at Little Blakenham and at Flowton (both Grade I Listed Buildings). The Panel finds that from its inspections of the sites of these churches there may be some visibility of the proposed OCS from parts of both these churchyards. However, the Panel finds that there are no locations on public land or within the curtilages of these churches from which the converter station and the church building would normally be visible together within the same field of vision. As a result therefore the Panel concludes there would be no material impact on these architectural heritage assets or their settings.
- 4.372 The church of St Nicholas at Hintlesham (Grade II Listed) and Hintlesham Hall (Grade I Listed) were both observed by the Panel to be too distant and too well screened by the brow of a hill to be affected by the development of the OCS, in any way, in the operational phase.
- 4.373 Although the Grade I Listed church of St Mary at Burstall is considerably closer than other churches to the proposed OCS site, it was clear from the Panel's inspection of it that both it and its environs were densely screened by the trees and hedges on its boundaries. Similarly, the Panel finds from its inspections that Broomvale Farmhouse (Listed Grade II) adjoins rising ground and that Canes Farmhouse (Listed Grade II) is near to woods which

respectively would screen them and their settings effectively from the OCS site. Because of this screening there would be no material impact on Broomvale or Canes Farmhouses as architectural heritage assets.

- 4.374 The Grade II Listed Bullenhall Farmhouse, although relatively close to the OCS site, lies within a depression such that from nowhere on its site would Bullenhall Farmhouse be experienced within the same field of vision as the OCS building. Thus there would be no impact on this heritage asset or on its setting.
- 4.375 Fidgeons Farmhouse (Grade II) was identified by the applicant as the one architectural heritage asset on which there would be an impact. The significance of this asset is architectural and of Listed Grade II status. The farmhouse is rendered with a red brick chimney structure and dates from the seventeenth century. The Farmhouse itself would not be affected by the development, however, the impact that would be had on its setting, if the development was consented, was examined by the Panel. There are a number of trees on the boundary of the curtilage of the farmhouse which would reduce the visual impact of the OCS. Lying across the land between the farmhouse and the site of the proposed OCS are both Bullen Lane and a public footpath traversing a field [as shown on the Public Rights of Way Plan [Sheet 12 of APP-016]. Although only comparatively few, rarely seen views of the farmhouse would include the OCS, the bulkiness of the new building would have an impact on the immediate environs and therefore on the setting of Fidgeons Farmhouse. The development would also have an impact on views of the Farmhouse from the OCS site. These factors would cause some harm to the heritage value of Fidgeons Farmhouse.
- 4.376 However, the site of the new OCS would adjoin major existing buildings and the wirescape that surrounds the existing Bramford substations. These buildings and wires are already visible from and are within the existing setting of Fidgeons Farmhouse. Furthermore, the application includes a proposal for a bank of planting running north/south to adjoin Goberts Grove and this would obscure parts of the proposed OCS. In addition the impact of the new OCS would be ameliorated by its low lying position relative to the farmhouse. For these reasons therefore, the harm to the value of the farmhouse as a heritage asset would be less than substantial. Nonetheless, this finding of less than substantial harm is a consideration to which the SSECC, the panel finds, must give considerable importance and weight²⁴. However, the Panel concludes that this less than substantial harm is outweighed by the very significant public benefits in terms of renewable energy (as set out in NPS EN-1) that the scheme would deliver.

²⁴ The Bath Society v Secretary of State for the Environment [1991] 1 WLR 1303

- 4.377 In addition the Local Impact Report [REP-231] advises that in relation to impacts on heritage assets which are farmhouses near to the OCS site *"The development therefore accords with HB1 of the Mid Suffolk Local Plan"*.

LANDSCAPE, VISUAL IMPACT AND GOOD DESIGN

Offshore

- 4.378 The Panel has given consideration to the effect of the offshore wind energy infrastructure proposals on seascape and visual receptors. With regard to seascape, English Heritage queried the applicant's approach to the categorisation of local seascapes. These matters were addressed in responses to ExA questions [see paragraph 7.8 in REP-142]. The applicant responded to the queries confirming that the reference was only applicable to location rather than any value based assessment. English Heritage subsequently accepted the applicant's response outlining an objective interpretation of assessing the ability of the historic seascape character to accommodate change based on data set out in England's Historic Seascapes: Southwold to Clacton (Oxford Archaeology 2007). The Panel therefore finds that the EH queries on this matter have been adequately addressed.
- 4.379 Paragraph 2.6.210 of NPS EN-3 is clear that *"the layout of the turbines should be designed appropriately to minimise harm, taking into account other constraints such as ecological effects, safety reasons or engineering and design parameters."*
- 4.380 The EAO wind farm array is located at sufficient distance that it would not be visible from the shore. Therefore, issues around the attractiveness of the chosen design were not a key concern to the Panel during examination. However, section 4.5 of NPS EN-1 makes clear that good design extends well beyond notions of attractiveness. In this vein the Panel asked written [REP-142] and oral questions [REP-318] on how the good design of the wind farm would be controlled in order to address safety and other considerations. The MCA indicated that safety of navigation at sea would be an important consideration for the design and programming of the construction works. In the course of the examination the applicant proposed amendments to the application version of the DCO to address these matters. DML Conditions 11(a)(xii) and 11(a)(vii) in Schedules I and J respectively of the recommended Order are now that the design plan would indicate the programming of the works. The Panel concludes this is necessary for reasons of good design and navigational safety.
- 4.381 These controls would extend, in terms of the graphic information to be submitted at DML condition discharge stage, only to plan layouts and dimensions of structures.

- 4.382 Given that Schedule I DML condition 11 (layout and construction of the wind farm) referred to *"indicative"* plans, the Panel asked questions [PD-004 & HE-06] as to whether indicative plans and programmes would be appropriate. The MMO as principal consenting and enforcement body in these matters considered that indicative plans of future phases would be of assistance [REP-343]. The wording finally arrived at by the applicant as set out in the recommended Order, applies the adjective *"indicative"* only to plans of future phases rather than to the design plan of the phase receiving final consent.
- 4.383 The Panel concludes therefore that submission of such layouts of the wind farm to the MMO for their approval would provide the necessary opportunity for the applicant to demonstrate that the layout/design chosen would be fit for purpose. This would be required with respect to functional considerations such as navigational safety and would optimise efficiency in the use of natural resources, in this case principally the wind energy resource, as required by NPS EN-1.

Onshore cable corridor

- 4.384 NPS EN-1 paragraph 5.9.8 states that *"Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate."*
- 4.385 The Panel had regard to the landscape and visual impacts that would occur following the necessary removal of trees and hedges/field boundaries required during trenching activities for the cable and ducts installation. The Panel also considered the predicted lesser impacts on landscape and visual amenity during the operation of the onshore cable installation. Generally replanting would be carried out subject to, in the words of the ES *"a very limited number of woodland belts or hedgerows where there would be a permanent impact on the landscape due to the restrictions imposed on the proximity of tree planting to the cables"* [APP-162 para 241]. The ES chapter on landscape and visual impact [APP-162] also makes clear that *"One of the objectives of reinstatement of the cable route is to return the visual and physical integrity of the landscape, as closely as possible, to its previous condition. Therefore, the impacts on landscape character are assessed as being temporary although direct."* The Panel therefore finds that the extent of the landscape impacts arising from installation in the cable corridor would be almost entirely mitigated.
- 4.386 NPS EN-1 paragraph 5.9.13 describes the need to comply with any development plan policies based on landscape character assessment. The LIR [REP- 231] does not identify any such policies (although Mid Suffolk Local Plan policy CS5 requires that proposals should be informed by landscape character).

- 4.387 Paragraph 5.9.8 of NPS EN-1 makes clear that *"Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate."*
- 4.388 Chapter 29 of the ES [APP-169 to APP-173] sets out the assessment of the landscape impacts of the proposal. According to the LIR [REP-231] approximately one fifth of the route goes *"through Special Landscape Areas between Kirton and Newbourne, and Martlesham to Tuddenham in Suffolk Coastal District and also through the Gipping Valley Special Landscape Area in Mid Suffolk."* The Panel asked questions on this matter [PD-004]. Responses [REP-142] to the request to the applicant to set out in detail the site selection process made clear that landscape designations of various kinds had been one of the most oft cited factors informing the route selection. The LIR concludes *"The local authorities have not identified landscape and visual impacts associated with temporary development to be of significant concern."*
- 4.389 The main landscape concerns [REP-231] in relation to the cable corridor works, aside from trees and hedges, related to the introduction of kiosks and marker posts in the landscape. The Panel asked questions on these issues and obtained indicative drawings and information [REP-210] on the scale and nature of kiosks. Following questions the applicant incorporated into its proposed DCO, as now in the Requirement 10(10)(b) of the recommended Order, maximum size parameters for the kiosks which are to be constructed along the cable route. The final scale and appearance of the kiosks, according to the recommended Order, would be approved by the relevant planning authority but would be no greater than the maximum size specified by the DCO.
- 4.390 The Panel, in its consultation DCO [PD-014], obtained views on whether the number and location of the kiosks should also be a matter over which the planning authority should have control. Unlike the LAs, the applicant objected to this approach on the basis that it was not necessary [REP-333]. Having considered the responses to the consultation on this matter the Panel finds that the policy set out in paragraph 4.1.7 of NPS EN-1 is clear that requirements should be precise and that a situation in which kiosks were able to be erected by the applicant anywhere and in any number along the entire cable route from Bawdsey to Bramford, could have significantly detrimental impacts on the landscape. For these reasons therefore the recommended Order includes, in Requirement (10)(10)(a), that the number and location, as well as the final scale and appearance of kiosks should be determined by the relevant planning authority. The Panel's approach in its recommended Order here is analogous, in general terms, with the regime in the Town and Country Planning Act 1990 under which the siting of telecommunications apparatus such as

cabinets is subject to prior approval by the local planning authority.

- 4.391 A number of Relevant Representations related to the potential loss of trees and hedgerows along the onshore cable route. For example those from Little Bealings Parish Council raised concerns relating to Queech Wood and the general loss of trees that might occur along the cable corridor [REP-121]. The Panel also asked questions [PD-004] relating to these issues. The Panel inspected a number of locations along the cable route, including the Bealings, at which there was potential for such loss [ASV-01 to ASV-05]. In response to ExA questions the applicant [REP-142] referred to the National Joint Utilities Group "*Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*", Issue 2, 16 November 2007 and to the National Grid "*Undergrounding High Voltage Electricity Transmission - The Technical Issues*" of August 2009. These strongly advise against the planting of trees above such transmission cables due to the prevention of access for maintenance, the drying out of the ground through water retention increasing thermal resistivity and the risk of uprooting that would cause damage to the infrastructure below.
- 4.392 Mitigation in relation to trees along the onshore cable route therefore would take the approach of avoiding any trees wherever possible. Key examples would include the approach taken in scheme design to "*Careful routeing of the Onshore Cable Route to avoid key areas of sensitivity (e.g. near Howes Farm, meadows near Martlesham Hall, Fynn Valley*" [REP-142].
- 4.393 The Panel inspected every section of the onshore cable corridor route [ASV-01 to ASV-05 supplemented by USV-01 to USV-04]. The works would not take place across the full width of the corridor nonetheless at a limited number of locations there would be a loss of trees. The Panel inspected the section of the cable corridor to the east of Lodge Road near the boundary between Little and Great Bealings for example. From this vantage point it was clear that the cable works would disturb perhaps 2 or 3 trees where it would pass through field boundaries. Similarly, from inspection of the corridor to the west of Lodge Road, it was clear that almost all trees could be avoided by the cable corridor works [APP-5 Location Plan 25 of 30].
- 4.394 In other locations along the onshore cable route it was also clear from the Panel's inspections that the works could avoid, through micro-routing [REP-142] almost all the mature trees.
- 4.395 The applicant proposed mitigation in the form of an Outline Landscape and Ecological Mitigation Strategy (OLEMS). The final OLEMS [REP-304] emphasises that mitigation to be embedded in the detailed design of the scheme would ensure that "*the Careful routing of the Onshore Cable Route avoids other large areas of woodland.*" Further mitigation of impacts on trees embedded

within the design of the scheme would include the use of *"Non open cut techniques, such as HDD would be used to cross Millers Wood due to the presence of protected species, and the woodland being designated as ancient woodland and a County Wildlife Site."* Once the OLEMS had been certified by the SSECC under Article 32 of the recommended Order, Requirement 12(2)(h) would be that a Tree Protection Plan be provided to be approved by the relevant planning authority in consultation with Natural England. The Panel finds that the Tree Protection Plan would be the appropriate document within which to consider judgements on the fate of individual trees, in part because this level of detail was not available to the Panel during the examination.

- 4.396 ExA questions [PD-004] were also asked in relation to the impacts of the swathe that the cable route and associated haul track would cut through hedgerows and across fields. It was clear from the responses [REP-142] that up to a height of about 2m hedgerows, unlike trees, could and would be reinstated over the cable corridor once works were completed. The applicant also stated [REP-142] that at hedgerow crossings the cable corridor width would be narrowed to 35m. REP-142 therefore states that *"there would be no permanent gaps in hedgerows over the cables."*
- 4.397 In addition, while the recommended Order would authorise the haul track along the onshore cable route (as further associated development (e) means of access), it would also require the removal of this haul track as a temporary work and restoration of the relevant land, under Article 23(4). The recommended Order authorises only rights over and temporary possession of, rather than acquisition of land along the onshore cable corridor. These compulsory powers are considered further in Chapter 5 below.
- 4.398 The potential for lasting effects on the landscape as a result of the underground cables was examined also in terms of settlement of the ground in the refilled trenches following completion. In response the applicant stated [HE-33] that these would be provided with extra fill to ensure no permanent settlement line remained visible.
- 4.399 The Panel also asked detailed questions relating to the proposed use of horizontal directional drilling under the Deben and beneath other notable features [HE-32 & HE-33]. There was no evidence available to the Panel that horizontal directional drilling would adversely affect soil stability, trees, hedgerows or the landscape.
- 4.400 The Panel examined whether there was any risk that the temperature of the cables, which could reach up to 50 degrees Celsius [HE-32], would cause any scarring of vegetation along the route due to heating of the ground inducing die back of vegetation above. Photographs from the applicant of apparently successful reinstatement related only to gas pipeline routes [REP-296] in which temperature rise, the Panel considers, is unlikely to be an

issue. However, in relation to the underground high voltage electricity cables and ducts proposed by the application the applicant very clearly stated that there would be no such effect [HE-33] on vegetation. The applicant added that *"because of their depth it would require the wind farm to be generating at full power for weeks before power would manifest itself in any form of temperature rise"* [HE-33]. There was no evidence before the Panel that would call into question the applicant's evidence on these matters. The Panel finds therefore that given sufficient cable burial depths and reinstatement techniques, which would be capable of control by the relevant planning authority through Requirement 12, there would be no appreciable lasting impacts of the cable corridor through settlement or through effects of heat on surface vegetation. This approach would be consistent with the approach in paragraph 65 of the OLEMS [REP-304] which requires the restoration of topsoil and grasslands.

- 4.401 Requirement 12(1) in the recommended Order, that landscaping schemes and programmes of works for each stage of the works be approved by the relevant planning authority, would ensure accordance of the works with the OLEMS. The OLEMS itself, as provided to the ExA during the examination [REP-304] would be certified under Article 32 of the recommended Order. The LAs generally agreed [REP-241 - statement of common ground with the LAs] the approach being taken in drafts of this document and did not object [REP-276] to the final OLEMS (version 2) [REP-304].
- 4.402 The LIR [REP-231] identifies that *"The cable lands within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (SCHAONB) at Bawdsey, one of the fastest eroding stretches of the Suffolk Coastline, which itself is one of the fastest eroding coastlines in the country."* The LIR also makes clear that approximately one third of the route passes through the AONB as is documented in the application [APP-020].
- 4.403 The areas of the SCHAONB in which the cable corridor would be situated would be at landfall at Bawdsey and thence along the east side of, beneath and along the west side of the river Deben. The route would leave the SCHAONB at Woodbridge and the principal above ground works, the onshore converter station (OCS), would be sited a long way outside the SCHAONB.
- 4.404 Coastal processes in the vicinity of landfall at Bawdsey cliff are covered in the relevant sub-chapter of this Report and as established in the heritage subchapter above, there is no evidence that there would be any alteration in the rate of erosion of coastline at this location as a result of the works. There would therefore be no landscape impacts on the SCHAONB as a result of landfall works.

4.405 The Panel has had regard to the SCHAONB Management Plan, the key aims of which include, in landscape terms, encouragement of High Voltage cabling to be laid underground, protection of sensitive landscape features, maintenance of landscape tranquillity, avoidance, mitigation or offsetting of impacts and maintenance or encouragement of access to the AONB and coast. The Panel finds that because all onshore cables are to be undergrounded and the landfall works at Bawdsey will involve only temporary possession and reinstatement rather than outright acquisition of the land, access to this part of the AONB coast will ultimately remain unhindered. As stated by the applicant [REP-142] in responding to the ExA's written questions [PD-004]:

"The proposed project responds to this management plan in that the cables are to be laid underground. Through the statement of common ground process it has been agreed with the AONB, Suffolk County Council and the Mid Suffolk District Council that consequently the impacts on the AONB are acceptable."

The Panel finds there is no evidence to contradict this conclusion.

4.406 Therefore, in considering any potential for landscape impacts the Panel has had regard to the purpose of conserving and enhancing the natural beauty of the SCHAONB²⁵. Because of all the reasons set out above, including the fact that all the land along the cable corridor would be restored after works are complete, the Panel concludes that the cable corridor would have a very minor detrimental impact in landscape terms. The Panel also concludes that this impact would be wholly outweighed by the substantial renewable energy benefits of the scheme.

Onshore Converter Station

4.407 Article 2 of the recommended Order interprets the proposed OCS (Work No. 39) as follows:

" 'onshore converter station' means onshore converter(s) housed within one or more converter halls and a compound containing electrical equipment including power transformers, switchgear, reactive compensation equipment, harmonic filters, cables, lightning protection masts, control buildings, communications masts, back-up generators, access, fencing and other associated equipment, structures or buildings;"

4.408 Works plans [APP-015, REP-201 & 228] set out the site of the OCS including its access to the highway.

4.409 The recommended Order would therefore authorise the construction of an OCS as set out on the Works Plan but this would be subject to Requirement 10(1) that details of layout, scale

²⁵ As required s85 of the Countryside and Rights of Way Act 2000.

and external appearance would subsequently be submitted to and approved by the relevant planning authority. Further aspects of Requirement 10 are that the height of the OCS shall not be more than 79m above ordnance datum (AOD) (64m AOD for external electrical equipment) and the footprint of the OCS buildings shall not exceed 130m by 85m. The entire compound would be limited by the requirement to dimensions of 190m by 150m. Requirement 10(2) is that the design of the OCS must accord with the OCS design principles statement to be certified under the Order.

- 4.410 Some illustrative drawings were provided with the application [APP-026]. Further illustrative drawings were requested by [PD-004] and submitted to the Panel in order that illustrative elevations [REP-209] would be available to the Panel and the SSECC at a recognised scale.
- 4.411 The applicant's ES concludes in relation to Landscape and visual impact in Chapter 29 [APP-162] that *"While the majority of the development is successfully screened by mitigation and visual impacts minimised, for high sensitivity receptors, views of the top of the converter hall buildings would still provide the potential for major significant visual impacts."*
- 4.412 The Panel carried out a number of site inspections [ASV-01 to ASV-05] including of viewpoints from which no photo montages are provided in the ES [APP-168]. In particular the Panel noted from its site inspections that as could be seen from the visual impacts of the existing National Grid substation adjoining the OCS site, potential impacts were likely to be significant on homes and farms on the north west side of Burstall [ASV-05]. Impacts here included lighting impacts which the Panel inspected during a before and after dark inspection in November 2013 when most of the leaves had fallen from the trees [USV-04].
- 4.413 A number of representations were received concerning the impact of *"very large industrial sized buildings"* [REP-056] on the countryside and on the village of Burstall [REP-055]. The OCS design principles in the initial application Design and Access statement [APP-185] were:
- Use
 - Amount and scale
 - Layout
 - Access
 - Appearance and landscaping
 - Lighting

Given the very general nature of these headings and the fact that the descriptions of these elements of the building under each heading seemed to bear little or no relation to the principles of good design set out in NPS EN-1, the Panel asked a number of questions. In particular it asked what principles of good design,

with regard NPS EN-1, the Design and Access Statement was intended to espouse. The Panel also asked how the design responded to the landscape assessment [PD-004]. The need for design review in accordance with paragraph 4.5.5 of NPS EN-1 was also raised by the Panel [PD-004].

- 4.414 The OCS design principles would be instrumental because the final design of the building(s) would be required to be in accordance with them.
- 4.415 The applicant made a number of responses [REP-142] and the design principles were developed considerably. The issue was also the subject of questioning at the ISH [HE-06]. Following the ISH there remained some disagreement between the principles put forward in particular in relation to the height of the proposed building. The Panel therefore consulted upon the proposal that, since the relevant planning authority was the appropriate authority for the discharge of the requirements, the LAs' version of the principles should be the version certified under the Order [PD-014]. Following this consultation a further final revised set of design principles was agreed by the applicant and the LAs and submitted to the examination [REP-339].
- 4.416 By way of illustration the principles as they would be certified under the recommended Order and as finally arrived at [REP-339] by the end of the examination following questioning by the Panel are now as follows:

"1 Principle

EAOL is committed to engagement with Parish Councils, local residents and relevant authorities (Suffolk County Council, Mid Suffolk District Council and Babergh District Council) on design and landscaping in order to discharge DCO Schedule A, Part 3, Requirements 10 and 12;

2 Principle

Appropriate building design and materials will be actively sought as part of the procurement process. EA ONE's converter station must be sensitive to place, with visual impacts minimised as far as possible by the use of appropriate design, building materials, shape, layout, coloration and finishes;

3 Principle

The height of the converter station hall and ancillary equipment will be kept to a minimum and the slab level will be lowered to the most practical level;

4 Principle

Landscaping to minimise the visual intrusion, and respond to local landscape character and biodiversity will be undertaken and considered with building design and layout of ancillary structures. Delivery of this principle will be guided by implementation of the Outline Landscape and Ecological Management Strategy and delivery through the

Section 111/106 agreement;

5 Principle

Design should have regard to the potential for embedded ecological mitigation and enhancement (excluding green and brown roofs and green walls), with particular attention to lighting, large areas of glass and baffling of noise sources;

Examples of items of ecological enhancement which could be considered include:

- 1. Reptiles and amphibians - refugia and hibernacula in habitats around station;*
- 2. Bird boxes (e.g. Barn Owl boxes) in surrounding habitat and on site;*
- 3. Swift bricks installed into buildings;*
- 4. Bat boxes in planting around site;*
- 5. Insect boxes on site and,*
- 6. Hedgehog hibernation boxes on site;*

In addition, the sustainable drainage system (SuDS) solution for the site as a minimum would be likely to include a ponded area, which could represent habitat creation on the site;

6 Principle

A SuDS drainage strategy will be developed in accordance with DCO Requirement 16 relating to a Surface Water and Drainage Management Plan, taking into account provisions of the Outline Landscape and Ecological Management Strategy;

7 Principle

Opportunity will be provided through development of the final design and landscaping proposals to engage with, and seek feedback from, local communities who will be directly affected by the converter station, and

8 Principle

The design should be subject to design review, in consultation with the relevant local authorities. This could involve the Design Council or Shape East. The output of which, if it is appropriate to do so, will form part of the procurement process."

4.417 The OCS would principally be experienced by residents at Fidgeons Farm to the north east (Fidgeons Farmhouse is considered in the Heritage subchapter above) and by residents of Burstall to the west. Because the ground level is lower at the OCS site than at Fidgeons Farm, and is lower again at Burstall, it is the latter settlement from which the most dominant views of the OCS building would be afforded.

4.418 Visual impacts experienced by residents at Fidgeons Farmhouse would be ameliorated by the factors described in the Heritage subchapter above. Views of the proposed OCS site from public highways nearby already feature a large substation building and

therefore the OCS building would make little additional impact to user views.

- 4.419 Objections to the landscaping proposals for the OCS from vantage points in Burstall were raised at the ISH [HE-11] in that there would be only limited landscaping at the OCS site itself. As stated by Burstall Parish Council *"Off site screening is being proposed when onsite screening is necessary and formed the basis of the previous planning consent for the 35 acre site."*
- 4.420 The applicant's main approach however would be to provide off site landscaping at certain viewpoints in Burstall. Off site landscaping is considered later in this subchapter.
- 4.421 Particular objections to the on site landscaping proposed were made in the context of the likely height of building(s) which was presented by the applicant at the ISH to be up to 25m [REP-318]. In comparison the proposed screening bund of only 5m in height was a matter of concern. Burstall Parish Council [HE-11] in particular called for the lowering of the base level of the building in order to address this concern. The applicant's response however was set out in REP-318, that:

"Additional excavation would result in more material to be removed from the site resulting in additional environmental effects such as transport, noise as well as visual. Substantially more concrete would be required for protecting the building from water influx also resulting in additional vehicular movements towards the site. An additional concern would be the potential for flooding which could occur."

This evidence was supplemented by the applicant with an OCS Bed Levels Note [REP-283] which set out further detail on flood risk and other constraints associated with reducing the base level of the OCS building(s) any further. It proposed instead that the focus should be on minimising the height of the building itself.

- 4.422 The Panel also asked questions in relation to the height of the proposed bund. It was established at the ISH that whilst the amount of earth material available for the bund would be limited to 50,000m³ (the amount assessed in the ES) [REP-318] a degree of flexibility remained as to the arrangement of this material which remained to be determined by the relevant planning authority in its discharge of Requirement 12 (landscape management schemes). This is evidenced by the statement in the OLEMS [REP-304] that the applicant would submit *"Drawings indicating mounding cross-section with long cross-sections to include typical elevations of the Converter Station. These drawings would also indicate proposed floor levels and proposed contours."* It is also the case that the landscaping here would be required to deliver at least the mitigation assumed in the visual assessment set out in the ES.

4.423 The Panel finds that because the detailed landscaping of the OCS would be a matter for determination under Requirement 12 and because there would be scope for the arrangement of the 50,000m³ material in a variety of ways, it would remain feasible under the recommended Order for the bund to exceed 5m where this was possible. The Panel finds that landscaping of this nature would be an improvement on the worst case visual impacts assumptions in the ES.

4.424 The screening of the OCS from Burstall that would be provided by the bund would be supplemented by planting on the bund. REP-318 states that the planting palette of trees here would be based on a species mix of:

- Horse Chestnut
- Evergreen Oak
- Pedunculate Oak
- Lime
- Wych Elm

These would be supplemented by a layer of planted shrubs. The above trees are species that grow to a substantial size and would eventually reach significant heights and together with the bund itself could eventually screen the majority of the OCS building as it would appear from Burstall.

4.425 The question of the cumulative impacts of the development with those arising from the substantially sized National Grid substation that exists on the site adjoining the OCS site was raised during the examination. Burstall Parish Council [HE-11] asked the Panel to consider the site as it existed before the development of the National Grid Substation. The applicant responded [APP-318] that as an existing structure the National Grid substation had been taken into account as part of the baseline position and the Panel finds that this is the accepted approach to environmental assessment. However, while limited weight could be given to any actions by National Grid (as these would be beyond the scope of the recommended Order) the applicant also made clear in the ISH [REP-318] that planting would be carried out jointly with planting proposed by National Grid to ensure that the visual impacts of its substation were mitigated effectively alongside those of the new OCS building(s) proposed.

4.426 Arising in part from existing impacts from the National Grid substation were concerns regarding lighting especially at night. On the Panel's night time inspection [USV-04] it appeared that 2 or more bright floodlights positioned on the National Grid building shone out across fields and into the windows of homes in Burstall due to the lack of any shade or cowl to direct their glare. The lights appeared to come on automatically as soon as dusk fell and most likely remained on all night. From this the Panel concluded, as did others, that there was a risk that the proposed OCS would

also have these impacts. The Panel therefore consulted upon an additional wording in Requirement 21(3) relating to hours of lighting. The applicant opted to propose this additional wording in one of its later drafts of the DCO [REP-332]. The phrase is therefore included in the recommended Order and is intended to require that the hours of lighting shall be agreed with the relevant planning authority.

- 4.427 A further concern related to cumulative impact of the proposed OCS with the impacts of converter stations that would be necessary for the proposed future offshore wind farms East Anglia Three and Four, which were also likely to be required at Bramford. It was accepted by the applicant that with regard to the cumulative impacts of the proposed OCS:

"and the mitigation of any cumulative impacts of these future developments will need to be addressed as part of these projects."

- 4.428 In view of the impacts of the scheme on Burstall generally residents suggested [REP-279 & HE-11] some community benefit should be offered to the village. The applicant however, decided no such community benefit should be offered or provided. The matter of community benefit and the Government's NPS policy upon it is covered in full in the socio-economic subchapter below.

- 4.429 Given the statement in the applicant's ES [APP-162] (referred to above) that *"views of the top of the converter hall buildings would still provide the potential for major significant visual impacts"* and given the limitations on bed level of the OCS building, on the extent of the EIA and on the practical height to which bunds could be constructed, some residual impacts on Burstall would remain.

- 4.430 In response to this and to issues raised by the local authorities in the LIR [REP-231] the applicant, in the course of the examination, decided that proposals for off site planting would be delivered through a development consent obligation under s106 of the Town and Country Planning Act 1990 as amended by s174 of PA2008 (and under s111 of the Local Government Act 1972) to be agreed with the local authorities [REP-312]. A draft and engrossed but unsigned version of the obligation was provided to the Panel in which a sum of *"£112,523.16 (plus any interest earned on that sum)"* would be available for such works.

- 4.431 The fund established by the agreement would be used as follows [REP-312]:

"3.1 The amount of £26,945.20 shall be used for landscaping works or measures within a 3km radius of Work No. 39 which, in MSDC and BDC's reasonable opinion, contribute to the appearance, setting, amenity, accessibility and enjoyment of its area;

3.2 The amount of £16,167.12 shall be used for purposes connected to implementation management and detailed design of planting for paragraph 3.1 above (to a maximum of £12,125.34) and landowner liaison costs (to a maximum of £4,041.78);

3.3 The amount of £53,890.40 shall be used for annual maintenance and/or replacements of the landscaping works or measures implemented under paragraph 3.1 above, over the period of 25 years; and

3.4 The amount of £15,520.44 shall be used for the Residual Impacts Contingency Fund."

- 4.432 The Panel has considered all the above evidence in its deliberations on the landscape and visual impact of the proposed OCS. Given the policy in NPS EN-1 paragraph 4.5.3 that national infrastructure should be designed with due regard to impacts of flooding, the Panel concludes that significant lowering the height of the OCS building(s) would be unlikely to represent mitigation that would be acceptable in NPS terms. The Panel recognises however that the OCS building(s) that would be authorised by the recommended Order would have visual impacts upon residents of Burstall. The Panel therefore also concludes that Design Principle 3 [REP-339] as it is now agreed and would be certified under the Order recommended by the Panel, is sufficient to partially address reasonable concerns about the height of the OCS building(s).
- 4.433 The Panel further concludes that given the extent of residual visual impacts that would remain (as recognised in the ES [APP-162]), the off site planting provided for in the engrossed development consent obligation [REP-312], as set out above, would be very necessary to making the proposed development acceptable in planning terms.
- 4.434 The Panel also finds the engrossed agreement relevant to planning in that it relates to impacts identified in an NPS, directly related in that it would contribute to the appearance of Work 39 or its area and fairly and reasonably related in scale and kind to the proposed development in that it derives from an objective assessment by the LAs of landscaping impacts and requirements. There are no unusual features to the proposed development consent obligation therefore it is reasonable in all other respects.
- 4.435 Thus, it is a part of the Panel's recommendation, set out in full in Chapter 6, that the recommended Order should only be made by the SSECC once a development consent obligation providing no less off site landscaping than that set out above (and in the engrossed obligation [REP-312]) has been agreed and signed by applicant or undertaker and by the relevant planning authority. No other interested parties made representations relating to the obligation. In making this recommendation the Panel notes that the obligation would need to be signed and agreed by the parties

notwithstanding the terms of proposed clause 3.2, which state that it is conditional upon and will not come into effect until the Order is made, or alternatively consider whether they are able to agree an amended wording in this regard.

- 4.436 Even taking into account the development consent obligation (as the SSECC is entitled to do as stated in paragraph 4.1.8 of NPS EN-1) and the above mitigation both embedded and to be delivered through the OLEMS, residual visual impacts would nonetheless remain. These visual impacts would particularly be experienced by the residents of Burstall, though some views from public land could be addressed through the off site planting provided for in the obligation.
- 4.437 However, NPS EN-1 policy recognises that in relation to projects of the kind for which development consent is now sought *"The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure."*
- 4.438 In this context the Panel finds that the bulk of visual impacts of the project would be temporary impacts along the cable corridor including at construction consolidation sites and that the appropriate use of bunding and planting could reduce the impacts from those identified by Burstall Parish Council and in the ES [APP-168 viewpoint 5 for example]. The Panel also finds from its site inspections [ASV-01 to 05] that a number of adverse visual impacts would be experienced from private property rather than from public land. It also finds that significant residual visual impacts resulting from the OCS, especially as experienced in Burstall, would remain particularly from those viewpoints that would not be subject to off-site planting. However, because of the mitigation referred to throughout this subchapter, as embedded in the scheme set out in the recommended Order, and because of the requirement for local authority approval of the landscaping approach, the Panel concludes that these residual landscape and visual impacts are outweighed by the national need for renewable energy infrastructure as set out in Part 3 of NPS EN-1.

HIGHWAYS AND TRAFFIC

- 4.439 Policy in relation to traffic and transport is set out in EN-1 paragraph 5.13 in which the decision-maker is required to ensure that the applicant has sought to mitigate impacts on surrounding transport infrastructure and consider the requirements necessary to mitigate such impacts. Detailed suggestions into appropriate types of mitigation are given in paragraphs 5.13.8-5.13.12.
- 4.440 Paragraph 5.13.6 states that *"where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the (decision-maker) should consider requirements to mitigate adverse impacts on transport networks arising from the development"* and also that *"applicants*

may be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts".

- 4.441 In relation to mitigation measures EN-1 proposes in paragraph 5.13.8, that *"where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with the remaining impacts"*. It goes on to propose, in paragraph 5.13.9, that the decision-maker *"should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as aiming to secure more sustainable patterns of transport development when considering mitigation measures."*
- 4.442 Where it is likely that substantial HGV traffic will be generated paragraph 5.13.11 sets out three potential mitigation measures, as follows:
- 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.
- 4.443 As a result of the proposed development and particularly the construction of the electricity network connection, extensive impacts on surrounding transport infrastructure and communities can be anticipated, especially during the construction period but also to a lesser extent through the operational and decommissioning stages.
- 4.444 Numerous representations were made questioning the adequacy of the traffic data in the Environmental Statement. For example Suffolk County Council [REP-113] expressed *"pressing concerns over the adequacy of the traffic assessment"* and requested that they should be provided with draft versions of the Access Management Scheme (AMS), Traffic Management Plan (TMP) and Travel Plan (TP). More specific concerns were expressed by Parish Councils for Great Bealings [REP-085], Grundisburgh and Culpho [REP-069], Martlesham [REP-087], Bawdsey [REP-088], Playford [REP-114], Little Bealings [REP-121], Swilland and Witnesham [REP-091] and by numerous individuals, both about the volume

and nature of traffic and its assessment but also about the impact of the Construction Sites.

- 4.445 A more specific concern was raised by the County and District Councils in relation to the selected ports for both construction and servicing of the wind farm and the traffic impact in those locations and beyond as a result of heavy traffic and movement of personnel during all stages of wind farm's life.
- 4.446 The impact on pedestrians, cyclists, motorists and other road users would also be felt through the diversion of traffic (on roads, footpaths and rights of way) during the construction period. Elaborate planning of these alterations formed part of the applicant's mitigation measures but also raised significant concerns for Parish Councils and individuals.
- 4.447 The panel examined the issues raised by interested parties in the light of NPS policies through written questions, site visits and the ISH.
- 4.448 The LIR produced by Suffolk Councils (Suffolk County Council, Babergh and Mid Suffolk Council and Suffolk Coastal Council) identified perceived inadequacies in the transport assessment and the number of HGV movements was a particular concern. The LIR emphasised the importance of producing a rigorous TMP and demands for the content of such a document. Alongside an outline TMP, an outline AMS and an outline TP were provided by the applicants and the LIR considered that together these three documents, provided for by appropriate requirements in the DCO and adhered to in the development, would be sufficient to ensure conformity with local policy. In addition a Code of Construction Practice (CoCP) was drawn up by the applicant to address issues of noise and disturbance from on-site traffic.
- 4.449 Substantially more information on highway and traffic impacts was provided during the examination in the Post-Submission Report 1 and Supplementary Environmental Information [REP-132]. It included further traffic impact assessments, clarification of traffic movements as well as the identification of additional secondary Consolidation Construction Sites (CCSs) at Bawdsey and Deben Estuary. It also contained further cumulative traffic assessment with regards to the redevelopment of the old Fisons site in Paper Mill Lane Bramford, further noise, vibration and air quality impact assessments and additional information regarding transport and traffic associated with a base port.
- 4.450 The SoCG with the Councils and others [REP-240] sets out the areas of agreement in relation to Highways and Traffic including:
- the assessment of traffic impacts;
 - the outline Traffic Management Plan;

- the outline Access Management Strategy;
- the outline Travel Plan;
- the development of a port travel plan when such port is identified;
- the outline Code of Construction Practice, where relevant to traffic within the site and to Public Rights of Way, and
- the willingness to agree s278 agreements.

4.451 At the ISH on Traffic and Transport [HE-46 and HE-51] the Panel examined a number of aspects of the application and in particular the potential adverse traffic impacts of the construction and maintenance of the cable and ducts. At Deadline III the applicant set out the content and purpose of the outline Travel Plan [REP-309], outline Access Management Strategy [REP-301] and the outline Traffic Management Plan [REP-308] in updated documents in which greater emphasis was given to the need to provide resources to monitor compliance, greater emphasis on the need for community liaison and a commitment to the marking of HGVs.

4.452 Issues were raised in respect of the management and operation of construction traffic and the times of operation at CCSs as well as agreeing preferred access routes to each CCS. These issues were addressed in the Post Submission Report 1 and REP-132. Specific restrictions would be placed on access through Bawdsey, and Kirton while restrictions would be put in place preventing movements of construction HGVs through Coddendam, Sproughton, Westerfield and Little Bealings.

4.453 HGV movements through Little Bealings were subject to great scrutiny and agreed highway improvements, access limitations and programming of works designed to minimise impacts in the vicinity of Lodge Road. The outline TMP (OTMP) identifies two local access ways into the working area between Lodge Road and the A12. At the ISH the applicant made the following commitment [REP-318], *"the easternmost access is provided off Seckford Hall Road to enable the HDD drilling rig to gain access to the A12 drilling site on the north side of the A12. Local highway improvements are promoted within the OTMP along Seckford Hall Road at Table 1 of the OTMP to facilitate this access provision. The westernmost accessway is provided off Lodge Road immediately to the east of The Lodge via an existing farm access. This access will only be used to facilitate the access of the mini-HDD drilling rig to the drilling site on the east side of Lodge Road. The HDD drilling sites will need to commence at an early stage within the construction programme, as these will form the critical activities within the overall programme for the construction works. The haul road construction for the haul road between Lodge Road and the A12*

will commence at the same time as the HDD sites, with the materials and construction traffic gaining access to and egress from the working area via the access along Seckford Hall Road. The haul road to the west of Lodge Road will commence in an easterly direction from the Playford CCS, terminating on the west side of Lodge will need to use Lodge Road to the south of The Lodge". This arrangement is demonstrated in Figure 1.07 of the outline TMP [REP-308].

- 4.454 A new Requirement 14(4) was added to the DCO by the applicant to ensure that no stage of the construction works should commence until the necessary highway works are completed. This now forms part of the recommended Order.
- 4.455 In response to the concerns of the local authorities and others a new requirement was agreed ensuring the production and agreement of a port travel plan with the relevant planning authority when a base port(s) has been identified. No stage of the connection work shall be commenced until this plan has been submitted and approved. This is included in the recommended Order as requirement 26.
- 4.456 Two particular issues were raised by Martlesham Parish Council [REP-087 and REP-149] with regard to pedestrian movement along Top Street in the vicinity of the CCS, and Sandy Lane. These sites were visited on more than one occasion by the Panel and the applicant's proposed modifications as submitted at Deadlines III and IV to the Rights of Way Plan (Sheet 7) [REP-337] and Access to Works Plan (Sheet 12) [REP-336] were accepted by Suffolk County Council in their response [REP-276] but with the proviso that no HGV traffic will travel eastwards along Sandy Lane from Top Street. The Panel concurs with the County Council that the Access to Works Plan should be amended to show this.
- 4.457 It is also proposed to recommend that the Council's advice on pedestrian movement along the section of Sandy Lane within the Order limits and north of the railway line should be accepted, as set out in their representation [REP-276] as follows; *"To reduce the potential for pedestrian conflict along the section of Sandy Lane that will be used, we suggest the TMP is also updated to indicate that provision of a pedestrian link, parallel and to the south of this stretch of Sandy Lane within the Order limits will be explored by the applicant in consultation with the relevant planning and highway authorities."*
- 4.458 The DCO now recommended includes modifications made by the applicant in response to the representations made by IPs and consultees and as agreed in the SoCGs and the Panel concludes these changes sufficiently mitigate the impacts on highways and traffic as required by the NPS.

DRAINAGE & WATER SUPPLY

- 4.459 The issue of drainage is referred to in EN-1 paragraphs 4.10.1 to 4.10.8 under the broader consideration of pollution control and other environmental regulatory regimes. The NPS points out in 4.10.1 that such issues may be subject to separate regulation but, in paragraph 4.10.3 it states that the decision-maker *"should focus on whether the development itself is an acceptable use of land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves."* More specifically it goes on to say that the decision-maker should work on the assumption that other regulatory regimes, *"including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator"* and seek to complement them.
- 4.460 Paragraph 4.10.7 states that the decision-maker *"should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with EA and other relevant bodies such as the MMO, Natural England, Drainage Bodies and water and sewerage undertakers"* the decision-maker should be satisfied that potential pollution will be adequately regulated and that cumulative effects are not unacceptable.
- 4.461 Water Quality and Resources are dealt with in paragraphs 5.15.1 to 5.15.10. The NPS points out that as with drainage the considerations set out in paragraph 4.10 on the interface between planning and pollution control apply. However paragraph 5.15.5 states that the decision-maker will need *"to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of environmental objectives established under the Water Framework Directive"* and in particular the specific objectives set out in the River Basin Management Plans (paragraph 5.15.6). The same paragraph proposes that the decision-maker *"should also consider the interactions with other plans such as Water Resources Management Plans and Shoreline/Estuary Management Plans."*
- 4.462 In terms of mitigation EN-1 paragraphs 5.15.8 to 5.15.10 suggest that producing a construction management plan may help codify mitigation as would careful design to facilitate good pollution control practice and through the efficient use of water including recycling.
- 4.463 A number of issues were raised by interested parties during the course of the examination. Water runoff and potential flooding in the vicinity of the converter station and construction sites were of particular concern to agencies and land owners, while the more general questions of impacts on farming and irrigation systems were also raised. More specific concerns in relation to the protection of waste and potable water pipelines and the effect on

private water supplies, and the proximity of contaminated land were also subject to inquiry during the examination process.

- 4.464 The above matters were examined through written questions, site visits and the ISH.
- 4.465 The SoCG with the local authorities, Environment Agency and East Suffolk Internal Drainage Board [REP-240] sets out a number of issues over which there was agreement, as follows:
- Impact assessment of ground conditions and contamination and the requirements in the DCO dealing with these matters;
 - Appropriate monitoring and mitigation in relation to cliff stability and coastal processes;
 - Impact assessment on water resources and flood risk, and
 - The requirements of the Water Framework Directive.
- 4.466 In the LIR [REP-231] the local authorities expressed their contentment that local policy compliance can be achieved through the implementation of the CoCP.
- 4.467 The EA expressed some reservations about the flood risk potential associated with the application in their relevant representation [REP-100] to which the applicant responded in their Written Response to Deadline II [REP-253] by referring to the amended outline CoCP and relevant DCO requirement and as reflected in the SoCG.
- 4.468 The East Suffolk Internal Drainage Board's concern about potential drainage issues, as expressed in their relevant representation [REP-096], was also responded to in the outline CoCP and accepted by Board in the SoCG.
- 4.469 The Panel concludes that the concerns of the EA and East Suffolk Internal Drainage Board over potential drainage issues would be addressed by close working between those organisations and the applicant, through the proper enforcement of other regulatory regimes, and the application of the CoCP through the recommended Order, as proposed in the NPS and set out in the SoCG.
- 4.470 Anglian Water is the water and sewerage undertaker for the East Anglia region. It had a number of concerns, expressed in its Written Representation [REP-042] with Article 13 of the Draft DCO as submitted by the applicant in as much as it related to "*public sewers, lateral drains or drains*". The applicant, in its response to Deadline III [REP-282], amended Article 13 with the agreement of Anglian Water.

- 4.471 Concerns expressed by Mr Herrington [REP-026] in relation to run-off at the Playford CCS were addressed in the applicant's response to Deadline II [REP-253] and the post-submission Report 1 Supplementary Environmental Information as well as the SoCG [REP-240] and outline CoCP, TMP and OLEMS.
- 4.472 Similarly Mr Joel Woolf expressed opposition to the application in relevant representations [REP-057] on the grounds of concern over water run-off from the converter station, interference with field drainage and potential risk of pollution. These issues were addressed through the applicant's response to Deadline II. Mr Woolf's objection was sustained and further detailed through written representation [REP-057]. The applicant responded in detail to this representation in its Written Response to Deadline II [REP-253]. Given that there has been no support for Mr Woolf's representations by the statutory bodies and that they have agreed a SoCG in relation to drainage and water supply with the applicant, the Panel's view is that these concerns have been addressed and any impacts will be mitigated through the CoCP and Requirements 16 and 17 in the DCO.
- 4.473 At the ISH the applicant set out their response to questions about the adequacy of mitigation by drawing attention to the DCO requirements for a Surface Water Drainage Scheme at the converter station site, a written scheme to mitigate the potential for release of contamination within the Order Limits, and the requirements of the CoCP in relation to drainage and water supply.
- 4.474 Additional issues covered at the ISH included field drainage and water supplies, and an amendment to the CoCP to include reference to a water screening report under the Water Framework Directive in relation to the permanent infrastructure associated with the converter station site to be submitted to the local authority. The applicants also confirmed that the Surface Water Management and Drainage Management Plan would consider the CCSs allowing consideration of the localised flooding issues at Playford.
- 4.475 The DCO now recommended includes modifications made by the applicant in response to the representations made by interested parties and as agreed in the SoCGs and the Panel concludes that these changes sufficiently mitigate the impacts on drainage and water supply as required by the NPS.

SOCIO-ECONOMIC IMPACTS

- 4.476 The proposed development will contribute to meeting a nationally recognised need for renewable energy production, and is likely to have significant impact at regional, sub-regional and local levels as a result of its construction and operation but also because of the economic and social impacts on the regional economy, environment, employment and communities. Consequently the

consideration of socio-economic impacts was a significant concern in the examination of the proposed development.

- 4.477 The applicant undertook a socio-economic assessment as part of its Environmental Impact Assessment [APP-168] although in the absence of identified ports for the construction or servicing of the wind farm this was, at a regional level, illustrative rather than an assessment of the likely impacts of the development.
- 4.478 NPS EN-1 paragraphs 4.1.2 to 4.1.4 emphasises that there is an urgency of need for infrastructure development and that the decision maker should take into account the environmental, social and economic benefits as well as adverse impacts at national, regional and local levels. A point which the applicant was keen to emphasise.
- 4.479 Paragraph 4.1.7 states that the decision maker "*should only impose requirements in relation to a development consent that are necessary, relevant to planning, relevant to the development ... enforceable, precise, and reasonable.*" This wording is almost exactly the same as in the new National Planning Practice Framework (NPPF) as issued by the Department for Communities and Local Government in relation to planning applications and in the former Circular 11/95 "*Use of Conditions in Planning Permission.*"
- 4.480 EN-1 paragraph 5.12.3 identifies the following considerations as relevant socio-economic impacts:
- "the creation of jobs and training opportunities*
- the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities*
- effects on tourism*
- the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development, and*
- cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers*

to meet the needs of other industries and major projects within the region."

- 4.481 Paragraph 5.12.8 emphasises that the decision-maker should take into account *"any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise."*
- 4.482 Paragraph 5.12.9 proposes that the decision-maker should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development.
- 4.483 This approach is supported in the NPPF paragraph 152 which confirms that *"local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three. Significant adverse impacts on any of these dimensions should be avoided and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where adverse impacts are unavoidable, measures to mitigate the impact should be considered. Where adequate mitigation measures are not possible, compensatory measures may be appropriate."* It goes on to refer to education and training as matters to which planning authorities should have regard thus indicating that training to provide skills may be a relevant planning consideration.
- 4.484 The applicant, throughout the examination process, made reference to the benefits to the local economy and communities through enhanced employment opportunities as well as the benefit to the environment of undergrounding of cables rather than using overhead transmission lines for the connection to the converter station and substation at Bramford. In addition the provision of installing ducting in advance of future projects and the development of a skills strategy for the project were quoted as additional community benefits from the application.
- 4.485 The applicant contended that provision of a community fund or section 106/111 would be the traditional response by a developer where projects have a lasting impact but they did *"not consider there to be any residual or lasting impacts to be mitigated through a community fund or scheme."*
- 4.486 The Panel do not accept the argument that it is only residual or lasting impacts which may attract mitigation in the form of community benefits. There may be circumstances where temporary impacts may be of such severity and spread over broad sections of the population and their lives, that it may be appropriate to consider some form of mitigation to a community rather than to an individual land or property owner.

- 4.487 The objections raised by interested parties in relation to socio-economic impacts concerned the failure to identify the preferred ports for construction or operation phases of the wind farm, the cumulative impacts of the construction of a number of nationally significant infrastructure projects in the region, and the retention of employment benefits in the local economy. Certain communities will be more adversely affected by the cable construction, construction compounds and the converter station than others and questioned what specific measures were being taken to compensate them for the disruption caused while unrelated projects, such as the proposed commercial greenhouses at Great Blakenham lying close to the route, requested assurances from the applicant.
- 4.488 The examination into these concerns was conducted by written questions, site visits and the ISH.
- 4.489 The LIR [REP-231] identifies the reluctance of the applicant to identify ports serving the development as a weakness but accepts that the ES provides an adequate assessment of the socio-economic effects of the development with the exception of possible impacts on tourist accommodation and cumulative effects. This is confirmed in the SoCG [REP-240].
- 4.490 The failure to identify preferred port(s) for construction and operations work, and supply chain was a particular concern for the local authorities. In the LIR [REP-231] paragraphs 14.6 and 14.7 the authorities point out that *"much of the potential for local economic growth hinges on the choice of both base and marshalling ports....Until this is decided and the applicant has taken a Final Investment Decision (FID) on the project, there is a reluctance on the part of the applicant to commit to more substantive investment to either develop the supply chain or undertake initiatives to ensure that the local workforce is adequately skilled to service the project. Our main concern is that delaying implementation of initiatives that would seek to maximise local economic benefits may mean that local suppliers and the local workforce are unable to respond to the demands of the East Anglia One project either when construction commences or indeed during the operational phase and thus there would be significant leakage of contracts and jobs to companies/individuals outside the region."*
- 4.491 The applicant's Environmental Statement volume 4 Chapter 28 [APP-159] paragraph 211, on socio-economic impacts concludes that *"the East Anglia ONE project in-combination with other windfarm projects could have the potential for some minor, but not significant, impacts upon the regional labour market, particularly for the construction phase of the project."* It refers to a programme of up-skilling and training programmes being developed, supported by regional initiatives and central government. However its own high impact scenario, referred to in

paragraph 155 assumes a 50% UK based procurement for construction as aspired to by the Offshore Wind developers' Forum. A vision supported by the project's promoters. It is concluded, in paragraph 170, that for this and the medium impact scenario each of the potential East Anglian ports would experience *"some pressure from demand for suitably skilled labour. Given that the construction period would be temporary and that the nature of the skills required would include both specialist as well as more general construction labour capabilities, the impacts on the labour markets in each of the area catchments is assessed as being of moderate to major and hence significant impact, likely requiring both the up-skilling of available labour and also the importation and attraction of additional labour into the area."*

- 4.492 The LIR noted that the draft DCO did not specify any requirements with respect to mitigating socio-economic impacts nor a section 106/111 agreement or unilateral undertaking proposed but Letters of Intent, included in the outline Skills Strategy [REP-307] have been issued and agreed which provide an indication of, and commitment to initiatives that will further socio-economic development in the region. This agreement was confirmed in the SoCG with the local authorities [REP-240] which also contained copies of letters sent from the applicant to the Spatial Planning and Sub-Regional Partnership Manager at Suffolk County Council.
- 4.493 Deadline III submission from the applicant contained an outline Skills Strategy [REP-307] which sets out the objectives of the strategy. It also confirmed that the principles of the strategy should be met in discharging Requirement 38, now Requirement 30 in the recommended Order, something strongly supported by the local authorities in their Deadline IV submission [REP-324].
- 4.494 From the Letters of Intent it is clear that the applicant has undertaken a range of engagement activities with key stakeholders in the skills and business community and is committed to collaborate with key partners on a skills strategy and delivery plan. However at the ISH it was made clear by the applicant that it considers that the requirement should only be imposed if the Secretary of State considers that the tests for requirements set out in paragraph 4.1.7 of EN-1 are met; that the requirement is necessary, relevant to planning, relevant to the development to be consented, enforceable, precise and reasonable in all other respects.
- 4.495 The applicant also drew comparison with the application for the Galloper offshore wind farm which has been granted. It suggests that the letters of intent for the application scheme have the same legal status as the Memorandum of Understanding²⁶ issued in relation to employment impacts during construction, operation and

²⁶ Galloper Wind Farm Economic Cooperation Memorandum of Understanding (29/10/12) between Suffolk County Council, Suffolk Coastal District Council and Galloper Wind Farm Ltd.

decommissioning of that wind farm. However, in contrast to East Anglia One the Galloper applicant's assessment of impact, as set out in its Environmental Statement for the Galloper application, assesses the impacts during these three stages as being negligible, negligible and potentially minor beneficial²⁷.

- 4.496 It is the view of the panel that the Galloper Offshore Windfarm case is clearly different in its impacts and that each case should be treated on its merits. In view of the findings of the applicant's own impact assessment on labour demands under the favoured scenario for the development, the NPS tests for requirements have been met and that the proposed requirement should be included. It is noted that it is the intention of the local authorities to revisit this issue through consideration of the applications for future phases of the East Anglia Array and the Panel supports this approach.
- 4.497 With regard to the impact on tourist accommodation the local authorities were satisfied that the development would not have significant negative effects, following the production of further evidence in the form of a report "*Assessment of Workforce Effects on Tourism Accommodation Providers in East Anglia*"²⁸ which is appended to the SoCG [REP-240] which also confirms that agreement.
- 4.498 However, in respect of the cumulative impact on tourist accommodation with the construction of Sizewell C Nuclear Power Station, while the local authorities were satisfied that this would not be adverse as a result of the proposed East Anglia One windfarm that this may not be the case for future phases of the Array.
- 4.499 One specific development site where there were potentially adverse effects from the proximity of the cable route was identified both by the local authorities in the LIR [REP-231] and by SITA UK [REP-046] and Mr Stephen Wright [REP-048] the land owner. Concerns were expressed that the cable route would impinge on the land identified for the development of a major greenhouse development associated with the nearby Energy from Waste plant at Great Blakenham. Subsequently a SoCG [REP-239] has been agreed with SITA identifying the route of the cables, the location of the greenhouses, site access, spoil and earthworks, landscaping, lagoon location, and relocation of services, subject to commercial arrangements with relevant parties.

²⁷ Galloper Wind Farm Project Environmental Statement chapter 21 Socio-economics (October 2011) paragraph 21.12 Table 22.14 Summary.

²⁸ The Assessment of Workforce Effects on Tourism Accommodation Providers in East Anglia, produced by PBA (June 2013) is contained in the applicant's document Written Response Deadline 1 Volume 3A [REP-240] and was made available in hard copy at publically accessible locations in Suffolk, along with the other application documents, but was not received electronically and consequently not displayed on the Planning Portal website for this project. Reference to the document and the local authorities' acceptance of its findings is made at ID 10.4 in the Principles of Development table of the SoCG with the local authorities.

- 4.500 The proximity of the route of the cable ducts to a number of communities, potential noise and disturbance and indeed the severance of roads and footpaths within communities during construction will mean that some villages will be more severely affected by the development than others. Great Bealings Parish Council proposed in its Relevant Representations [REP-085] that an amenity fund should be established to finance an Enhancement Scheme for community projects. A similar sentiment was expressed by Little Bealings Parish Council in their Relevant Representation [REP-121] which stated that in its opinion *"community funding is a prerequisite of consent."*
- 4.501 In written representations Bawdsey Parish Council [REP-088] questioned how EAOL planned to compensate the community in the general area of the landfall site and those affected by increased traffic and construction work.
- 4.502 In their written representation Little Bealings Parish Council [REP-121] further elaborated their request for compensation payment to the community for the impacts of travel disruption, delays and disruption to the quiet of the countryside.
- 4.503 This proposal was endorsed by Suffolk County Council's Cabinet and set out in the local authorities' response to written questions [REP-185], stating *"East Anglia Offshore Wind should work with the Council to provide a mechanism of delivering community benefits to those areas most seriously affected."*
- 4.504 In a similar vein Deben Estuary Partnership in its statement to the Panel at the ISH [REP-320] asked that the principle of the applicant contributing to the on-going costs of estuary defence should be recognised in the DCO. The applicant's response to this suggestion was clearly put at the ISH. *"EAOL would not benefit from any sea defence reinforcement and therefore do not need to financially contribute"* [REP-318]. The Panel agreed that there was no legal obligation on the applicant to contribute to the Partnership.
- 4.505 In its response to the Relevant Representations of Little Bealings Parish Council [REP-253], the applicant states that *"the impacts will only be temporary and addressed through control mechanisms (OLEMS, COCP, TMP). The principal socio-economic impact of this development is a positive one namely the creation of jobs and the development of skills. The primary investment by EAOL for communities affected by the cable corridor is the decision to underground the cable. The option of erecting pylons and then compensating communities whose visual amenity was permanently blighted was discounted in favour of an option that caused temporary works disruption but had no lasting visual impact along the corridor."* In addition, at the ISH, the applicant pointed out that it had taken further steps by way of mitigation in areas of greater impact such as:

- regular consultation and feedback on concerns raised by parish councils;
- choice of construction methodology in sensitive areas such as Little Bealings;
- reducing the land take at Bawdsey;
- provision and agreement of certified documents addressing traffic management, construction and noise, and
- appointment of a community liaison officer and development of a project community and public relations procedure secured through Requirement 27, now Requirement 20(2)(j) of the recommended Order.

4.506 The Panel believes there is considerable merit in the applicant's argument and that undergrounding of cables has its benefits in terms of visual intrusion. However, it also has its costs in terms of disruption and tree/hedge loss. There is also merit in the argument that jobs will be created in the region but at present this is unquantified and dependent on the choice of port(s).

4.507 The NPS EN-1 paragraph 4.1.3 clearly acknowledges that while it may be the case that a region or locality may benefit from the investment and employment opportunities provided by an offshore wind farm that there may also be adverse impacts which require mitigation including "*measures to avoid, reduce or compensate for any adverse impacts.*" The Panel believes that it is understandable that communities which will be particularly affected not just by the installation of cabling and ducting for East Anglia One windfarm, but in the future cabling and maintenance of ducts and cables for East Anglia Three and East Anglia Four as well, should feel entitled to be compensated. However in view of the applicant's contribution through the project's benefits and more general initiatives providing mitigation, there is little in existing legislation or policy which would support the alteration of the DCO to include a requirement to this effect. Cumulative impacts of the application scheme, if permitted, with those of the proposed East Anglia Three and Four offshore wind farms would be considered on their merits, by the SSECC in determining those applications..

4.508 The DCO now recommended includes modifications made by the applicant in response to the representations made by interested parties, and as agreed in the SoCGs and the Panel concludes that these changes, including Requirement 30 relating to the skills strategy, sufficiently mitigate the impacts on socio-economic issues as required by the NPS.

4.509 The Requirement 30 as proposed by the applicant has been amended by the Panel, to require that the skills strategy be

subject to consultation with Suffolk County Council, as stated in the LAs' [REP-324] submitted to the examination at Deadline IV:

"Consequently, the local authorities strongly support the inclusion of this Requirement, though do note that the skills strategy should be approved by the relevant planning authority, after consultation with Suffolk County Council."

Whilst the applicant considered and responded to other representations received at Deadline IV in its responses at Deadline V, it made no response to the specific point that the planning authority should discharge this Requirement in consultation with the County Council. However, since no other material change to the Requirement is involved and because the planning authority is responsible for discharging requirements, rather than the County Council, the Panel has made the change as a drafting amendment and this is now contained in the recommended Order.

THE DEVELOPMENT CONSENT ORDER & OTHER MATTERS

Introduction to the Development Consent Order

- 4.510 The recommended Order is comprised of the Articles, including the principal powers (Articles 3 to 7) and the Powers of Acquisition (Articles 15 to 26). Schedule A, Part 1 sets out what would be the authorised development (including the Associated Development) and Part 2, the Ancillary Works that would be authorised. Schedule B sets out the streets that would be subject to street works. Schedules C and D set out, respectively, the public rights of way and the streets which would be temporarily stopped up. Schedule E describes the various accesses to works. Schedule F lists the land in which only new rights would be acquired, Schedule G sets out modifications of enactments relating to new rights and Schedule H the land of which temporary possession would be taken.
- 4.511 Schedules I and J of the recommended Order are DMLs for, the generation assets (the wind farm) and the transmission assets (the offshore cable corridor) respectively.
- 4.512 Schedule K of the recommended Order lists the important hedgerows that would be removed, while Schedule L sets out the protective provisions.
- 4.513 An explanation of the application DCO is to be found in the Explanatory Memorandum [APP-029] submitted by the applicant with the application.

The Applicant's DCO

- 4.514 The applicant numbered its versions of the DCO 1 to 7 through the examination. All of these, with the exception of version 4 were

provided to the ExA. Those versions of the DCO provided to the examination by the applicant can be found in the examination library appended and are as follows:

- Application Version dated 8 November 2012 [APP-028] and Explanatory Memorandum [APP-029]
- Version 2 dated 30 July 2013 [REP-204] including tabulated explanations of changes made by the applicant.
- Version 3 dated 27 August 2013 [APP-213] including descriptions of changes to a Version 4
- Version 5 dated 21 October 2013 [APP-244] and tabulated explanations of changes made by the applicant [APP-245]
- Version 6 dated 21 November 2013 [REP-333] and tabulated explanations of changes made by the applicant [REP-334]
- Version 7 dated 13 December 2013 [APP-250] and in order to explain all the changes in Version 7, the Schedule of Applicant's Comments on MMO's Response to Deadline IV [REP-343]

4.515 There were a number of differences between the description of development in Chapter 4 of the ES [APP-056] and the DCO as applied for. These are explained in Chapter 2 of this Report above. The extent of any works not subject to specific limitations in the Order however, would be limited by the fact that any works beyond those described in the ES could not lawfully be carried out without first being assessed under the Infrastructure Planning (Environmental Impact Assessment) Regulation 2009.

4.516 Most of the changes made by the applicant were to address matters raised by interested parties such as to better secure mitigation outlined in the ES but not originally secured by the application version of the DCO. A number of changes were also proposed by the applicant following the ISH in particular to address the Government's policy in NPS EN-1 (paragraph 4.1.7) that requirements should be *"necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects."*

Precedent Orders

4.517 The interpretation of the word "maintain" as set out in Article 2 of the recommended Order reflects that in the Triton Knoll Offshore Wind Farm Order 2013 (TKO). The Panel concludes that this interpretation would ensure that only works assessed by the environmental impact assessment would be authorised by Article 4 of the recommended Order. For these reasons the Panel concludes

the interpretation of "maintain" as set out in Article 2 of the recommended Order is acceptable.

4.518 The applicant referred to TKO in its representations relating to ornithological collision risk models. It also referred to the Galloper Wind Farm Order 2013 and to TKO in relation to provisions in the recommended Order on compulsory acquisition and to TKO in relation to the drafting of DML Conditions [REP-142].

4.519 The applicant also referred to the Galloper Offshore Wind Farm Order 2013 in its representations relating to the proposed skills strategy. However, in this case, as concluded in the Socio-economic subchapter of this chapter above, the Panel finds the assessed impacts on the supply of skills, in this application, to be of an entirely different degree to the assessed impacts on skills of the Galloper Offshore Wind Farm.

Defence to proceedings in respect of statutory nuisance

4.520 The Panel also consulted upon potential changes to the DCO in respect of the guidance in NPS EN-1 paragraph 4.14.1 that the statutory authority for carrying out the development consented conferred by s158 of PA2008 is:

"only for the purpose of providing a defence in any civil or criminal proceedings for nuisance. This would include a defence for proceedings for nuisance under Part III of the Environmental Protection Act 1990 (statutory nuisance) but only to the extent that the nuisance is the inevitable consequence of what has been authorised."

4.521 NPS EN-1 continues (paragraph 4.14.3) that

"The IPC should note that the defence of statutory authority is subject to any contrary provision made by the IPC in any particular case in a development consent order (section 158(3)). Therefore, subject to Section 5.6, the IPC can disapply the defence of statutory authority, in whole or in part, in any particular case but in so doing should have regard to whether any particular nuisance is an inevitable consequence of the development."

4.522 Therefore the defence to proceedings in relation to statutory nuisance should be in place in relation to "*particular nuisance[s]*". On this matter the LAs raised relevant concerns about whether the DCO would appropriately constrain the use of such a defence [REP-324] to a particular nuisance.

4.523 Paragraph 5.6.8 of NPS EN-1 adds that:

"If the IPC does grant development consent for a project, it should consider whether there is a justification for all of the authorised project (including any associated development) being covered by a defence of statutory authority against nuisance claims. If it cannot

*conclude that this is justified, it should disapply in whole or in part the defence through a provision in the development consent order."*²⁹

- 4.524 The applicant's responses on this matter indicated that the defence provided by Article 7 of the recommended Order constrained the defence that would otherwise be available in any case in relation to an NSIP under s158 of PA2008. In detail, according to the terms of Article 7 of the Order, the defence would be available only in relation to noise emitted from premises used by the undertaker for the use of and attributable to the authorised project. In addition Requirement 24 would be applied by the recommended Order to control noise pollution. On this matter therefore the Panel concludes that in this application the defence provided, by virtue of it being provided only to noise pollution of a specified kind, would be provided in relation only to a particular nuisance as set out in NPS EN-1 and that there is no reason in relation to this matter to withhold development consent for the project.
- 4.525 Other passages of section 5.6 of NPS EN-1 require an assessment of and where necessary mitigation of potential artificial light, dust, odour, smoke, steam and insect infestation. These matters have been examined as follows:
- Artificial light - measures to control artificial light including hours of lighting would be secured through the recommended Order (see subchapter on Landscape and visual impact)
 - Dust - the air quality management plan that would be certified under the Order would include dust control and traffic management measures including wheel washing facilities for heavy goods vehicles
 - Odour, smoke, steam and insect infestation - since the generation station is proposed approximately 40km offshore and the only onshore facilities will be underground cables and the OCS the Panel concludes that no such impacts are likely which could cause a statutory nuisance.

Certified Documents and Plans

- 4.526 As set out in Article 32 of the recommended Order, the Works Plans, the Land Plans and a number of other documents would be submitted to the SSECC as soon as practicable after the making of the Order to be certified. Revisions that were made to these plans are reported upon in Chapter 2 above. The other documents that

²⁹ The Localism Act 2011 has amended the Planning Act 2008 such that the SSECC has taken over the functions of the IPC in this matter.

would be certified would include a number of outline strategies and plans, such as the Outline Traffic Management Plan and the Outline Landscape and Ecological Mitigation strategy for example. Many of the final versions of these plans and strategies to be approved through the discharge of requirements would be required to accord with their outline counterparts to be certified under the Order. For example the Traffic Management Plan to be approved under Requirement 25 would have to accord with the Outline Traffic Management Plan.

- 4.527 A number of representations were received relating to these outline plans and strategies and the Panel asked questions about and thoroughly examined them as reported upon throughout this Report. In response to the various examination deadlines the applicant updated and altered these documents. For example, what is now the Outline Landscape and Ecological Mitigation Strategy originally comprised, separately, an Ecological Mitigation Plan and a Landscape Strategy.
- 4.528 At the final timetabled consultation deadline the applicant was requested to and indeed provided, updated references within Article 32 of the recommended Order to all the correct documents.

Simultaneous installation of ducts with onshore cabling

- 4.529 Requirements in the recommended Order are considered in detail throughout this Report. One requirement relating to the general powers of construction of the authorised project is Requirement 29 "*Installation of cable ducts*". In the course of the examination it became plain that although the only option for the laying of the ducts for future wind farms East Anglia Three and Four, that had been environmentally assessed, was the laying of them simultaneously with the cables for East Anglia One, this would not be secured in the application version of the DCO.
- 4.530 The application version of the DCO appeared to leave open the programme and period over which cables and perhaps later, the ducts could be laid. This was emphasised by the applicant's Cable Statement [REP-181] which described only "*the option*" to lay the ducts for the future wind farms. At the heart of the Panel's concerns was that a short term operational decision could be taken by an undertaker that the ducts were unnecessary and that only the cables for East Anglia One would be laid, only for the same cable corridor across Suffolk to be dug up again at a later date to put ducts in to satisfy a later, different, operational decision.
- 4.531 The LAs and in general terms the applicant, understood the risks involved here and agreed, and the applicant proposed Requirement 29 as now within the recommended Order. This requirement would provide that the ducts could only be dropped from the scheme upon successful application to the SSECC. The Panel recognises that any dispensation granted by the SSECC from

installing the ducts could in due course be followed by a reversal at another stage perhaps under a different SSECC or statutory process. However, the SSECC would be in a position to consider all the risks of such an outcome in making a decision pursuant to any application under this requirement.

Deemed Marine Licences

- 4.532 At the outset of the examination the applicant's version 1 [APP-028] of the DCO set out a single DML. Subsequently the applicant's version 2 [REP-204] of the DCO contained two DMLs. The MMO (the principle enforcement body) had objected to the potential of splitting the DML since the relevant provisions of the Marine and Coastal Access Act 2009 do not provide for the transfer of a licence in part and the applicant's response [REP-204] was to create two licences instead obviating the need to split a licence in any way.
- 4.533 In the recommended Order therefore one DML, Schedule I, would provide a licence for the activities of the offshore generating station (Work No. 1 and ancillary works), the other DML, Schedule J, would provide for the activities within the offshore cable transmission corridor (Work Nos. 2 and 3A and ancillary works), excluding the wind farm. This would provide for the generating assets and the transmission assets to be owned by separate undertakers. A number of changes were made to Article 5 (Benefit of the Order) in order to address concerns raised by the MMO and as a result the recommended Order, in Article 5, secures that only the whole of either or both DMLs may be transferred. Given that the MMO [REP-275] were accepting of and did not maintain any objection to this approach and given that the Panel finds that the obligations within each DML would be enforceable by the MMO on each licensee, the Panel concludes there is no objection to such an approach which therefore forms part of its recommended Order.

Transfer of Benefit of the Order

- 4.534 Article 5 (Benefit of the Order) requires that any transfer of the benefit of the Order would require the consent of the SSECC and this would apply equally, by virtue of paragraphs (4)(a) and (b) and (2)(a) and (b) of Article 5, to any transfer of the DMLs. The Panel concludes this is acceptable given that the SSECC has confirmed such provisions in other Orders.

Final changes proposed to the DCO

- 4.535 Discussion arose at the very end of the examination from a schedule received from the MMO [REP-328] at Deadline IV (the final timetabled deadline) setting out newly proposed changes to the DCO. Many of these changes had not featured in the MMO's relevant or written representations. The MMO also had not raised the changes at the ISH on the DCO. These proposed changes,

together with unresolved matters in relation to ornithology caused the Panel to decide to hold a further written consultation, which closed at Deadline V in the examination. The purpose was to ensure that the applicant and other interested parties had an opportunity to respond, in particular to the DCO proposals.

4.536 The applicant's response [REP-341] to the MMO's proposed final changes to the DCO stated:

"Please note that following a meeting with the MMO on 2 December 2013, most of these issues have now been agreed. Where there is still disagreement, this is noted in the Schedule."

However, the applicant's attached schedule [REP-343] responding to the MMO's proposed changes suggested that all matters had been agreed and did not clearly identify any remaining area of disagreement. The only area where the Panel considered there might have remained disagreement was where REP-343 stated, in relation to the MMO's proposed change to Part 2 of Schedule A of the DCO (Ancillary Works):

"It is not agreed that the additional wording (i.e. "Details of proposed works below MHWS, including details of where the works have been assessed, must be provided to the MMO for written approval prior to commencement") should be included. The purpose of Condition 9 of the DMLs is to provide a number of preconstruction plans in which these details will be provided (and the MMO has to sign off) – the proposed wording is duplicating this."

However, this passage continues with the words:

"Following further discussions with the MMO, the Applicant has agreed to include the following wording in Schedule I and J, Part 1, section 2(3):

*'And in connection with such Works No. 2 and 3A, **ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement** comprising—...*

And in Schedules I and J, Condition 11(c):

(c) A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of—...

*(vii) associated **and ancillary** works.' "*

The text in bold above identifies the words added by the applicant at this stage. It was not clear therefore whether the words in bold had been agreed by the MMO or not.

- 4.537 Because the applicant's and the MMO's representations on the above matters came at the end of the examination and after the Hearings at which they could have been more fully examined, it may not be possible for the SSECC to attribute great weight to either.
- 4.538 However, because the applicant's amendments above would effectively constrain the authorised ancillary works to those that had been assessed as recorded in the ES and because that was the burden of the MMO's concern in this matter, the Panel concludes that the applicant's text above is acceptable and has included it in the recommended Order.
- 4.539 The Panel also received at Deadline IV a representation from the National Federation of Fishing Organisations (NFFO) [REP-326] on 26 November 2013. The applicant did not respond specifically to the proposed changes to the DCO it contained, however a number of them appeared to be supported by the applicant in the relevant statement of common ground [REP-232]. The Panel considers these matters fully in the Fishing subchapter of this chapter, above.

Other legal agreements

- 4.540 The draft s106 agreement under the Town and Country Planning Act 1990 is reported upon in detail in the subchapters on: Issues in the examination and Landscape and visual impact, above. The s106 agreement forms a key element in the Panel's recommendation on the application made to the SSECC in Chapter 6.

The recommended Order

- 4.541 The recommended Order is appended to this Report. At the request of the Panel [PD-014] at the final timetabled consultation in the examination, the applicant edited the DCO such that the recommended Order now makes use of modern phraseology and has been formatted to be consistent with the format required for Statutory Instruments.
- 4.542 The recommended Order is the applicant's last submitted version of the DCO as proposed by the applicant (version 7 [APP-250]), but includes the following changes made by the Panel and incorporated within it.
- 4.543 All of the amendments made by the Panel below (with the exception of those identified as "*drafting changes*") have been considered in consultations during the examination and therefore the applicant and other interested parties have had an opportunity to set out their views upon them, as reflected in the relevant sections of this Report.

4.544 Table 1.6: Amendments and reasoning

Panel amendment number	Part of the recommended Order that differs from the applicant's final submission DCO	Amendment made by the Panel	Reasoning / reference to reasoning for the amendment
1	Schedule A, Part 1 Authorised Development, Paragraph 1. Work No. 3A	The acronym " <i>HVDC</i> " has been inserted in place of " <i>HDVC</i> "	Drafting change: The Panel concludes this to be a drafting error because there is no known abbreviation " <i>HDVC</i> " and has corrected it
2.	Schedule A, Part 3 Requirement 9 (Offshore decommissioning)	The words <i>"/the notice dated [•]"</i> and other square brackets in Requirement 9 have been deleted	Drafting change: This has been deleted because the requirement would otherwise be ungrammatical and leaving an either/or option within the text would have rendered this Requirement imprecise
3.	Schedule A, Part 3 Requirement 10(10)(a) (Detailed design approval onshore)	The words <i>"number, location"</i> have been inserted before the words: <i>"scale and appearance of the kiosks have been submitted to and approved in writing by the relevant planning authority"</i>	See Landscape and visual impacts subchapter of Chapter 4
4.	Schedule A, Part 3 Requirement 13(2) (Implementation and maintenance of landscaping)	The figure "9" has been deleted before the words <i>"relevant planning authority"</i>	Drafting change: This has been deleted because the requirement would otherwise be ungrammatical
5.	Schedule A, Part 3 Requirement	The words <i>"the relevant planning authority, after consultation with"</i>	See Socio-economic subchapter of Chapter 4

	30(1) (Skills strategy)	have been inserted before the words <i>"Suffolk County Council"</i>	
6.	Schedule A, Part 3 Requirement 31(1) (Onshore decommissioning)	The words <i>"Within three months of"</i> have been inserted in place of the word <i>"Upon"</i> . After the <i>"the cessation of commercial operation of the connection works,"</i> the words: <i>"or of Work No.3B or of Work No. 4"</i> have been inserted.	See Marine and Physical Coastal Processes subchapter of Chapter 4
7.	Schedule A, Part 3 Requirement 32(1) (Decommissioning of Work No.3B and Work No.4)	After the words <i>"After a period of"</i> the words <i>"24 years but before the expiration of a period of"</i> have been inserted	See Marine and Physical Coastal Processes subchapter of Chapter 4
8.	Schedule I (DML-Generation assets) Part 2 Condition 11(g) (Pre-construction plans and documentation)	(i) the word <i>"and"</i> has been deleted. (ii) the words <i>"and including contingency plans if burial is not achieved through preferred techniques; and"</i> have been inserted at the end of (ii). New (iii) has been inserted: <i>"(iii) appropriate methods such as trawl or drift net to be deployed along the offshore subsea cables within the authorised scheme as agreed in writing by the MMO, following the survey referred to in condition 19(2)(d) to assess any seabed obstructions resulting from burial of cables as part of the</i>	See Fishing subchapter of Chapter 4

		<i>authorised scheme."</i>	
9.	Schedule I (DML- Generation assets) Part 2 Condition 11(k) (Pre- construction plans and documentation)	New (k) has been inserted " <i>(k) A coexistence statement demonstrating how the design and construction methods, including cable specification, installation and armouring, reasonably avoids or mitigates effects on other marine users, including fisheries."</i>	See Fishing subchapter of Chapter 4
10.	Schedule J (DML- Transmission assets) Part 2 Condition 11(a)(vii) (Pre- construction plans and documentation)	"(vii)" has been deleted.	Drafting change: these figures have been deleted because they were repeated unnecessarily
11.	Schedule J (DML- Transmission assets) Part 2 Condition 11(g)(ii) (Pre- construction plans and documentation)	The words " <i>and including contingency plans if burial is not achieved through preferred techniques; and</i> " have been inserted before the final " <i>and</i> " at the end of (ii).	See Fishing subchapter of Chapter 4
12.	Schedule J (DML- Transmission assets) Part 2 Condition 11(l) (Pre- construction plans and documentation)	New (l) has been inserted " <i>(l) A coexistence statement demonstrating how the design and construction methods, including cable specification, installation and armouring, reasonably avoids or mitigates effects on other marine users, including fisheries."</i>	See Fishing subchapter of Chapter 4

Other consents required

- 4.545 Whilst the need for separately obtaining a significant number of consents under different aspects of legislation would be obviated by the recommended Order, if made, the proposed project would nonetheless require a number of other consents and licenses. These were originally listed on the application form [APP-02] and in a separate application document [APP-047]. This latter document listed 7 offshore consents required and 15 onshore consents of various kinds, required in order for the development to become operational.
- 4.546 The Panel asked questions relating to these other consents required [PD-004]. The Panel also questioned at the ISH [HE-06] whether there were any reasons why the necessary consents would not be granted and requested any information indicating that they would be granted.
- 4.547 This included questioning related to whether a Ministry of Justice licence should be sought, in case the undertaker discovered human remains (the SSECC may consider that undertakers do indeed deal with such matters). This matter had been raised by the LAs [REP-231]. In response [REP-318] the applicant explained that a Ministry of Justice Licence would be required *"only if remains were found on a localised basis."* This was in part because a different Church of England notification would be required if the land was thought to be consecrated ground. The Panel concludes that there is no certainty that a Ministry of Justice Licence would be required and if it were required at a later date it has no evidence that such a licence could not be obtained when necessary.
- 4.548 In response to the more general questions at the ISH about other consents required the applicant provided a report on progress and responses from various authorities [REP-313]. In almost every case the applicant was able to report that either the relevant licence had been granted (for example the Applicant was granted a generation licence on 2 April 2013 pursuant to section 6(1)(a) of the Electricity Act 1989); or that a letter of comfort had been obtained (for example from Natural England in relation to certain European Protected Species Licences); or that the consent was or may not be required (for example a certificate under s127 and Building Regulations Consent for the OCS); or that the matter would be dealt with as secured and agreed with the LAs through the Order (for example a Road Vehicles (Authorisation of Special Types) (General) Order 2003/Road Traffic Act 1988).
- 4.549 One area where no response was obtained was in relation to the application made to the Department for Communities and Local Government for use of open space at Bawdsey beach under s132 of PA2008. However, because there is no evidence that this permission may not be obtained the Panel concludes that there is

no reason to suppose that this consent and those others not yet granted, would not be granted in due course.

Other matters

- 4.550 The Panel considered all other representations received, including one representation from Professor Midwinter in favour of the scheme [REP-043]. The Panel has also considered all other important and relevant matters in its consideration of the application and has taken all representations and all these matters into account.

CONCLUSIONS ON DEVELOPMENT CONSENT

- 4.551 The Panel concludes that for the reasons set out in the chapters above and subject to the incorporation of the DCO changes it has made, that development consent should be granted for the development as set out in the Panel's recommendation in Chapter 6.

5 COMPULSORY ACQUISITION

THE REQUEST FOR COMPULSORY ACQUISITION POWERS

- 5.1 The application for the DCO seeks compulsory acquisition powers for the acquisition of freehold land, permanent rights (such as rights of access) and temporary rights. It includes rights to install cables (with or without ducts) in an onshore cable corridor with a width of 75m (except where HDD is proposed). The cable corridor would accommodate the cables required for East Anglia One, as well as the cable ducts for the future wind farm projects known as East Anglia Three and Four.
- 5.2 The application also seeks additional powers. The details of these are included in the articles of the recommended Order as follows: Article 8 - Street Works, Article 10 - Temporary stopping up of streets, Article 14 - Authority to survey and investigate land, Article 18 - Private rights, Article 21 - Acquisition of part of certain properties, Article 22 - Rights over or under streets, Article 23 - Temporary use of land for carrying out the authorised project, Article 24 - Temporary use of land for maintaining the authorised project and Article 31 - Felling or lopping trees and removal of hedgerows.
- 5.3 The application was accompanied by a Statement of Reasons [APP-030], a Funding Statement [APP-031], a Book of Reference in five parts [APP-032, APP-033, APP-034, APP-035, APP-036] and Land Plans [APP-006, APP-007, APP-008, APP-009] showing the plots of land referred to in the Book of Reference. These accompanying documents and plans have been revised during the course of the examination [APP-191 to APP-212, APP-230 to APP-239].
- 5.4 The land in respect of which compulsory acquisition (CA) powers are sought is described in this chapter as the CA land. The CA land included in the Order is described in Chapter 2 of this Report and also in section 4 of the revised Statement of Reasons [APP-239]. The revised Book of Reference [APP-231 to APP-237] identifies 454 plots of land and these are shown on the revised Land Plans [APP-222, APP-223, APP-225, APP-226 & APP-229].
- 5.5 The Statement of Reasons indicates that the applicant's purpose in acquiring the CA Land compulsorily is to secure the land and rights required to construct (and then operate, in relation to East Anglia One) the project within a reasonable commercial timeframe [APP-030, APP-239].
- 5.6 Land for which compulsory acquisition is required:

- to remove existing easements servitudes and other private rights in relation to all plots³⁰;
 - to acquire the freehold in 10 plots;
 - to acquire new permanent rights in 428 plots, and
 - to take temporary possession in 443 plots including those in which new permanent rights would be acquired.
- 5.7 The freehold title is sought in the location of the proposed convertor station and its associated compound and landscaping (plots 450, 453, 454, 457 - 463).
- 5.8 Permanent rights to construct and maintain cables are sought for East Anglia One and to install ducts for East Anglia Three and Four; to facilitate access for installation and maintenance of the onshore infrastructure and for maintenance of the onshore infrastructure and associated works (described and identified in Schedule F to the recommended Order).
- 5.9 Most plots fall within the category of rights which provide for the permanent retention of cables/ducts together with a surface right of access for occasional maintenance. Other parts of the CA Land, which would have the cable route installed by way of HDD or other forms of sub-soil drilling, are subject to permanent rights of underground cable installation and maintenance. A further category of rights are proposed in relation to those plots where a permanent right of access is required but no cable laying activities are anticipated.
- 5.10 Restrictive covenants are also sought for the land that would have the cables and ducts installed to protect the cables or ducts from being exposed or damaged, or built over. They are not sought over areas that are owned or used by statutory undertakers.
- 5.11 For some plots, the laying of cables and ducts would not be carried out but a permanent right of access to the cable route is sought. This includes along existing routes and temporary haul roads for maintenance during the operational period and for decommissioning activities. It would include the right to improve existing routes and to lay down hardstanding.
- 5.12 The categories of temporary possession are set out in the Schedule H to the recommended Order. The first category is described as being for the construction of the relevant Works and includes the cable corridor and the convertor station land. The second category is required during the construction of the project for construction compounds. The latter would afterwards be

³⁰ In relation to lands in which new rights may be acquired those rights shall be extinguished insofar as their continuance would be inconsistent with the exercise of that right

restored to their previous condition and returned to the relevant owner.

- 5.13 The Statement of Reasons [APP-239] explains, at paragraph 7.52, that there are a number of plots identified in the Book of Reference where it was not been possible to identify ownership and the steps taken as a result.

Crown Land

- 5.14 The Statement of Reasons, paragraph 8.1, identifies Crown Land as being present below the mean low water mark (the details of which are to be found in the Book of Reference and associated Land Plans). Plot 1 of the Order Land forms part of the foreshore of the Suffolk coastline at Bawdsey. It is held by The Crown Estate and is excluded from compulsory acquisition. The applicant has not included Crown interests in the CA Land but proposes to negotiate to acquire the necessary interests directly with the Crown. The applicant does not perceive any obvious impediment to obtaining those interests [APP-239].
- 5.15 Crown Land also exists at the A14 Trunk Road, as the land is held by the Secretary of State for Transport and is managed by the Highways Agency. In addition, land at the A12 highway is owned by the Secretary of State for Transport.

Statutory undertakers' land: s127 Planning Act 2008

- 5.16 Statutory undertakers' operational land may be the subject of special procedures under PA2008. Statutory undertakers' land or rights in land are affected by the compulsory powers sought.
- 5.17 In order to connect the project to the National Grid at Bramford, it would be necessary to directionally drill beneath two railways owned by Network Rail Infrastructure Limited (Network Rail). These are the East Suffolk Railway, north of Martlesham Creek and south of Woodbridge and the Great Eastern Main Line at Claydon, north of Ipswich.
- 5.18 An application for a certificate pursuant to s127 was made to the Secretary of State for Transport on 16 November 2012 [APP-037] in anticipation of a representation by Network Rail to the inclusion of its land in the DCO. Network Rail's representation was subsequently submitted on 27 February 2013 [REP-163]. As set out in Chapter 1 of this Report, the application for a certificate, and Network Rail's representation, have subsequently been withdrawn [S127-02 & S127-03].
- 5.19 The applicant also requires rights to connect the project to the National Grid substation at Bramford. National Grid Electricity Transmission PLC (National Grid) is the owner of the land, and is a statutory undertaker.

- 5.20 The representation made by Anglian Water identified assets that should not be interfered with and sought sufficient protective provisions within the draft DCO to safeguard them [REP-042].
- 5.21 As explained in Chapter 1 of this Report, there is no longer any requirement for s.127 certificates to be granted in respect of any statutory undertakers' land. The process whereby this was achieved will be explained in more detail later in this chapter.

Local authority and statutory undertakers' land: s128 of the Planning Act 2008

- 5.22 At the time of the submission of the DCO, special category land belonging to Network Rail and National Grid existed and such interests are included in Part 5 of the Book of Reference [APP-036, APP-237]. Land held by SCC, as highway authority, is also in Part 5 of the Book of Reference but is expressly excluded from compulsory acquisition.
- 5.23 By virtue of s128 of PA2008, the proposed compulsory acquisition of land and rights over land held by local authorities and other statutory undertakers would have been potentially subject to Special Parliamentary Procedure. However, s.128 "*Local authority and statutory undertakers' land generally*" and s.129 "*Local authority and statutory undertakers' land: acquisition by public body*" were repealed by s24(1) of the Growth and Infrastructure Act 2013. This took effect in relation to applications submitted on or after 19 October 2012, prior to the date of submission of the current application.

Open space land

- 5.24 On 21 June 2013, an application under s132 of PA2008 was submitted to the Department for Communities and Local Government (DCLG) to authorise the acquisition of rights over open space land [S132-1]. This application relates to the grid connection route through Plots 1-7. The applicant's position is that the status of this land as "*beach land*" does not prevent it from it being open space. It is land that is not restricted to the public and the possibility of its use for public recreation could not be ruled out. The applicant has provided all the necessary information to DCLG to allow determination of the application (Written Response Deadline III) [REP-318].

Other matters

- 5.25 The draft DCO, Article 19, seeks to incorporate the provisions of the Compulsory Purchase (General Vesting Declarations) Act 1981 with some modifications.
- 5.26 S120(5)(a) of PA2008 provides that a DCO may apply, modify or exclude a statutory provision which relates to any matter for which provision may be made in the DCO and s117(4) provides that, if

the DCO includes such provisions, it must be in the form of a statutory instrument. Since in a number of instances the DCO seeks to apply s.120(5)(a), it is in the form of a statutory instrument.

THE REQUIREMENTS OF THE PLANNING ACT 2008

- 5.27 Compulsory acquisition powers can only be granted if the conditions set out in s122 and s123 of PA2008 are met.
- 5.28 S122(2) requires that the land must be required for the development to which the development consent relates or is required to facilitate or is incidental to the development. In respect of land required for the development, the land to be taken must be no more than is reasonably required and be proportionate.³¹
- 5.29 S122(3) requires that there must be a compelling case in the public interest which, in summary, means that the public benefit derived from the compulsory acquisition must outweigh the private loss that would be suffered by those whose land is affected. In balancing public interest against private loss, compulsory acquisition must be justified in its own right. But this does not mean that the compulsory acquisition proposal can be considered in isolation from the wider consideration of the merits of the project. There must be a need for the project to be carried out and there must be consistency and coherency in the decision-making process.
- 5.30 S123 requires that one of three conditions is met by the proposal³². The Panel is satisfied that the condition in s123(2) is met because the application for the DCO included a request for compulsory acquisition of the land to be authorised.
- 5.31 A number of general considerations also have to be addressed either as a result of following applicable guidance or in accordance with legal duties on decision-makers –
- all reasonable alternatives to compulsory acquisition must be explored;
 - the applicant must have a clear idea of how it intends to use the land and to demonstrate funds are available, and

³¹ Guidance related to procedures for compulsory acquisition of land DCLG September 2013

³² (1) An order granting development consent may include provisions authorising the compulsory acquisition of land only if the Secretary of State is satisfied that one of the conditions in subsections (2) to (4) is met.

(2) The condition is that the application for the order included a request for compulsory acquisition of the land to be authorised.

(3) The condition is that all persons with an interest in the land consent to the inclusion of the provision.

(4) The condition is that the prescribed procedure has been followed in relation to the land.

- the decision-maker must be satisfied that the purposes stated for the acquisition are legitimate and sufficient to justify the inevitable interference with the human rights of those affected.

How the Panel examined the case for Compulsory Acquisition

- 5.32 The Panel raised questions in relation to the request for compulsory acquisition powers. These are set out in Appendix D of the Rule 8 letter [PD-004]. The questions covered a range of issues including matters of principle relating to the exercise of compulsory acquisition powers, the exploration of alternatives, and the justification for including land in the application to accommodate the ducts and convertor station compounds for East Anglia Three and Four. The questions also dealt with matters relating to the availability of funding and the justification for the interference with the human rights of those with an interest in the land affected. They reflected matters raised by affected persons in their representations and the requirements of PA2008.
- 5.33 The applicant responded to all our questions. That response was set out in the Written Response I [REP-142]. The applicant's Position Statement in relation to associated development was appended as Appendix 2K to that document [REP-196].
- 5.34 A compulsory acquisition hearing (CAH) was held at Trinity Park, Ipswich, on 8 October 2013. None of the affected persons chose to attend the CAH. The Panel pursued a number of matters with the applicant including outstanding points relating to the general principles applicable to the compulsory acquisition of land and rights over land, whether adequate funding was likely to be available, and whether the purposes of the proposed compulsory acquisition justified interfering with the human rights of those with an interest in the land affected.
- 5.35 At the CAH, the applicant submitted a short document explaining some amendments which had been made to the plot by plot analysis. That document was provided at Deadline III [APP-241] together with an updated plot by plot analysis reflecting the changes (Appendix 8.1) [APP-240]. A written summary of the oral case presented at the CAH was submitted by the applicant at Deadline III. The appendices included an Updated Landowner Negotiations Document (Appendix 8.2), Board Report and Written Resolution (Appendix 9), Statements of Agreement with Statutory Undertakers/Crown Consent (Appendix 10), revised Statement of Reasons (Appendix 12), and the revised Book of Reference (Appendix 13) [REP-318, REP-285, APP-230 to APP-240]. The Deadline III documents also included a letter of withdrawal of representation from Andrew Bond (Hearing Document 16) [APP-243] on behalf of various landowners and a letter of consent from

The Crown Estate Commissioners (Hearing Document 17) [APP-242].

- 5.36 A Deed of Variation to the Funding Agreement dated 21st November was provided as Appendix 9 to the applicant's Deadline IV submissions [REP-340].

The Applicant's case

- 5.37 The applicant's case for the grant of compulsory acquisition powers is set out in the revised Statement of Reasons [APP-239] together with the Funding Statement [APP-031] and revised Book of Reference [APP-230 to APP-237]. The documents which accompanied the application included a substantial amount of information regarding baseline conditions, site selection, the proposed development, environmental impact and other relevant matters. The Statement of Reasons should therefore be read alongside the List of Application Documents set out in Schedule 1 to that document. Additional information in relation to Crown Land, open space, local authority and statutory undertakers' land was submitted in response to the Panel's questions and in further representations submitted by the applicant.

Approach to Associated Development

- 5.38 The project includes the East Anglia One offshore wind farm and the associated development described in Chapter 2 of this Report.
- 5.39 The applicant's approach to associated development is set out in section 3.6-3.10 of the revised Statement of Reasons and in the Written Response I to questions 1.13, 12.2-12.6 and 12.27 [REP-142]. A Position Statement was also provided on the revised DCLG Guidance on Associated Development Applications for Major Infrastructure Projects (April 2013) (AD Guidance) in relation to the onshore cable ducts at Deadline I (Appendix 2K) [REP-196]. This was supplemented by the Position Statement describing the feasibility of constructing the East Anglia One cables only which was submitted at the ISH on 19 September 2013 [REP-289]. The case was summarised in the Written Response for Deadline III Part 2 – Written Summary Oral Case at Compulsory acquisition hearing [REP-318].
- 5.40 In seeking compulsory acquisition powers for the ducting for East Anglia Three and Four Offshore Wind farms, primary reliance is placed on s122(2)(a) of PA2008, being development to which the development consent relates. However, if there is any doubt regarding whether s122(2)(a) is applicable, then s122(2)(b) is also relied upon [REP-318].
- 5.41 The revised AD Guidance clarifies the meaning of associated development and confirms that a degree of overcapacity in infrastructure might be included in the application as associated development. The applicant submits that too restrictive an

approach should not be applied to "overcapacity". The AD Guidance recognises, in principle, the good sense of providing capacity for future developments provided the relevant tests are met. There is no distinction, in principle, between providing extra cable capacity, and providing additional duct capacity.

- 5.42 Whether or not development should be treated as associated development, is a matter for the Secretary of State to decide on a case by case basis, taking into account a series of core principles that he has identified to guide his judgment in answering that question.
- 5.43 The applicant contends that there is an important relationship between the ducts for East Anglia Three and Four Offshore Windfarms and the East Anglia One Offshore Windfarm project, as they would address the cumulative impacts of East Anglia One. The inclusion of the cable ducts for the East Anglia Three and Four Offshore wind farms would allow the onshore cable ducts for the two subsequent wind farms to be laid at the same time as the laying of the onshore cables and ducts for East Anglia One. This would have advantages including minimising repeated disturbance to landowners and the public and enabling earlier permanent reinstatement and proposed landscaping works.
- 5.44 The applicant is a wholly owned subsidiary of East Anglia Offshore Wind Ltd (EAOWL), a joint venture owned 50:50 by Scottish Power Renewables (UK) Ltd (SPR) and Vattenfall Wind Power Ltd (Vattenfall). The development consent applications for East Anglia Three and Four would also be submitted by wholly owned subsidiaries of EAOWL. Thus, the same or a related developer would be involved. There would also be a high degree of physical proximity between the schemes with, for example, the onshore cable ducts to accommodate East Anglia Three and Four being laid along the same route as the onshore cables for East Anglia One to connect to their respective convertor stations adjacent to the East Anglia One convertor station at Bramford.
- 5.45 In relation to the timescales for the future projects, the applications for development consent are planned to be made in late 2014 for East Anglia Three and early 2015 for East Anglia Four. There is a genuine prospect that the East Anglia Three and Four schemes would proceed within a reasonable and clear timetable.
- 5.46 The applicant submits that, from the AD Guidance as a whole and, in particular, paragraph 5 (iv), footnote 3, what is proposed in this case is capable of being associated development. The Position Statement, as supplemented by the note submitted at the ISH "Onshore Construction and Onshore Noise and Vibration"³³ [REP-

³³ Applicant's Response to Agenda Item 7.2 for Day 3'.

196 & REP-289], addresses each one of the core principles and demonstrates that what is proposed aligns very closely indeed with the AD Guidance. Indeed, this is a paradigm case of the type of overcapacity provision that properly qualifies as associated development.

Requirement for the compulsory acquisition of the Order Land (s122(2) & (3))

- 5.47 The applicant sets out in the revised Statement of Reasons [APP-239] clear proposals for the use of the CA land. The applicant asserts that all of the CA Land, shown on the Land Plans and described in the Book of Reference, is required either for the purposes of the project, or to facilitate it, or for purposes incidental thereto. The nature of the land interests required for the project are set out in section 7 of the Statement of Reasons and include freehold title, permanent rights to construct and maintain cables, restrictive covenants over lands where rights are sought, permanent rights of access, and temporary possession.

General justification for the extent of the Order Land

- 5.48 This is set out in the Statement of Reasons, section 7, and includes a detailed description of the route with reference to the relevant plots. The power to enter lands within an area of lands to be acquired or used (LLAU) for a width 75m is sought, save where HDD is proposed. The width of the LLAU reflects the width of the works to install cables for East Anglia One, as well as the ducts for East Anglia Three and Four, thereby enabling three sets of four cables/ducts to be laid in parallel.
- 5.49 The width of the cable corridor derives from the need to provide sufficient clearance between the cables to ensure that their operating temperature does not exceed operating limits. This has driven the maximum cable and duct spacing. During construction it would also be necessary to make provision for a haul road, a spoil heap, perimeter fencing and drainage. The various calculations and assumptions that have been made have led to the conclusion that all the temporary and permanent works could be accommodated within a working width of 55m, except where special circumstances applied. This is shown by Diagram 2-5 of the Non-Technical Summary: Schematic showing Activities within the Onshore Cable Route Working Width [REP-286].
- 5.50 An additional 20m is included to allow for (within the Order Limits) minor variances to the cable corridor to avoid potential engineering difficulties or to otherwise enable the construction of the project in the stated time with the minimum of disruption. Other examples of reasons why additional space might be required are set out in section 7 of the Statement of Reasons [APP-030].

- 5.51 The whole of the 75m width of the cable corridor has been included in the LLAU as it cannot yet be confirmed where exactly within the corridor the cables and ducts would be laid or identify accurately where only temporary possession would be sufficient. The exact location of the cables/ducts would not be finally fixed until detailed surveys have been carried out under the powers in the DCO and discussed with the landowners. The possession of the CA Land would therefore be taken on a temporary basis in the first instance, relying on the powers in Article 24 of the DCO. When it is clear what land would be required permanently within the LLAU, and what would need to be occupied only on a temporary basis, then the process of compulsory acquisition for those permanent rights would commence.
- 5.52 Post construction, a permanent cable corridor of up to 42m width is anticipated for most of the route. The permanent corridor would be justified on the basis that all twelve cables/ducts would be laid within it. The width of the LLAU represents a clear, justifiable, proportionate and reasonable approach to compulsory acquisition.
- 5.53 The underlying rationale for including the ducts for East Anglia Three and East Anglia Four in the DCO for the East Anglia One project is to reduce the impacts of installing ducts and cables for all three projects on those most directly affected by the onshore works. This approach has been driven by the responses received to pre-application consultation from LAs and others. If cable laying was carried out for East Anglia One alone, three separate cable laying operations would need to be considered. In EIA terms, the overall impacts of three cable laying operations may or may not change, but the impacts on communities would change as the length of time taken to install all three cables would be significantly extended, construction and consolidation sites would need to be remobilised, and there would be more traffic to and from these sites (Written Response Deadline III) [REP-318].
- 5.54 The applicant therefore contends that the proposed compulsory acquisition of all the interests sought is for a legitimate purpose, namely, to allow implementation of the development to which the application for development consent relates and thus to reduce the cumulative impacts associated with that development and likely future projects.

Need for power to override rights and easements

- 5.55 The Statement of Reasons [APP-239] explains that land has been included in the recommended Order as being scheduled in the Book of Reference, even where agreement has been reached. This is to ensure that, if any minor interests such as easements, rights of way, restrictive covenants or similar interests are discovered that have not previously been negotiated away, powers are still available to override those interests. It also reflects the fact that minor interests may still be outstanding and not waived and

therefore have to be extinguished or overridden by the statutory process.

- 5.56 The applicant submits that it is both necessary and appropriate for the DCO to include provisions allowing for the overriding and/or extinguishment of rights and covenants over the CA Land. It contends that the overriding of such rights is in the public interest and without the ability to extinguish or override such rights the project might be delayed or prevented.

Relevant Draft Development Consent Order provisions

Article 21 – Acquisition of part of certain properties

- 5.57 The justification for the inclusion of Article 21 is set out in the Explanatory Memorandum which accompanied the application [APP-029]. This article is a substitute for section 8 of the Compulsory Purchase Act 1965. That is the applicable provision for an owner to serve a material detriment notice requiring the acquiring authority to acquire the whole of the interest, if only part is to be acquired. The inclusion of Article 22 provides clarity to both the undertaker, and the owner, on the process and timescale to be followed.

Article 23 – Temporary use of land for carrying out the authorised project

- 5.58 This relates to the temporary occupation of the land for the purpose of carrying out the project. Most of the land would not be required on completion of the temporary works but some land would be required. If the applicant requires permanent rights over that land before the end of the period when it is required to vacate the land, then it must take steps to permanently acquire the land by serving notice of entry under section 11 of the 1965 Act or making a declaration under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 in order to lawfully remain in possession.

Schedule G – Modification of compensation and compulsory purchase enactments for the creation of new rights

- 5.59 The purpose of Schedule G of the DCO is to ensure that where a person is affected by the creation of a new right or the imposition of a restrictive covenant, compensation would be payable.

Alternatives to compulsory acquisition

- 5.60 The applicant submits that the land scheduled in the Book of Reference is necessary and appropriate and there are no other suitable alternatives. The Statement of Reasons, section 7, [APP-030] explains that, in each case, the applicant has chosen to secure land or rights in a way that minimises disruption to relevant owners. The selection of the landfall, onshore cable

corridor and convertor station is set out in detail in the ES, Volume 1, Chapter 3 – *"Site Selection and Consideration of Alternatives"* [APP-053]. The applicant's response to the Panel's questions (12.7-12.24) on this topic is set out in Written Response I (REP-142). The Great and Little Bealings Alternative Routeing Report May 2013 (Appendix 2II) is appended to that response [REP-198].

- 5.61 In the light of the DCLG *"Guidance related to procedures for compulsory acquisition"* September 2003 (CA Guidance), the Panel's question 12.1 [PD-004] sought assurances regarding the exploration of reasonable alternatives. The applicant's Written Response I [REP-142] outlines both pre-application modifications to the route that were made to minimise land use impacts and a number of specific routeing modifications that were made for the same reason. The latter changes followed more detailed routeing work and were made in response to post-application comments. The applicant's response to the Panel's question 12.6 explains the reasons for the selection of the route between the Bealings [REP-142]. The final route for the cable corridor has been agreed with a number of consultees, including the relevant LAs [REP-240 SoCG 3A].
- 5.62 The applicant's response to the Panel's questions 12.21 and 12.22 [REP-142] indicates that it has reviewed the proposed order limits at the convertor station site and an area to the north (plots 451-452 & 454-456). This was proposed to accommodate landscaping works that would have mitigated the impact of future projects rather than East Anglia One alone. It has been removed from the DCO limits and the Book of Reference has correspondingly been revised. The need for the remainder of the land at the convertor station site is also explained in the response to question 12.21.
- 5.63 The applicant has sought a negotiated solution to each of the identified required interests. Negotiations have been entered into with all landowners to seek to avoid the need to compulsorily acquire the relevant interests. Those negotiations have been successfully concluded, and agreement has been reached with all landowners including statutory undertakers. The outstanding representation of the occupier (as opposed to landowner), Mr Mayhew, has also now been withdrawn [REP-298]. The applicant has therefore achieved a negotiated solution to acquire each of the interests in the CA Land.

Availability and adequacy of funds for compensation

- 5.64 The availability of funds for compensation is considered in section 7 of the Statement of Reasons [APP-030], in the response to questions 12.31-12.41 of Deadline I, and the Funding Agreement dated 25 June 2013 [APP-239, REP-142, APP-203]. Details of the proposed funding for the implementation of the project and the acquisition of land are set out in the Funding Statement [APP-031].

- 5.65 The shareholders of EAOWL are Vattenfall and SPR. The latter company is a subsidiary of Scottish Power Renewable Energy Limited which, itself, is a subsidiary of Scottish Power UK plc. SPR is ultimately part of Iberdrola, the world's largest wind energy developer. Vattenfall's ultimate holding company is Vattenfall AB which is a state-owned Swedish energy utility company.
- 5.66 The Funding Statement appends the published accounts for both Vattenfall and Scottish Power UK plc for the year 2010-2011 [APP-031]. It concludes that the applicant has the ability to procure the financial resources necessary to fund the works to be authorised by the DCO, subject to final Board authority. These funds would meet the capital expenditure for the project; the cost of acquiring the CA Land and the cost of compensation otherwise payable in connection with the exercise of CA powers in the DCO. The applicant contends that the Secretary of State can be satisfied that funding is likely to be available to meet both land acquisition costs and any claims for compensation by landowners and also that the project is soundly backed and there is no reason to believe that, if the DCO is made, the project would not proceed.
- 5.67 The applicant, Vattenfall and Scottish Power UK plc have entered into the agreement attached to the Funding Statement [APP-203]. In clause 4 of the Funding Agreement, the parent companies undertake to make payments of agreed, or awarded, compensation direct to the relevant claimant, if the applicant has not done so. The Funding Agreement would ensure that sufficient funding for payment of compensation would be available, if the compulsory acquisition powers sought in the DCO were granted.
- 5.68 The applicant has responded to the Panel's questions relating to the Funding Agreement including the clauses which enable assignment, or novation, of the deed [REP-142]. Following the CAH, Scottish Power UK plc and Vattenfall have completed a Deed of Variation [REP-340] to the Funding Agreement which has the effect of inserting a requirement for a covenant strength test to be satisfied prior to an assignment, or novation, of its respective obligations to any third party including a group company.
- 5.69 An estimate of the funding required to acquire the rights sought for the project through compulsory means was undertaken by the Valuation Office prior to the submission of the application. The £7.5 million compensation secured by the Funding Agreement relates to the estimated costs of compulsory acquisition for the East Anglia One project including the provision of the ducts for East Anglia Three and East Anglia Four. The £7.5 million figure is conservative due to the assumptions used (see response to question 12.31 of Deadline I [REP-142]). In addition, given that agreement has now been reached with all known landowners and claimants, the whole compensation provision of £7.5 million under the Funding Agreement is available for unknown items of claim.

- 5.70 The financial status of the companies involved and an explanation of the funding process is set out in the Written Response for Deadline III, Part 2 [REP-318]. The funding for the construction of the project is intended to be secured after certainty is obtained on the application for development consent. Following the grant of development consent, and a successful tender process for the major construction contracts, the companies would take the final investment decision (FID) on the project which would commit the necessary funding for it. Funding for the project could be provided using a number of different standard models, or using a combination of these models. The main models are providing funds from the capital reserves of the parent companies, from parent company finance, or directly from an external lender.
- 5.71 The applicant contends that both Scottish Power UK plc and Vattenfall are utility companies of sound financial standing. At the CAH, the Panel requested clarification of Vattenfall's financial status in the light of comments in its accounts for the year ending 31 December 2012. For the reasons provided at the CAH, as set out in the Written Summary of the Oral Case [REP-318], it is submitted that the numbers indicate that there is very little financial risk in Vattenfall.
- 5.72 The funding of the East Anglia Three and East Anglia Four schemes would happen in the same way as for this project. If the FID is positive, the projects would be funded in the same way as for East Anglia One.

Compelling case in the public interest (section 122(3))

- 5.73 The Statement of Reasons, section 7, sets out why the applicant considers that a compelling case in the public interest exists for the powers of compulsory acquisition sought. The project would contribute to the national demand for the generation of power using renewable energy in accordance with national policy. The compulsory acquisition powers sought are required to secure the lands and rights necessary to construct (and then operate East Anglia One) within a reasonable commercial timescale.
- 5.74 In selecting the route, the applicant has sought to minimise or avoid interaction with urban areas, residential property, non-agricultural businesses and other infrastructure. The majority of the land subject to compulsory acquisition powers is agricultural land which, in the long term, is relatively insensitive to the onshore infrastructure works proposed. As the cables and ducts are to be installed underground, the land could be returned to its original purpose post construction. Depending on the date of entry, some areas might lose one harvest and others might lose two harvests where timing overlaps harvests and the window for autumn cultivation is missed [REP-318].

- 5.75 The applicant submits that the project would be in accordance with national policy as set out in NPS EN-1, NPS EN-3 and NPS EN-5. It would meet a pressing national need for electricity generating capacity and would be entirely necessary and proportionate to the extent that interference with private rights would be required. The high degree of the importance of the project, strongly outweighs the importance of the use of the land proposed to be subject to compulsory acquisition powers.

The Human Rights Act 1998

- 5.76 The European Convention on Human Rights, Articles 6 and 8 and Article 1 of the First Protocol.
- 5.77 The applicant's case is set out in section 9 of the Statement of Reasons [APP-239] and in response to the Panel's question 12.25 Written Response I [REP-142]. The Board Report provided at Deadline III, Appendix 9, sets out the relevant parts of the Human Rights Act and the Articles of the European Convention on Human Rights (ECHR) that are engaged [REP-285].
- 5.78 As the onshore infrastructure avoids residential housing, Article 8 of the ECHR would only be engaged to the extent that gardens, or access to them, are to be acquired. Every effort has been made to route the cable to avoid residential property and where residential property would be affected, for example, at the Bealings, bespoke engineering solutions have been explored to minimise the interference.
- 5.79 Article 1 would be engaged in the acquisition of agricultural land and businesses. The majority of the route has been designed so that most of the works would take place beneath the ground (rather than using overhead pylons) and only the acquisition of rights is sought over the cable corridor route. The applicant submits that this is a proportionate response to the acquisition of land interests.
- 5.80 The justification for the imposition of permanent rights and restrictive covenants is explained in response to question 12.28 at Written Response I [REP-142]. The applicant contends that it is reasonable to seek such powers in the areas sought along the cable route to allow the installation, maintenance and removal of the ducts and cables and to secure the continued safe operation of the transmission of electricity and the safety of those persons with an interest in the land. For example, the erection of structures over the cables would be likely to provide further insulation to the cables which, in turn, would reduce their capacity.
- 5.81 It is appropriate to include a restriction on shrubs in the wording of the restrictive covenant to be imposed, as it is not possible to state and distinguish between all the various types of significant

vegetation which might interfere with the cables and could not be planted for that reason.

- 5.82 Since consultation has taken place in accordance with PA2008, and all those with scheduled interests were able to make representations to the Panel, the applicant contends that the requirements of Article 6 have been met. Given that payments would be made for the acquisition of any interest, Article 1 of the First Protocol would not be contravened. There would be no unlawful interference with any such rights and it would be proportionate to make the DCO, including the compulsory acquisition powers sought.

The degree of importance attributed to the existing uses of the land proposed to be acquired

- 5.83 In establishing the route of the cable corridor, the applicant has considered the uses of the land and sought to minimise the impact of the route on the land where possible. The majority of the land that would be subject to compulsory acquisition powers is agricultural land. As the cables and ducts would be installed underground, the land could be returned to its original purpose post-construction with any short term harvest loss being appropriately compensated. The design of the route avoids creating areas of farmland which would be too small to be effectively farmed.
- 5.84 The route selection seeks to minimise interaction with urban areas, residential properties, sensitive areas and other infrastructure. Where this is not possible specialist engineering measures would be used to minimise interference in these locations.

The weighing of any potential infringement of Convention rights against the potential public benefits if the Order is made

- 5.85 The position is set out in section 9 of the Statement of Reasons [APP-239] and in response to the Panel's question 12.25 at Written Response I [REP-142].
- 5.86 The DCO has the potential to infringe the human rights of persons who hold interests in the CA Land. Such infringement can be authorised by law if there is made out a compelling case in the public interest and the interference with those rights is proportionate. The test of proportionality is satisfied if the DCO strikes a fair balance between the public benefit sought and the interference with the rights in question.
- 5.87 The applicant has weighed the potential infringement of rights safeguarded by the ECHR in consequence of the inclusion of compulsory powers within the DCO with the potential public benefits if the Order is made. The applicant submits that there

would be significant public benefit if the DCO is made and this would outweigh the effects upon persons who own property rights and land within the CA Land. Those affected by compulsory acquisition could claim compensation in accordance with the Statutory Compensation Code.

- 5.88 The condition of there being a compelling case in the public interest in section 122(3) of PA2008 mirrors the requirements of the Human Rights Act. In both cases it is necessary to demonstrate that the interference is for a legitimate purpose, necessary and proportionate. The applicant contends that, if the tests in the CA Guidance are met, the requirements of the Human Rights Act would also be satisfied.

Special considerations affecting the Order Land

Crown Land

- 5.89 The letter from the Crown Estate Commissioners dated 7 October 2013 [REP-297] confirms that, in accordance with s.135(2) of the Act, they are satisfied with the wording of the draft DCO. In particular, Article 38 - Crown Rights contained wording which was protective to the interests of Crown authorities affected by the proposals in the draft DCO and was in a form specified by the Commissioners. In relation to any compulsory acquisition rights sought in respect of Crown Land falling within s135(1) of PA2008, the Commissioners consent to the inclusion of such rights in the draft DCO. This is conditional upon Article 38 (and any other provision of the draft DCO which is subject to section 135(1) or 135(2) of PA2008) remaining materially as stated in the draft DCO at that time. This has now been carried forward as Article 37 of the recommended Order.
- 5.90 The applicant has had discussions with the Department for Environment, Food and Rural Affairs (DEFRA). They do not, in fact, have the interests listed in the Book of Reference. In respect of plot 353, the reference to DEFRA was made in error and this interest has now been removed from the revised Book of Reference provided at Deadline III, Appendix 13 [APP-235]. The applicant's letter dated 23 October 2013 [APP-242] explains that it has undertaken further discussions with various Government Departments to confirm responsibility for an interest in plot 394. It has been confirmed that there is no longer any interest in this plot that is held by any Government Department. Since plot 394 is not Crown Land, no consent is required in relation to it and a revised Part II of the Book of Reference reflecting the removal of this interest has been submitted [APP-232].
- 5.91 The letter from the Highways Agency dated 15 October 2013, on behalf of the Secretary of State for Transport and the Highways Agency [REP-292], notes that Article 38 entitled "*Crown rights*" in the draft DCO dated 6 September 2013 contains wording which is

protective to the interests of Crown authorities affected by the proposals in the draft DCO. They confirm, in accordance with section 135 of PA2008, that they consent to the inclusion of Article 38 in the draft DCO (now Article 37 of the recommended Order).

Statutory undertakers' land

- 5.92 The applicant's letter dated 28 November 2013 [S127-01] confirms that, in each case, it has been possible to reach agreement with the relevant statutory undertaker. This has avoided the need for s127 applications to be pursued. Details of these agreements are set out below.

Network Rail

- 5.93 The applicant has reached agreement with Network Rail, as evidenced by the agreed statement provided at Deadline II, Appendix 10.1 [REP-284]. The recommended Order, Part 3 of Schedule L, includes protective provisions for the benefit of Network Rail.
- 5.94 By letter dated 29 August 2013, Network Rail formally withdrew its representations [S127-03]. The applicant's letter dated 5 September 2013 confirmed the withdrawal of the application to the Secretary of State under s127 of PA2008 [S127-02].

National Grid

- 5.95 An Agreed Statement with National Grid is provided at Appendix 10.1 of the Deadline III response [REP-284]. National Grid has subsequently confirmed that agreement has been reached with the applicant to secure the protection of their interests, including the protective provisions which are set out in the recommended Order. The National Grid objection to the Order has been withdrawn [S127-04]. The recommended Order, Part 5 of Schedule L, includes protective provisions for the benefit of National Grid.

Anglian Water

- 5.96 Anglian Water has confirmed that, in the event that the compulsory purchase powers sought are granted, protective provisions have been agreed with the applicant to deal with such powers and there is no need for any s127 application to be made [S127-05]. The recommended Order, Part 1 of Schedule L, includes protective provisions for the benefit of such undertakers.

The objections received to the compulsory acquisition proposals

- 5.97 A number of objections to the compulsory acquisition proposals have been received from affected persons: Andrew Bond on behalf of a list of landowners, Hayden Foster on behalf of a list of landowners, the Crown Estate, Anglian Water Services Ltd;

Andrew Reed, SITA UK Ltd, Sterling Suffolk Ltd, Stephen Wright, Winckworth Sherwood LLP on behalf of Network Rail, Richard Eaton on behalf of various landowners, Henry Birch on behalf of a list of landowners, National Grid, and Chris Leney on behalf of Richard Mayhew [REP-058, REP-060, REP-013, REP-042, REP-044, REP-046, REP-062 to REP-067, REP-048, REP-047, REP-092, REP-173 & REP-095].

- 5.98 At the CAH, the Panel was advised by the applicant that Mr Bond had written to confirm, that following detailed negotiations, agreement had been reached between the applicant and his clients. The letter from Mr Bond dated 7 October 2013 confirms the withdrawal of the representations made by himself and Mr Foster on behalf of various landowners [APP-243].
- 5.99 At the CAH, the applicant confirmed that with the exception of the two outstanding statutory undertakers, Anglian Water and National Grid, all of the representations made by landowners to the project had been withdrawn [S127-04, S127-05 & S127-06]. The outstanding representation of the occupier (as opposed to landowner), Mr Mayhew, had also been withdrawn. A withdrawal of representation letter was submitted on behalf of Mr Mayhew to Deadline III [REP-298].
- 5.100 The applicant's letter dated 28 November 2013 confirms that agreement has been reached with Network Rail, National Grid and Anglian Water [S127-00]. This has avoided the need for s.127 certificate applications. Further details of particular objections and how they have been resolved are set out below.

Messrs Woolf

- 5.101 Foot Anstey made representations on behalf of Messrs Woolf, the freehold owners of plots 455 and 456 in the original Book of Reference. Their letter dated 26 July 2013 explains that they had been advised by the applicant that it no longer proposed to acquire their clients' land and were in the process of removing their clients' interests from its application documents [REP-182]. Both the Book of Reference and the Land Plans have been updated to reflect this position [APP-231 & APP-226].

SITA UK Ltd, Sterling Suffolk Ltd and Stephen Wright

- 5.102 The representation from Sterling Suffolk Limited explains that they are in the course of developing a £30 million glasshouse facility for tomato production on a national scale. They sought to agree with the applicant a satisfactory cable route through the fields where the intended greenhouse project is proposed to be located [REP-065]. The need to accommodate the greenhouses is also the basis for the objections from SITA UK Ltd (SITA) and the landowner Stephen Wright [REP-046 & REP-048].

5.103 At the Written Response Deadline I, a Statement of Common Ground (SCG) between the applicant and SITA was provided (Appendix 3B) [REP-239]. The SCG sought to ensure that the developments promoted by SITA and the applicant could both be accommodated within the land required. It confirms that the location of the cable route, and the location of the SITA greenhouses, as identified on the relevant drawings³⁴ are acceptable to both parties.

The Crown Estate

5.104 The Crown Estate Commissioners consent to the inclusion of any rights of compulsory purchase sought by the applicant in relation to interests in Crown land falling within s.135(1) of PA2008. This is set out in their letter dated 7 October 2013 [REP-297]. The approvals provided in the letter are conditional upon Article 38 (and any other provision of the draft DCO which is subject to s135(1) or 135(2) of PA2008) remaining materially as stated in the draft DCO at that time. This position is reflected in the recommended Order, save that the relevant article is now Article 37.

Network Rail

5.105 Network Rail has completed an agreement with the applicant to enable it to formally withdraw its representations. This is confirmed by Network Rail's letter dated 29 August 2013 [S127-03] and the applicant's letter dated 5 September 2013 [S127-06]. The application to the Secretary of State under section 127 of PA2008 has been withdrawn.

National Grid

5.106 National Grid has reached agreement with the applicant to secure the protection of their interests including agreed protective provisions to be included within the DCO. The National Grid representation to the DCO dated 30 July 2013 objecting to the acquisition of its land and the overriding/extinguishment of its easement rights in relation to existing equipment has been formally withdrawn. This is confirmed by letter dated 30 October 2013 [S127-04].

Anglian Water

5.107 The initial representation made by Anglian Water Services Ltd dated 25 February [REP-042] explained that it had numerous waste water and potable waste pipelines of varying widths and depths which would cross the development at various points. These pipelines provide potable water and sewerage to the surrounding area in accordance with its statutory function and

³⁴ Drawings EAOL/SSL-20130410-01 and/or EAOL/SSL-20130410-02 (Work Number 36)

obligation. Although there was no objection, in principle, to the project, it sought protective provisions within the DCO for the protection of these assets. A relevant representation expanding upon its case in this respect, and identified the existing assets affected, was subsequently submitted on 29 July 2013 [REP-137]. At the same time, a response to First Written Questions was also provided [REP-184]. As set out in the "*Drainage and Water Supply*" section of Chapter 4 of this Report, it also expressed concerns in relation to Article 13 "*Discharge of Water*" of the draft DCO. By letter dated 13 November 2013 [S127-05], Anglian Water maintained its written representation in relation to the draft DCO. However, it confirmed that its initial objection was no longer being pursued in respect of that part of its representation which related to the inclusion of compulsory purchase powers in the DCO. In relation to the assets identified in its relevant representation, the protective provisions had been agreed with the applicant and that negated the need for any s127 application.

The Panel's Conclusions

- 5.108 The Panel's approach, to the question whether and, if so, what compulsory acquisition powers it should recommend to the Secretary of State to grant, has been to seek to apply the relevant sections of PA2008, notably s122 and s123, the CA Guidance, and the Human Rights Act 1998; and, in the light of the representations received and the evidence submitted, to consider whether a compelling case has been made in the public interest, balancing the public interest against private loss.
- 5.109 The Panel understands, however, that the draft DCO deals with both the development itself and compulsory acquisition powers. The case for compulsory acquisition powers cannot properly be considered unless and until the Panel has formed a view on the case for the development overall, and the consideration of the compulsory acquisition issues must be consistent with that view.
- 5.110 The Panel has shown in the Conclusion to the preceding section that it has reached the view that development consent should be granted. The question, therefore, that the Panel addresses here is the extent to which, in the light of the factors set out above, the case is made for compulsory acquisition powers necessary to enable the development to proceed.

Associated development and the additional land required to accommodate the East Anglia Three and Four duct corridor

- 5.111 S122(2) of PA2008 sets out three conditions that must be satisfied if the Secretary of State is to grant a DCO including compulsory acquisition powers. The CA Guidance, at paragraph 7, explains that, in the light of s122, applicants must be prepared to justify their proposals for the compulsory acquisition of any land to the satisfaction of the Secretary of State.

- 5.112 S115 of PA2008 provides that, in addition to the development for which development consent is required under Part 3 of PA2008 Act (the principal development), consent may also be granted for associated development. PA2008, in effect, defines associated development as (inter alia) development which is associated with the principal development.
- 5.113 At the CAH, the Panel explored further whether the ducts for East Anglia Three and Four were capable of being "*associated development*" in the light of the revised AD Guidance. That guidance sets out relevant matters to be considered in deciding whether it is appropriate for infrastructure to be regarded as associated development.
- 5.114 As set out in Chapter 4, of this Report, the Panel concurs with the applicant's approach that the ducts for East Anglia Three and Four constitute associated development in relation to this project. In reaching that conclusion, the Panel has had regard to the relevant matters set out in paragraph 5(iv) of the AD Guidance and the key relationship between the laying of the ducts for East Anglia Three and Four and the East Anglia One project. We recognise that the inclusion of the ducts as associated development for the project would assist in addressing its cumulative impacts. The simultaneous installation of all cables and ducts (except in specified circumstances) would be secured by Requirement 29 of the recommended Order.
- 5.115 At the CAH, the applicant clarified that, in seeking compulsory acquisition powers for the East Anglia Three and Four ducting, it placed primary reliance on s122(2)(a) of PA2008 on the basis that the ducts form part of the development comprised in the DCO for which development consent is sought under Part 3 of PA2008. Alternatively, the applicant submitted that s122(2)(b) would be applicable on the grounds that the land would be required to facilitate the development.
- 5.116 Since the ducts for East Anglia Three and Four are appropriately included as associated development in the recommended Order and thereby comprise development for which development consent is sought, the land required for that development can, in principle, be compulsorily acquired pursuant to s122(2)(a) of PA2008.
- 5.117 Consideration will be given later in this chapter as to whether all of the land in respect of which compulsory powers are sought is, in fact, required for the development. In addition, consideration will be given to the inclusion of the ducting for East Anglia Three and Four in our assessment of the balance between public interest and private loss, Human Rights and the resource implications of the scheme.

Alternatives

- 5.118 The CA Guidance (paragraph 8) advises that the applicant should be able to demonstrate to the satisfaction of the Secretary of State that all reasonable alternatives to compulsory acquisition (including modifications to the scheme) have been explored.
- 5.119 The Panel has considered this in terms of the selection of the site, the scale of the development proposed, the specific characteristics of the development and the proposed acquisition of each parcel of land.
- 5.120 The applicant has made both pre-application and post-application modifications to the route with a view to minimising land use impacts. The principles of the routeing work and the final route have been agreed with a number of consultees, including the relevant LAs [REP-240].
- 5.121 The applicant has entered into negotiations with all known landowners to seek to avoid the need to compulsorily acquire the relevant interests. At the time of the CAH, with the exception of two statutory undertakers, National Grid and Anglian Water, all of the representations made by landowners had been withdrawn. The negotiations with those statutory undertakers have also now resulted in agreement. In addition, the occupier, Mr Mayhew, has withdrawn his representation relating to his interest in land at Bullen Farm³⁵[REP-298]. The applicant has therefore sought a negotiated solution to acquire all known interests in the CA Land. As indicated above, compulsory acquisition powers are nonetheless sought for the reasons identified in the Statement of Reasons [APP-239].

The site selected

- 5.122 A description of the cable route is set out in section 7 of the Statement of Reasons. The ES³⁶ [APP-53] sets out the alternative cable routes, landfall and substation locations considered by the applicant in response to pre-application consultation. It provides details of the site selection process for both the offshore and onshore cable route.
- 5.123 Key constraints were ecological, nature conservation designations, landscape and cultural heritage designations, the presence of infrastructure, land use and land allocated for other development.
- 5.124 The ES explains the reasons for identifying Bawdsey as the preferred landfall location and the key reasons for the selection of the "*Preferred Onshore Cable Corridor*". Other key routeing decisions included straightening out a right angle bend between

³⁵ Plots 434-446

³⁶ ES Chapter 3 (Site selection and Consideration of Alternatives)

the villages of Tuddenham St Martin and Westerfield and avoiding Seckford Hall golf course and landfill.

- 5.125 At the pre-application stage, re-routing options were explored and discussed in relation to the route between the Bealings (Written Response I Appendix 2II – Great and Little Bealings Alternative Routing Report May 2012) [REP-198]. This study concluded that no alternative route was appropriate and the final proposed route was agreed with MSDC (Written Response I Appendix 3A) [REP-240].
- 5.126 Following Phase 2 consultation, more specific micro-siting of particular areas of the onshore cable route was undertaken and details of these are set out in the ES.
- 5.127 For the convertor station location, the ES identified three potential brownfield sites on the outskirts of Ipswich within the search area of 5km. These were all rejected as being unsuitable. The criteria used for assessing the convertor station site and the reasons for preferring the chosen site are set out in the ES and in the applicant's response to the Panel's question 12.15 [REP-142].

The scale of the proposed development

- 5.128 The Panel questioned (12.21) the extent of the land required for the onshore convertor station and associated landscaping [PD-004]. The applicant reviewed the proposed order limits at the convertor station site and removed an area to the north (plots 451-452 and 454-456) which was proposed to accommodate landscaping works that mitigated the impact of future projects rather than East Anglia One alone. The area for those landscaping works would form part of the subsequent applications for East Anglia Three and Four, as would the convertor stations [REP-142].
- 5.129 At the CAH, the applicant was requested to explain further the particular changes which had been made to the onshore cable route and the reason for the changes in the location of the proposed convertor station site. Specific changes to reduce the land to be acquired have been made in respect of the SITA site, the landfall, the Playford CCS site and the convertor station. In most instances, the narrowing of the order limits reflects a greater understanding of the engineering, design and technical challenges faced.
- 5.130 The Panel asked a number of questions relating to the width of the cable corridor route. We have also had the benefit of the ISH agenda item on "*Onshore Construction and Onshore Noise and Vibration*" when details of the onshore construction process were provided.
- 5.131 For the cable route, the 75m width LLAU incorporates a working width of 55m required to allow cables to be installed using open-cut techniques and be carefully micro-sited within the limits of

deviation to minimise their environmental impact. Where there is a need for horizontal directional drilling (HDD) a wider working width has been identified to allow for the greater cable separations required when the cables are placed at greater depths.

- 5.132 The applicant has explained to the Panel's satisfaction the various calculations and assumptions that led it to the conclusion that all the temporary and permanent works could be accommodated within a working width of 55m, except where special circumstances applied.
- 5.133 For East Anglia One only, the anticipated permanent easement could potentially have been reduced to 23.5m. However, the greater width between the ducts for East Anglia Three and East Anglia Four reflects the fact that the carrying of the cables through ducts would affect the operating temperature of the cables so that greater separation would be required.
- 5.134 The applicant has also confirmed in its Written Response for Deadline III [REP-318] that it does not require a right to retain permanent structures at the area of the landfall and would therefore amend this right in Schedule F of the draft DCO for plots 2-7 of the Book of Reference. This change is now reflected in the recommended Order.
- 5.135 The approach taken in the recommended Order would allow a maximum envelope within which works could be constructed for the project sufficient for unforeseen obstacles to be overcome during construction. Following construction, any additional areas of land that are not required on a permanent basis and which are only required for construction would be reinstated and returned to their previous owners and uses.
- 5.136 The temporary works would be limited by requirement 10(6) of the recommended Order which sets out the working width of the onshore cable corridor. The permanent rights to be acquired would not be wider than this corridor. The actual width necessary for the cables and ducts cannot be specified at this stage as flexibility is required to allow micro-siting within the corridor. For the applicant to acquire a larger area than would be required for the cables would be of no benefit to it and additional compensation would be payable to affected persons.
- 5.137 In the circumstances, the Panel does not consider that there is a need for further restraint within the recommended Order to ensure that the land to be acquired for the cable corridor would be no more than is reasonably necessary for the purposes of the development.
- 5.138 The Panel concludes that the applicant has explored all reasonable alternatives to compulsory acquisition, including modifications

which have taken place during the course of the examination, and there are no alternatives which ought to be preferred.

The public benefits

- 5.139 The need for new nationally significant energy infrastructure projects is recognised by NPSs EN-1, EN-3 and EN-5.
- 5.140 NPS EN-1 explains that electricity meets a significant proportion of our overall energy needs and our reliance on it is likely to increase. It states that the UK needs all the types of energy infrastructure covered by it in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. It advises that all applications for such development should be assessed on the basis that there is a need for those types of infrastructure. It sets out, in section 3.3, the key reasons why the Government believes that there is an urgent need for new electricity NSIPs.
- 5.141 The National Planning Policy Framework acknowledges the pre-eminence of NPSs in policy terms when considering NSIPs. It is clear from the relevant NPSs that there is a national need for electricity generating capacity of the type that is the subject of the application. There is a need in the public interest to protect the cables/ducts, once installed, and to ensure that the supply of electricity is not impeded. That represents a significant public benefit to be weighed in the balance.

The private loss

- 5.142 In the light of the CA Guidance, paragraph 13, the Panel questioned (12.29) what assessment had been made of the effect upon affected persons and their private loss that would result from the exercise of compulsory powers [PD-004].
- 5.143 The Panel recognises that the onshore element of the project has been designed so that the majority of works would take place beneath the ground. The cable/duct route selected seeks to minimise or avoid interaction with urban areas, residential property, non-agricultural businesses and other infrastructure. The extent of any private loss has therefore been mitigated both through the selection of the route and the undergrounding of the cables/ducts along it. The majority of the plots would be agricultural land which, in the long-term, would be relatively insensitive to the proposed onshore infrastructure works. The undergrounding of the cables and ducts would enable the land to be returned to its original agricultural purpose post-construction. The acquisition of the freehold of plots is limited to the site of the proposed convertor station. These factors must inherently reduce the extent of the private loss experienced by those affected by compulsory acquisition.

Adequacy of funding – the resource implications of the proposed scheme

- 5.144 The CA Guidance, paragraph 9, advises that the applicant should be able to demonstrate that there is a reasonable prospect of the requisite funds for acquisition becoming available. Otherwise, it will be difficult to show conclusively that the compulsory acquisition of land complies with s.122.
- 5.145 The CA Guidance, paragraph 17, explains that the funding statement that accompanies an application should provide as much information as possible about the resource implications of both acquiring the land and implementing the project for which the land is required. Paragraph 18, also requires applicants to be able to demonstrate that adequate funding is likely to be available to enable the compulsory acquisition within the statutory period following the order being made, and that the resource implications of a possible acquisition resulting from a blight notice have been taken into account.

The funding required

- 5.146 In accordance with the CA Guidance, the application was accompanied by a Funding Statement explaining how it would be funded [APP-031].
- 5.147 In response to the Panel's questions, the applicant has subsequently explained in greater detail how the resource implications of the project have been assessed [REP-142]. All costs were taken into account including compensation for disturbance during construction and legal/professional fees. The proposed cap on liability of £7.5 million set out in the Funding Agreement was derived from the valuation carried out by an independent local District Valuer (Written Response I) [REP-142].
- 5.148 That figure was based on the estimated costs of compulsory acquisition for the East Anglia One project including the ducts for East Anglia Three and Four (Written Response I) [REP-142]. Since agreement has been reached with all known claimants, the whole compensation provision of £7.5 million under the Funding Agreement would be available for unknown items of claim.
- 5.149 The Panel finds the manner in which the applicant has assessed the funding required for compulsory acquisition to be entirely satisfactory. Indeed, we consider the proposed cap on liability to be a conservative figure, particularly in the light of the agreements already reached with potential claimants.

The source of the funding

- 5.150 The applicant is a subsidiary of EAOWL which is a company formed by Vattenfall and SPR. The latter company is a subsidiary of a subsidiary of Scottish Power UK plc which is part of Iberdrola. The ultimate holding company of Vattenfall is Vattenfall AB which is a state-owned Swedish energy utility company [REP-142].
- 5.151 The Funding Statement appended the accounts for Vattenfall 2010-11 and for Scottish Power UK plc 2010-11 [APP-031]. The accounts for both parent companies for year ended 31 December 2012 have also been provided [REP-193 & REP-194]. The liabilities revealed by those accounts are more than adequately covered by the current assets.
- 5.152 At the CAH, the applicant provided further information relating to the funding of the project and the East Anglia Three and Four schemes. The applicant intends to secure funding for construction of the project once a Final Investment Decision (FID) has been made. That decision would not be reached until after development consent has been secured. A number of different standard models, or a combination of the same, could be used to provide the funding for the project. The applicant has explained the type of funding models that are likely to be used. The funding of East Anglia Three and East Anglia Four would be organised in the same way as for East Anglia One.
- 5.153 Based on the information provided by the applicant, the Panel has no reason to doubt that the relevant companies are of sound financial standing and that the figures revealed by their accounts indicate that they are of low financial risk. Whilst the precise details of the way in which the implementation of the project would be resourced have not yet been finalised, the course of action outlined by the applicant to achieve that aim does not give rise to any cause for concern or reason to doubt that the project would, in fact, be capable of being developed if granted consent.

Securing the funding

- 5.154 The completed Funding Agreement [APP-203] requires the parent companies to each pay 50% of the agreed, or assessed, amount of legitimately claimed compensation to the relevant third party on behalf of the applicant. The extent of the liability would be £7.5 million in total.
- 5.155 The Panel asked a number of detailed questions relating to the Funding Agreement [see ExA questions 12.34 – 12.37 in PD-004]. In particular, we queried clause 6.2.2(a), (b) and (c) which makes provision for the assignment, or novation, of the deed in certain circumstances.
- 5.156 The applicant confirmed that there was no restriction in the Funding Agreement to prevent the transfer by the parent

companies of their responsibilities to a shell company. In practice, the need for the parent companies to maintain their reputations to be able to secure compulsory acquisition powers on future projects meant that there would be only minimal risk of this taking place (Written Response I, 12.35) [REP-142].

- 5.157 At the CAH, the Panel questioned whether it would be satisfactory to rely on the stated desire of the parent companies to maintain their reputations in that way. The applicant's response was that, if the reputations of the companies were harmed, it would not just be embarrassment that they would suffer - it would go right to the heart of their operations in obtaining compulsory acquisition powers to deliver future wind farms. Notwithstanding that stance, a Deed of Variation has subsequently been completed [REP-340]. The effect of this is to insert a requirement for a covenant strength test to be satisfied prior to an assignment, or novation, of the respective obligations of the companies to any third party including a group company [REP-142].
- 5.158 We are satisfied that the Funding Agreement together with the subsequent Deed of Variation provide an adequate means of securing the funding for all the compulsory acquisition compensation costs of the project.
- 5.159 The Panel concludes that there is a reasonable prospect of the requisite funds for acquisition becoming available within the statutory period following the Order being made. The financial resource necessary to accommodate possible acquisition resulting from a blight notice has also been satisfactorily secured. The Funding Statement and other documentation support the existence of a compelling case for the grant of compulsory acquisition powers.

Human Rights Act³⁷ 1998 considerations

- 5.160 In assessing whether there is a compelling case in the public interest for the land to be acquired compulsorily, it is necessary to consider the interference with human rights which would occur if compulsory acquisition powers were granted.
- 5.161 The European Convention on Human Rights was incorporated into domestic law by the Human Rights Act 1998. The Statement of Reasons identifies as being relevant:
- 5.162 Article 1 of the First Protocol (the peaceful enjoyment of possessions and not to be deprived of possessions except in the public interest and subject to the conditions provided for by law and by the principles of international law)

³⁷ <http://www.legislation.gov.uk/ukpga/1998/42/contents>

- 5.163 Article 6 (fair and public hearing within a reasonable time by an independent and impartial tribunal).
- 5.164 Article 8 (right to respect for private and family life, home and correspondence).
- 5.165 At the CAH, the Panel raised with the applicant the extent to which those rights would be engaged by the compulsory acquisition powers sought. Since the onshore cable corridor and convertor station site avoid housing, Article 8 would only be engaged to the extent that gardens or access to them were to be acquired. Article 1 would be engaged in the acquisition of agricultural land and businesses.
- 5.166 In assessing whether the interference with the rights of individuals would be for a legitimate purpose, the Panel has attributed substantial weight to the need described in NPS EN-1 for renewable energy and how the project would assist in meeting this need.
- 5.167 The plot by plot analysis sets out the purpose for which each plot would be used as part of the project [APP-240]. All of the land, including the land to provide the ducting for the East Anglia Three and Four schemes, has been incorporated within the recommended Order for a legitimate purpose. The provision of the project and its operation thereafter represents a legitimate wider public interest to be balanced against the degree of interference with the individual's human rights.
- 5.168 The Panel questioned the degree of importance that could be attributed to the existing uses of the land proposed to be acquired (12.27) [PD-004]. The plot by plot analysis identifies the existing land use of each plot included in the CA Land. The importance of the land use was taken into account at the time of designing the route of the project and the ES made an assessment of alternatives [APP-053].
- 5.169 Freehold interests are sought for the site of the convertor station. The acquisition of lesser interests would clearly not be appropriate for that purpose. For the cable corridor, the cables/ducts would be underground with only temporary possession and/or a mixture of permanent rights and restrictive covenants being sought rather than freehold interests. In most instances, the land would be returned to its original purpose and use following the construction of the project.
- 5.170 The restrictive covenants have been drafted in a way that provides appropriate protection for the project with the minimum necessary interference with the owners of the CA Land. They avoid the need for outright acquisition whilst safeguarding the supply of electricity through the cable route. This represents a proportionate approach.

- 5.171 It is clear that the applicant has endeavoured to minimise the impact that compulsory acquisition would have on those individuals who would be affected by the scheme. In addition, compensation would be payable to be assessed on an individual basis.
- 5.172 We have considered the individual rights interfered with and are satisfied that, in relation to Article 1 of the First Protocol and Article 8, the proposed interference with those rights would be for legitimate purposes that would justify such interference in the public interest. The extent of that interference would be proportionate. In reaching this conclusion, we have had regard to the compensation to which those individuals would be entitled.
- 5.173 In relation to Article 6, the applicant has consulted the persons set out in the categories contained in s44 of the PA2008 which include owners of the CA Land and those who might be able to make claims either under s.10 of the Compulsory Purchase Act 1965 or Part 1 of the Land Compensation Act 1973. All scheduled interests were able to make representations to the Panel. In the event that the order is made, persons aggrieved may also challenge the grant of development consent in the High Court, if they consider that the grounds for doing so are made out pursuant to s118 of PA2008. Furthermore, affected persons would have the right to apply to the Upper Tribunal if compensation were disputed. All affected persons had the opportunity to participate in the examination process and to attend the CAH. The Panel is satisfied that the requirements of Article 6 have been met.

SUMMARY OF CONCLUSIONS ON GRANTING COMPULSORY POWERS

Section 122(2) - The purpose for which compulsory acquisition is sought

- 5.174 This section of the Act sets out the purposes for which compulsory acquisition may be authorised. In the light of the CA Guidance, it is necessary to consider whether the applicant has justified its proposals for the compulsory acquisition of the land.
- 5.175 The Panel is satisfied that the legal interests in all the plots of land included in the revised Book of Reference and shown on the Land Plans (as amended) would be required for the development to which the development consent relates. Both the principal development and the associated development identified by the application would be needed for that purpose. The requirements of s122(2)(a) of PA2008 are therefore met.

Section 122(3) - Whether there is a compelling case in the public interest

5.176 The Panel concludes that:

- the development for which the land is sought would be in accordance with national policy as set out in the relevant NPSs and development consent should be granted;
- the NPSs identify a national need for electricity generating capacity of the type that is the subject of the application;
- the need to secure the land and rights required and to construct the development within a reasonable commercial timeframe, and (in relation to East Anglia One) to ensure that the supply of electricity is not thereafter impeded, represents a significant public benefit to weigh in the balance;
- the private loss to those affected has been mitigated through the selection of the application land; the undergrounding of the cables/ducts and the extent of the rights and interests proposed to be acquired;
- the applicant has explored all reasonable alternatives to the compulsory acquisition of the rights and interests sought. There are no alternatives which ought to be preferred;
- adequate and secure funding would be available to enable the compulsory acquisition within the statutory period following the Order being made;
- the resource implications of a possible acquisition resulting from a blight notice have been taken into account;
- the proposed interference with the human rights of individuals would be for legitimate purposes that would justify such interference in the public interest and to a proportionate extent.

5.177 Taking these various factors together, there is a compelling case in the public interest for the compulsory acquisition powers sought in respect of the CA Land shown on the Land Plans (as amended). The Panel therefore concludes that the proposal would comply with s122(3) of the PA2008.

Sections 120(5)(a) and 126 – the incorporation of other statutory powers

5.178 The recommended Order seeks in a number of instances to apply s120(5)(a) and apply, modify or exclude a statutory provision. Since the DCO is in the form of a statutory instrument, it would comply with s117(4). Furthermore, no provision would contravene

the provisions of s126 which relates to the modification or exclusion of a compensation provision.

Section 127 – statutory undertaker’s land

5.179 The applicant has confirmed that, in each case, it has been possible to reach agreement with the relevant statutory undertaker. Since their representations have been withdrawn, at least to the extent that they relate to this particular matter, there has been no need for s127 applications to be pursued and no certificate from the Secretary of State is required.

6 SUMMARY OF CONCLUSIONS AND RECOMMENDATION

SUMMARY OF CONCLUSIONS

- 6.1 In relation to the granting of development consent and as set out in the chapters above, the Panel concludes in summary:
- that on matters of Associated Development, as a matter of fact and degree, that the connection between the East Anglia One project and the laying of the ducts for East Anglia Three and Four is such that the latter can be appropriately regarded as development which is associated with the former;
 - that for the reasons set out, including what NE describes as the *"uncertainty surrounding the figures used in the various impact assessments"* [REP-325] the Panel finds that the proposal would not have an adverse impact on the kittiwake feature of the Flamborough Head and Bempton Cliffs Special Protection Area in-combination with previously consented wind farms, and those wind farm applications which are not yet determined, but which were submitted before the application for East Anglia One offshore windfarm;
 - that because data on projects beyond Tier 3 are very imprecise, (described by NE as the *"uncertainty surrounding the figures used in the various impact assessments"* [REP-325]), using the building block approach and using the 99% avoidance rate, the impact of the project in-combination, upon baseline mortality of gannet would be below the lower potential biological removal threshold and so an adverse impact upon integrity of the Flamborough Head and Bempton Cliffs Special Protection Area would be unlikely to occur;
 - that if the SSECC disagrees with the conclusions of the Panel regarding impact on European Sites he should consider the advice of NE that he should carry out, at strategic level, an *"an appropriate assessment taking into consideration all projects currently in the planning system"* in a manner the Panel is not empowered to carry out;
 - that, for the reasons given above and in the relevant chapters of this Report, there are no reasons to withhold the grant of consent on grounds of any impacts on European Sites or Species or on any other protected habitats or species;
 - the recommended Order including changes made by the Panel sufficiently mitigate the impacts on fish and fishing as required by relevant NPSs;

- that there are no reasons why consent should be withheld by the SSECC on the basis of the effects of the proposal on marine and coastal processes or on the Bawdsey Cliff Site of Special Scientific Interest;
- that the proposed "*Noise and Vibration Management Scheme*" in combination with the control over working hours to be secured through the requirements in the recommended Order would provide adequate safeguards for local residents as regards noise and vibration impacts during the construction phase;
- that, in the light of the mitigation measures proposed, the noise and vibration associated with the operation of the Construction Consolidation Sites and related Heavy Goods Vehicle movements along the Construction Access Routes would not be significant;
- that the revised Requirement 24 of the recommended Order would have the necessary degree of precision to satisfactorily control noise emanating from the onshore convertor station during the operational phase, and that in those circumstances, there would be no significant impact upon sensitive noise receptors;
- that there would be no significant noise or disturbance impacts on benthic and epibenthic species or fish resulting from the project and that there is no justifiable case for restricting the period or times during which offshore piling operations would take place;
- that condition 11(f) of the draft DMLs contained within the recommended Order would be sufficient to provide for marine mammal mitigation in relation to noise impacts and that it would be appropriate for the exact contents of the protocol to be based on current guidance nearer to the time of construction;
- that having regard to the ES assessment of the worst case scenario, the embedded mitigation proposed and the further details set out in the applicant's Written Response I [REP-142], Appendix 3L, the project would not result in any significant adverse impacts arising from EMFs, either onshore or offshore;
- that in the light of the measures set out in the Outline Code of Construction Practice (CoCP) and the requirements contained within the recommended Order, adequate safeguards would be provided in respect of health-related land contamination impacts;

- that appropriate measures would be secured through the CoCP so as to minimise the risks to the health and safety of all those offshore personnel engaged in the project and that there would be no significant risk to the health and safety of those persons or to others who might potentially be affected;
- that operational and navigational safety risks would be as low as reasonably practical;
- that the only harm to heritage assets would be less than substantial and justified for the reasons given in this Report;
- that residual landscape and visual impacts are outweighed by the national need for renewable energy infrastructure as set out in Part 3 of NPS EN-1 in view of the mitigation that would be delivered by the strengthened Onshore Converter Station Design Principles and by the s106 development consent obligation;
- that the impacts on highways and traffic would be sufficiently mitigated by the changes made by the applicant to the recommended Order;
- that the changes made by the applicant to the recommended Order would sufficiently mitigate the impacts on drainage and water supply as required by NPS EN-1, and
- that the changes made to the recommended Order by applicant, along with those made by the Panel, as set out in this Report, would sufficiently mitigate the impacts on socio-economic issues.

6.2 In relation to the application for compulsory acquisition powers within the recommended Order, the Panel in summary concludes:

- that the development for which the land is sought would be in accordance with national policy as set out in the relevant NPSs and development consent should be granted;
- that the NPSs identify a national need for electricity generating capacity of the type that is the subject of the application;
- that the need to secure the land and rights required and to construct the development within a reasonable commercial timeframe, and (in relation to East Anglia One) to ensure that the supply of electricity is not thereafter impeded, represents a significant public benefit to weigh in the balance;
- that the private loss to those affected has been mitigated though the selection of the application land, the

undergrounding of the cables/ducts and the extent of the rights and interests proposed to be acquired;

- that the applicant has explored all reasonable alternatives to the compulsory acquisition of the rights and interests sought;
- that there are no alternatives which ought to be preferred;
- that adequate and secure funding would be available to enable the compulsory acquisition within the statutory period following the Order being made;
- that the resource implications of a possible acquisition resulting from a blight notice have been taken into account, and
- that the proposed interference with the human rights of individuals would be for legitimate purposes that would justify such interference in the public interest and to a proportionate extent.

6.3 Taking these various factors together, there is a compelling case in the public interest for the compulsory acquisition powers sought in respect of the CA Land shown on the Land Plans (as amended). The Panel therefore concludes that the proposal would comply with s122(3) of PA2008.

6.4 In relation to s104 of PA2008, the Panel further concludes in summary:

- that making the recommended Order would be in accordance with National Policy Statements EN-1, EN-3 and EN-5 and would also be in accordance with the Marine Policy Statement, relevant emerging Marine Plans, the development plan and other relevant policy, all of which have been taken into account by the Panel in this Report;
- that making the recommended Order, with requirements in accordance with the Onshore Converter Station Design Principles and for a skills strategy and a traffic management plan, would fully take into account the Local Impact Report from Suffolk County Council, Suffolk Coastal District Council and Mid Suffolk District Council;
- that all potential transboundary impacts have been assessed, have been made known to the relevant EEA states and would be appropriately mitigated were the recommended Order to be made;
- that in making the recommended Order, the SSECC would be fulfilling his duties under the relevant EU Directives as transposed into UK law by regulation, as well as the

biodiversity duty under the NERC Act, subject to any necessary Habitat Regulation Assessment;

- that whilst the SSECC is the competent authority under the Habitat Regulations, the Panel finds that in its view the proposal would not adversely affect European Sites, species or habitats and the Panel has taken this finding into account in reaching its recommendation;
- that in regard to all other matters and representations received the Panel found no important and relevant matters that would individually or collectively lead to a different recommendation to that below;
- that making the recommended Order would not lead the United Kingdom to be in breach of any of its international obligations, nor lead the SSECC to be in breach of any duty imposed on him under any enactment, would not be unlawful by virtue of any enactment;
- that the adverse impact of the proposal would not outweigh its benefits, and
- that there is no condition prescribed for deciding the application other than in accordance with the relevant National Policy Statements.

RECOMMENDATION

- 6.5 For all the above reasons and in the light of the Panel's findings and conclusions on important and relevant matters set out in this Report, the Panel recommends the Secretary of State for Energy and Climate Change, once a s106 agreement is signed as detailed in Chapter 4 above, to make the East Anglia One Offshore Wind Farm Order in the recommended form appended.

APPENDICES

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Appendix A

RECOMMENDED DEVELOPMENT CONSENT ORDER

The recommended Order below is the applicant's last submitted version of the DCO as the applicant proposed it (version 7 [APP-250]), but includes 12 changes made by the Panel incorporated within it. These changes and the reasons for them, are set out in full in the table in the subchapter of Chapter 4 above entitled "*The Development Consent Order & Other Matters*".

The recommended Order below makes use of modern phraseology and has been formatted to be consistent with the format required for Statutory Instruments.

2014 No.

INFRASTRUCTURE PLANNING

The East Anglia ONE Offshore Windfarm Order 2014

<i>Made</i>	***201●
<i>Laid before Parliament</i>	***201●
<i>Coming into force</i>	***201●

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WHEREAS an application has been made to the Secretary of State in accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009(a) made under sections 37, 42, 48, 51, 56, 58, 59 and 232 of the Planning Act 2008 (“the 2008 Act”)(b) for an Order under sections 37, 55, 115, 120, 121, 122, 140 and 149A of the 2008 Act;

AND whereas the application was examined by an examining authority appointed by the Secretary of State pursuant to Chapter 4 of the 2008 Act;

AND whereas the examining authority, having considered the national planning statements relevant to the application and concluded that the application accords with these statements as set out in section 104(3) of the 2008 Act;

AND whereas the examining authority, having considered the objections made and not withdrawn and the application with the documents that accompanied the application, has recommended that the decision-maker make an Order giving effect to the proposals comprised in the application with modifications which in its opinion do not make any substantial change to the proposals;

(a) S.I. 2009/2264 as amended by the Localism Act (Infrastructure Planning) (Consequential Amendments) Regulations 2012 S.I. 2012/635 and the Infrastructure Planning (Prescribed Consultees and Interested Parties etc) (Amendment) Regulations 2013 S.I.2013/522

(b) 2008 c.29. Parts 1 to 7 were amended by Chapter 6 of Part 6 of the Localism Act 2011 (c.20).

AND whereas notice of the decision-maker's determination was published [●];

NOW THEREFORE, as the decision-maker in exercise of the powers conferred by sections 114, 115, 120, 121, 122 and 149A of the 2008 Act the Secretary of State makes the following Order:

PART 1

PRELIMINARY

Citation and commencement

1. This Order may be cited as the East Anglia ONE Offshore Windfarm Order and shall come into force on [●] 201[●].

Interpretation

2.—(1) In this Order—

“the 1961 Act” means the Land Compensation Act 1961(a);

“the 1965 Act” means the Compulsory Purchase Act 1965(b);

“the 1980 Act” means the Highways Act 1980(c);

“the 1981 Act” means the Compulsory Purchase (Vesting Declarations) Act 1981(d);

“the 1990 Act” means the Town and Country Planning Act 1990(e);

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- (a) 1961 c.33. Section 2(2) was amended by section 193 of, and paragraph 5 of Schedule 33 to, the Local Government, Planning and Land Act 1980 (c.65). There are other amendments to the 1961 Act which are not relevant to this Order.
- (b) 1965 c.56. Section 3 was amended by section 70 of, and paragraph 3 of Schedule 15 to, the Planning and Compensation Act 1991 (c.34). Section 4 was amended by section 3 of, and Part 1 of Schedule 1 to, the Housing (Consequential Provisions) Act 1985 (c.71). Section 5 was amended by sections 67 and 80 of, and Part 2 of Schedule 18 to, the Planning and Compensation Act 1991 (c.34). Subsection (1) of section 11 and sections 3, 31 and 32 were amended by section 34(1) of, and Schedule 4, to, the Acquisition of Land Act 1981 (c.67) and by section 14 of, and paragraph 12(1) of Schedule 5 to, the Church of England (Miscellaneous Provisions) Measure 2006 (2006 No.1). Section 12 was amended by section 56(2) of, and Part 1 to Schedule 9 to, the Courts Act 1971 (c.23). Section 13 was amended by section 139 of the Tribunals, Courts and Enforcement Act 2007 (c.150). Section 20 was amended by section 70 of, and paragraph 14 of Schedule 15 to, the Planning and Compensation Act 1991 (c.34). Sections 9, 25 and 29 were amended by the Statute Law (Repeals) Act 1973 (c.39). Section 31 was also amended by section 70 of, and paragraph 19 of Schedule 15 to the Planning and Compensation Act 1991 (c.34) and by section 14 of, and paragraph 12(2) of Schedule 5 to, the Church of England (Miscellaneous Provisions) Measure 2006 (2006 No.1). There are other amendments to the 1965 Act which are not relevant to this Order.
- (c) 1980 c.66. Section 1(1) was amended by section 21(2) of the New Roads and Street Works Act 1991 (c.22); sections 1(2), 1(3) and 1(4) were amended by section 8 of, and paragraph (1) of Schedule 4 to, the Local Government Act 1985 (c.51); section 1(2A) was inserted, and section 1(3) was amended, by section 259(1), (2) and (3) of the Greater London Authority Act 1999 (c.29); sections 1(3A) and 1(5) were inserted by section 22(1) of, and paragraph 1 of Schedule 7 to, the Local Government (Wales) Act 1994 (c.19). Section 36(2) was amended by section 4(1) of, and paragraphs 47(a) and (b) of Schedule 2 to, the Housing (Consequential Provisions) Act 1985 (c.71), by S.I.2006/1177, by section 4 of, and paragraph 45(3) of Schedule 2 to, the Planning (Consequential Provisions) Act 1990 (c.11), by section 64(1), (2) and (3) of the Transport and Works Act 1992 (c.42) and by section 57 of, and paragraph 5 of Part 1 of Schedule 6 to, the Countryside and Rights of Way Act 2000 (c.37); section 36(3A) was inserted by section 65(5) of the Transport and Works Act 1992 and was amended by S.I.2006/1177; section 36(6) was amended by section 8 of, and paragraph 7 of Schedule 4 to, the Local Government Act 1985 (c.51); and section 36(7) was inserted by section 22(1) of, and paragraph 4 of Schedule 7 to, the Local Government (Wales) Act 1994 (c.19). Section 329 was amended by section 112(4) of, and Schedule 18 to, the Electricity Act 1989 (c.29) and by section 190(3) of, and Part 1 of Schedule 27 to, the Water Act 1989 (c.15). There are other amendments to the 1980 Act which are not relevant to this Order.
- (d) 1981 c. 66. Sections 2(3), 6(2) and 11(6) were amended by section 4 of, and paragraph 52 of Schedule 2 to, the Planning (Consequential Provisions) Act 1990 (c. 11). Section 15 was amended by sections 56 and 321(1) of, and Schedules 8 and 16 to, the Housing and Regeneration Act 2008 (c. 17). Paragraph 1 of Schedule 2 was amended by section 76 of, and Part 2 of Schedule 9 to, the Housing Act 1988 (c 50); section 161(4) of, and Schedule 19 to, the Leasehold Reform, Housing and Urban Development Act 1993 (c. 28); and sections 56 and 321(1) of, and Schedule 8 to, the Housing and Regeneration Act 2008. Paragraph 3 of Schedule 2 was amended by section 76 of, and Schedule 9 to, the Housing Act 1988 and section 56 of, and Schedule 8 to, the Housing and Regeneration Act 2008. Paragraph 2 of Schedule 3 was repealed by section 277 of, and Schedule 9 to, the Inheritance Tax Act 1984 (c. 51). There are amendments to the 1981 Act which are not relevant to this Order.
- (e) 1990 c.8. Section 56(4) was amended by section 32 of, and paragraph 10(2) of Schedule 7 to, the Planning and Compensation Act 1991 (c. 34). Section 106 was substituted, and section 106A inserted, by section 12(1) of the Planning and Compensation Act 1991. Section 206(1) was amended by section 192(8) of, and paragraphs 7 and 11 of Schedule 8 to, the 2008 Act. Sections 272 to 274 and section 279 were amended by section 406(1) of, and paragraph 103 of Schedule 17 to, the Communications Act 2003 c. 21, and section 280 was amended by section 406(1) of, and paragraph 104 of Schedule 17 to, that Act. Sections 272 to 274 were also amended by S.I. 2011/741 and S.I. 2012/2590. Section 282 was amended by S.I. 2009/1307. There are other amendments to the 1990 Act which are not relevant to this Order.

“the 1991 Act” means the New Roads and Street Works Act 1991(a);

“the 2004 Act” means the Energy Act 2004(b);

“the 2008 Act” means the Planning Act 2008(c);

“the 2009 Act” means the Marine and Coastal Access Act 2009(d);

“ancillary works” means the ancillary works described in Part 2 of **Schedule A** (authorised project) 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 A** (authorised project) and any other development authorised by this Order, which is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and the ancillary works authorised by this Order;

“book of reference” means the book of reference certified by the decision-maker as the book of reference for the purposes of this Order;

“building” includes any structure or erection or any part of a building, structure or erection;

“CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982;

“cable” in respect of any onshore cable shall include direct lay cables and/or cables laid in cable ducts and in respect of any cable whether onshore or offshore shall include fibre optic cables either within the cable or laid alongside;

“cable crossings” means the crossing of existing sub-sea cables by the inter-array, interconnecting and/or export cables authorised by this Order together with physical protection measures including concrete mattresses and/or rock placement;

“cable ducts” means conduits for the installation of cables;

“carriageway” has the same meaning as in the 1980 Act;

“commence” means, in relation to works below MHWS, the first carrying out of any licensed marine activities authorised by in the deemed marine licences at **Schedule I** (deemed licence under the Marine and Coastal Access Act 2009 – generation assets) and **Schedule J** (deemed licence under the Marine and Coastal Access Act 2009 – transmission assets), save for pre-construction surveys and monitoring and, in respect of any other part of the authorised project, beginning to carry out any material operation (as defined in Section 56(4) of the 1990 Act) forming part of the authorised project other than operations consisting of site clearance, demolition work, archaeological investigations, environmental surveys, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements and “commencement” shall be construed accordingly;

“compulsory acquisition notice” means a notice served in accordance with section 134 of the 2008 Act;

“connection works” means Work Nos. 3B to 41 and any related further associated development including, in relation to cable laying, jointing bays, manholes, kiosks, marker posts and other works associated with cable laying;

“construction consolidation site” means a construction site associated with the connection works including hard standings, lay down and storage areas for construction materials and equipment, areas for spoil, areas for vehicular parking, bunded storage areas, areas for welfare facilities including offices and canteen and washroom facilities, workshop facilities and

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- (a) 1991 c.22. Section 48(3A) was inserted by section 124 of the Local Transport Act 2008 (c.26). Sections 78(4), 80(4), and 83(4) were amended by section 40 of, and Schedule 1 to, the Traffic Management Act 2004 (c.18).
- (b) 2004 c.20. Section 105 was amended by section 69 of the Energy Act 2008 (c.32).
- (c) 2008 c.29
- (d) 2009 c.23

temporary fencing or other means of enclosure and areas for other facilities required for construction purposes;

“decision-maker” has the same meaning as in section 103 of the 2008 Act;

“deemed generation assets marine licence” means the licence set out in **Schedule I** (deemed licence under the Marine and Coastal Access Act 2009 – generation assets) and deemed by **article 28** (deemed marine licence under the Marine and Coastal Access Act 2009);

“deemed marine licence(s)” means the deemed generation assets marine licence and/or the deemed transmission assets marine licence;

“deemed transmission assets marine licence” means the licence set out in Schedule J (deemed licence under the Marine and Coastal Access Act 2009 – transmission assets) and deemed by **article 28** (deemed marine licence under the Marine and Coastal Access Act 2009) to have been granted under Part 4 of the 2009 Act, by virtue of section 149A of the 2008 Act;

“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;

“draft written scheme of investigation: archaeology and cultural heritage (offshore)” means the document certified as the draft written scheme of investigation: archaeology and cultural heritage (offshore) by the decision-maker for the purposes of this Order;

“environmental statement” means the document certified as the environmental statement by the decision-maker for the purposes of this Order and submitted in support of the application;

“further environmental information” means the document certified as the further environmental information by the decision-maker for the purposes of this Order;

“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;

“highway” and “highway authority” have the same meaning as in the 1980 Act;

“horizontal directional drilling” includes, for the purposes of this Order, non-trenchless techniques for laying the onshore cables;

“horizontal directional drilling compound” means a construction site associated with the connection works where horizontal directional drilling is proposed including hard standings, lay down and storage areas for construction materials and equipment, areas for spoil, areas for vehicular parking, bunded storage areas, areas for welfare facilities including offices and canteen and washroom facilities, wheel washing facilities, workshop facilities and temporary fencing or other means of enclosure and areas for other facilities required for construction purposes;

“HVAC offshore collector station” means a platform with one or more decks, whether open or fully clad, accommodating electrical power transformers, low, medium and/or high voltage switch gear, instrumentation, protection and control systems, neutral earthing resistors, reactive compensation, standby electrical generation equipment, fuelling facilities, auxiliary and uninterruptible power supply systems and transformers, accommodation and/or emergency shelter, craneage, metering stations, meteorological equipment, helicopter landing facilities, messing facilities, potable water storage, black water separation equipment, control hub, drainage facilities, access equipment, J-tubes, marking and lighting and other associated equipment and facilities to enable the transmission of electronic communications and for electricity to be collected at, and exported from, the platform;

“HVDC offshore converter station” means a platform with one or more decks, whether open or fully clad, accommodating electrical power transformers, AC equipment including phase reactors and AC filters, AC/DC converter with switching devices, DC equipment including DC capacitors and DC filters and associated equipment, switch gear, cooling systems, instrumentation, protection and control systems, standby electrical generation equipment, fuelling facilities, auxiliary and uninterruptible power supply systems and transformers, accommodation and/or emergency shelter, craneage, meteorological equipment, helicopter

landing facilities, messing facilities, potable water storage, black water separation equipment, control hub, drainage facilities, access equipment, J-tubes, marking and lighting and other associated equipment and facilities to enable the transmission of electronic communication and the conversion and transmission of electricity;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at two or more points with steel pin piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment, and “discrete jacket foundation types” shall include pre-piled or post-piled jackets, three-legged or four legged jackets, or straight or battered leg jackets;

“land plan” means the plan certified as the land plan by the decision-maker for the purposes of this Order;

“LAT” means lowest astronomical tide;

“maintain” includes inspect, maintain, repair, adjust and alter, and further includes remove, reconstruct and replace any of the ancillary works in Part 2 of **Schedule A** (ancillary development) and any component part of any wind turbine generator, offshore substation or meteorological mast described in Part 1 of **Schedule A** (authorised development) (but not including the alteration, removal or replacement of foundations) to the extent assessed in the environmental statement; and “maintenance” shall be construed accordingly;

“MCA” means the Maritime and Coastguard Agency;

“mean high water springs level” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“mean low water” or “MLW” means the average height of all low waters above Chart Datum;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“MMO” means the Marine Management Organisation;

“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 substation” means a HVAC collector station or a HVDC converter station;

“onshore converter station” means onshore converter(s) housed within one or more converter halls and a compound containing electrical equipment including power transformers, switchgear, reactive compensation equipment, harmonic filters, cables, lightning protection masts, control buildings, communications masts, back-up generators, access, fencing and other associated equipment, structures or buildings;

“Order land” means the land shown on the land plan which is within the limits of land to be acquired and described in the book of reference;

“Order limits” means the limits shown on the works plan within which the authorised project may be carried out, whose grid coordinates seaward of MHWS are set out in paragraph 2 of Part 1 of **Schedule A** (authorised development) of this Order and whose grid coordinates landward of MLW are set out in paragraph 3 of Part 1 of **Schedule A** (authorised development) of this Order;

“Order limits boundary coordinates plan” means the document certified as the Order limits boundary coordinates plan by the decision-maker for the purposes of this Order;

“outline access management plan” means the document certified as the outline access management plan by the decision-maker for the purposes of this Order;

“outline Bawdsey bed level monitoring and remediation strategy” means the document certified as the outline Bawdsey bed level monitoring and remediation strategy by the decision-maker for the purposes of this Order;

“outline code of construction practice” means the document certified as the outline code of construction practice by the decision-maker for the purposes of this Order;

“outline converter station design principles statement” means the document certified as the outline converter station design principles statement by the decision-maker for the purposes of this Order;

“outline landscape and ecological management strategy” means the document certified as the outline landscape and ecological management strategy by the decision-maker for the purposes of this Order;

“outline navigation monitoring strategy” means the document certified as the outline navigation monitoring strategy by the decision-maker for the purposes of this Order;

“outline offshore operations and maintenance and monitoring plan” means the document certified as the outline offshore operations and maintenance and monitoring plan by the decision-maker for the purposes of this Order;

“outline written scheme of investigation: archaeology and cultural heritage (onshore)” means the document certified as the outline written scheme of investigation: archaeology and cultural heritage (onshore) by the decision-maker for the purposes of this Order;

“outline skills strategy” means the document certified as the outline skills strategy by the decision-maker for the purposes of this Order;

“outline traffic management plan” means the document certified as the outline traffic management plan by the decision-maker for the purposes of this Order;

“outline travel plan” means the document certified as the outline travel plan by the decision-maker for the purposes of this Order;

“owner”, in relation to land, has the same meaning as in Section 7 of the Acquisition of Land Act 1981(a);

“pin piles” means steel cylindrical piles driven and/or drilled into the seabed for fixity of steel jacket foundations;

“primary construction consolidation site” means a construction consolidation whose footprint does not exceed the dimensions specified in **requirement 10(10)**;

“public rights of way plan” means the plan certified as the public rights of way plan by the decision-maker for the purposes of this Order;

“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 A** (requirements) to this Order;

“secondary construction consolidation site” means a construction consolidation whose footprint does not exceed the dimensions specified in **requirement 10(10)**;

“statutory undertaker” means any person falling within section 127(8), 128(5) or 129(2) of the 2008 Act;

“street” means a street within the meaning of section 48 of the 1991 Act, together with land on the verge of a street or between two carriageways, and includes part of a street;

“street authority”, in relation to a street, has the same meaning as in Part 3 of the 1991 Act;

“suction buckets” means large diameter steel cylindrical shells which penetrate the seabed assisted by hydrostatic pressure differential for fixity of steel jacket foundations;

“suction caisson foundation” means a tubular steel structure which penetrates the seabed assisted by a hydrostatic pressure differential and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“the tribunal” means the Lands Chamber of the Upper Tribunal;

(a) 1981 c.67. Section 7 was amended by section 70 of, and paragraph 9 of Schedule 15 to, the Planning and Compensation Act 1991 (c.34). There are other amendments to the 1981 Act which are not relevant to this Order.

“transition cable jointing bay” means an underground pit where the offshore export cables comprised in Work No. 3A are jointed to the connection works;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“undertaker” means East Anglia ONE Limited, which is the named undertaker, or any other person who has the benefit of this Order in accordance with section 156 of the 2008 Act for such time as that section applies to that person;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“watercourse” includes all rivers, streams, creeks, ditches, drains, canals, cuts, culverts, dykes, sluices, sewers and passages through which water flows except a public sewer or drain;

“wind turbine generator” or “WTG” 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; and

“works plan” means the plan certified as the works plan by the decision-maker for the purposes of the Order;

(2) References in this Order to rights over land include references to rights to do or to place and maintain, anything in, on or under land or in the air-space above its surface.

(3) All distances, directions and lengths referred to in this Order are approximate, save in respect of the parameters referred to requirements 3 to 7 and 10 in Part 3, Schedule A (requirements), conditions 1 to 5 in Part 2, Schedule I (deemed licence under the Marine and Coastal Access Act 2009 – generation assets) and conditions 2 to 5 in Part 2, Schedule J (deemed licence under the Marine and Coastal Access Act 2009 – transmission assets).

(4) Any reference in this Order to a work identified by the number of the work is to be construed as a reference to the work of that number authorised by this Order.

(5) References in this Order to points identified by letters are to be construed as references to the points so lettered on the works plan unless otherwise stated.

(6) The expression “includes” shall be construed without limitation.

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 3A shall be constructed anywhere within the Order limits seaward of mean high water springs and Work Nos. 3B to 41 shall be constructed anywhere within the Order limits landward of mean low water.

Power to construct and maintain authorised project

4. The undertaker may, at any time construct and maintain, and maintain from time to time, the authorised project, except to the extent that this Order or an agreement made under this Order provides otherwise.

Benefit of the Order

5.—(1) Except as provided for by this article, section 156(1) of the 2008 Act applies to grant of development consent by this Order.

(2) The undertaker may with the consent of the Secretary of State who would be responsible for determining an application for development consent within the subject matter of this Order—

- (a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (excluding the deemed marine licences referred to in (4) below) and such related statutory rights as may be agreed between the undertaker and the transferee; or
- (b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order (excluding the deemed marine licences referred to in (4) below) and such related statutory rights as may be so agreed,

except where paragraph (6) applies in which case no such consent shall be required.

(3) Where an agreement has been made in accordance with paragraph (2) references in this Order to the undertaker, except in paragraph (8), shall include references to the transferee or lessee.

(4) The undertaker may with the written consent of the MMO—

- (a) where an agreement has been made in accordance with paragraph 2(a), transfer to the transferee the whole of the deemed generation assets marine licence and/or the whole of the deemed transmission assets marine licence and such related statutory rights as may be agreed between the undertaker and the transferee; or
- (b) where an agreement has been made in accordance with paragraph 2(b), grant to the lessee, for the duration of the period mentioned in paragraph 2(b), the whole of the deemed generation assets marine licence and/or the whole of the deemed transmission assets marine licence and such related statutory rights as may be so agreed,

except where paragraph (6) applies, in which case no such consent shall be required.

(5) Where the undertaker has transferred any benefit and/or a deemed marine licence, or for the duration of any period during which the undertaker has granted any benefit and/or a deemed marine licence under paragraph (2) or (4)—

- (a) the benefit and/or a deemed marine licence 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 save in the case of a deemed marine licence transferred or granted in respect of any breach of an obligation by the undertaker which occurs prior to such transfer or grant or which occurs as a result of any activity carried out by the undertaker on behalf of the transferee.

(6) This paragraph applies where—

- (a) the transferee or lessee is a person who holds a licence under the Electricity Act 1989; or
- (b) the time limits for claims for compensation in respect of the acquisition of land or effects upon land under this Order have elapsed and—
 - (i) no such claims have been made,
 - (ii) any such claim has been made and has been compromised or withdrawn,
 - (iii) compensation has been paid in final settlement of any such claim,

- (iv) payment of compensation into court has taken place in lieu of settlement of any such claim; or
- (v) it has been determined by a tribunal or court of competent jurisdiction in respect of any such claim that no compensation shall be payable.

(7) The provisions of **article 8** (street works), **article 10** (temporary stopping up of streets), **article 15** (compulsory acquisition of land), **article 17** (compulsory acquisition of rights), **article 23** (temporary use of land for carrying out the authorised project) and **article 24** (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 and is also—

- (a) in respect of Works No. 3B to 41 a person who holds a licence under the Electricity Act 1989; or
- (b) in respect of functions under **article 8** (street works) relating to a street, a street authority.

(8) The exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (2) or (4) shall be subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(9) Where paragraph (6) applies—

- (a) the undertaker shall provide written notification to the Secretary of State prior to transferring and/or granting any benefit under paragraph (2); and
- (b) the undertaker shall provide written notification to the MMO prior to transferring and/or granting any deemed Marine Licence under paragraph (4).

Application and modification of legislative provisions

6.—(1) Regulation 6 of the Hedgerows Regulations 1997^(a) shall be modified so as to read for the purposes of this Order only as if there were inserted after Regulation (1)(j) the following:

- (k) or for carrying out development which has been authorised by development consent made pursuant to the Planning Act 2008.

Defence to proceedings in respect of statutory nuisance

7.—(1) Where proceedings are brought under section 82(1) of the Environmental Protection Act 1990^(b) (summary proceedings by person aggrieved by statutory nuisance) in relation to a nuisance falling within paragraph (g) of section 79(1) of that Act (noise emitted from premises so as to be prejudicial to health or a nuisance) no order shall be made, and no fine may be imposed, under section 82(2) of that Act if—

- (a) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised project and that the nuisance is attributable to the carrying out of the authorised project in accordance with a notice served under section 60 (control of noise on construction site), or a consent given under section 61 (prior consent for work on construction site) or 65 (noise exceeding registered level), of the Control of Pollution Act 1974^(c); or
 - (ii) is a consequence of the construction or maintenance of the authorised project and that it cannot reasonably be avoided; or
- (b) the defendant shows that the nuisance—

(a) S.I 1997/1160

(b) 1990 c.43. There are amendments to this Act which are not relevant to this Order.

(c) 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 this Order.

- (i) relates to premises used by the undertaker for the purposes of or in connection with the use of the authorised project and that the nuisance is attributable to the use of the authorised project which is being used in compliance with **requirement 24** (control of noise during operational phase); or
- (ii) is a consequence of the use of the authorised project and that it cannot reasonably be avoided.

(2) Section 61(9) (consent for work on construction site to include statement that it does not of itself constitute a defence to proceedings under section 82 of the Environmental Protection Act 1990) of the Control of Pollution Act 1974 and section 65(8) of that Act (corresponding provision in relation to consent for registered noise level to be exceeded), do not apply where the consent relates to the use of premises by the undertaker for purposes of or in connection with the construction or maintenance of the authorised project.

PART 3 STREETS

Street works

8.—(1) The undertaker may, for the purposes of the authorised project, enter on so much of any of the streets specified in **Schedule B** (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), (b), (c) and (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) The provisions of sections 54 to 106 of the 1991 Act apply to any street works carried out under paragraph (1).

(4) In this article “apparatus” has the same meaning as in Part 3 of the 1991 Act.

Temporary stopping up of public rights of way

9.—(1) Subject to the provisions of this article, the undertaker may, in connection with the carrying out of the authorised project temporarily stop up each of the public rights of way specified in columns (2) to (3) of **Schedule C** (public rights of way to be temporarily stopped up) to the extent specified in column (4), by reference to the letters and numbers shown on the public rights of way plan.

(2) The public rights of way specified in Part 1 of **Schedule C** (public rights of way to be temporarily stopped up) shall not be temporarily stopped up under this article unless the diversion route specified on the public rights of way plan is first provided by the undertaker, to the reasonable satisfaction of the relevant highway authority.

(3) The relevant diversion route provided under paragraph (2) shall be subsequently maintained by the undertaker until the re-opening of the relevant public right of way specified in paragraph (1).

Temporary stopping up of streets

10.—(1) Subject to paragraph (4), the undertaker, during and for the purposes of carrying out the authorised project, may temporarily stop up, alter or divert any street within the Order limits and may for any reasonable time—

- (a) divert the traffic or a class of traffic from the street; and
- (b) subject to paragraph (2), prevent all persons from passing along the street.

(2) The undertaker shall 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.

(3) Without prejudice to the generality of paragraph (1) the undertaker may temporarily stop up, alter or divert the streets specified in column (1) and (2) of **Schedule D** (streets to be temporarily stopped up) to the extent specified, by reference to the letters and numbers shown on the public rights of way plan, in column (4) of that Schedule.

(4) The undertaker shall not temporarily stop up, alter or divert—

- (a) any street without the consent of the street authority which may attach reasonable conditions to any consent; and
- (b) any other street without the consent of the street authority which may attach reasonable conditions to any consent.

(5) Any person who suffers loss by the suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

Access to works

11. The undertaker may, for the purposes of the authorised project—

- (a) form and lay out means of access, or improve existing means of access, in the locations specified in columns (1) and (2) of **Schedule E** (access to works); and
- (b) with the approval of the relevant planning authority after consultation with the highway authority, 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.

Agreements with street authorities

12.—(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 an agreement may, without prejudice to the generality of paragraph (1)—

- (a) make provision for the street authority to carry out any function under this Order which relates to the street in question;
- (b) include an agreement between the undertaker and street authority specifying a reasonable time for the completion of the works; and
- (c) contain such terms as to payment and otherwise as the parties consider appropriate.

PART 4

SUPPLEMENTAL POWERS

Discharge of water

13.—(1) The undertaker may use any watercourse or any public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the authorised project and for that purpose may lay down, take up and alter pipes and may, on any land within the Order limits, make openings into, and connections with, the watercourse, public sewer or drain subject to the obtaining of consent and approval respectively pursuant to paragraphs 3 and 4 below.

(2) Any dispute arising from the making of connections to or the use of a public sewer or drain by the undertaker pursuant to paragraph (1) shall be 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 shall 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 shall not be unreasonably withheld.

(4) The undertaker shall not carry out any works to any public sewer or drain pursuant to article 13(1) except—

- (a) in accordance with plans approved by the person to whom the sewer or drain belongs, but such approval shall not be unreasonably withheld; and
- (b) where that person has been given the opportunity to supervise the making of the opening.

(5) The undertaker shall 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 shall 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 2010(b).

(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 Water Resources Act 1991, as amended by the Environmental Permitting (England and Wales) Regulations 2010 have the same meaning as in that Act.

Authority to survey and investigate the land

14.—(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;

(a) 1991 c.56. Section 106 was amended by sections 36(2) and 99 of the Water Act 2003 (c.37), and amended by sections 32 and 42 of, and paragraph 16(2) of Schedule 3 to, the Flood and Water Management Act 2010 (date in force to be appointed see section 49(3)(h)(i)). There are other amendments to this section which are not relevant to this Order.

(b) S.I. 2010/675, as amended by the Environmental Permitting (England and Wales) (Amendment) Regulations 2011 (SI 2011/2043), the Environmental Permitting (England and Wales) (Amendment No. 2) Regulations 2011 (SI 2011/2933), the Environmental Permitting (England and Wales) (Amendment) Regulations 2012 (SI 2012/630), the Controlled Waste (England and Wales) Regulations 2012 (S.I. 2012/811).

- (c) without prejudice to the generality of sub-paragraph (a), carry out ecological or archaeological investigations on such land; and
- (d) place on, leave on and remove from the land apparatus for use in connection with the survey and investigation of land and making of trial holes.

(2) No land may be entered or equipment placed or left on or removed from the land under paragraph (1) unless at least 14 days' notice has been served on every owner and occupier of the land.

(3) Any person entering land under this article on behalf of the undertaker—

- (a) shall, 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 shall be made under this article—

- (a) in land forming a railway without the consent of Network Rail Infrastructure Limited; or
- (b) in land held by or in right of the Crown without the consent of the Crown.

(5) No trial holes shall be made under this article—

- (a) in land located within the highway boundary without the consent of the highway authority; or
- (b) in a private street without the consent of the street authority,

but such consent shall not be unreasonably withheld.

(6) The undertaker shall 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.

PART 5

POWERS OF ACQUISITION

Compulsory acquisition of land

15.—(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 17** (compulsory acquisition of rights) and **article 23** (temporary use of land for carrying out the authorised project).

Time limit for exercise of authority to acquire land compulsorily

16.—(1) After the end of the period of 5 years beginning on the day on which this Order is made—

- (a) no notice to treat shall be served under Part 1 of the 1965 Act; and
- (b) no declaration shall be executed under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 as applied by article 19 (application of the Compulsory Purchase (Vesting Declarations) Act 1981)(a).

(2) The authority conferred by **article 23** (temporary use of land for carrying out the authorised project) shall cease at the end of the period referred to in paragraph (1), except that nothing in this

(a) 1981 c.66. Sections 2, 6 and 11 were amended by section 4 of, and paragraph 52 of Schedule 2 to, the Planning (Consequential Provisions) Act 1990 (c.11). There are other amendments to the 1981 Act which are not relevant to this Order.

paragraph prevents the undertaker remaining in possession of land after the end of that period, if the land was entered and possession was taken before the end of that period.

Compulsory acquisition of rights

17.—(1) The undertaker may acquire compulsorily such rights or impose restrictive covenants over the Order land as may be required for any purpose for which that land may be acquired under **article 15** (compulsory acquisition of land), by creating them as well as by acquiring rights already in existence.

(2) Subject to the provisions of this article, **article 18** (private rights) and **article 25** (statutory undertakers), in the case of the Order land specified in column (1) of **Schedule F** (land in which only new rights etc. may be acquired) the undertaker's powers of compulsory acquisition are limited to the acquisition of such new rights and the imposition of restrictive covenants for the purpose specified in relation to that land in column (2) of that Schedule.

(3) Subject to section 8 of the 1965 Act, as substituted by paragraph 5 of **Schedule G** (modification of compensation and compulsory purchase enactments for creation of new rights and restrictive covenants), where the undertaker acquires an existing right over land or restrictive covenant under paragraph (1), the undertaker shall not be required to acquire a greater interest in that land.

(4) **Schedule G** (modification of compensation and compulsory purchase enactments for creation of new rights) shall have effect for the purpose of modifying the enactments relating to compensation and the provisions of the 1965 Act in their application in relation to the compulsory acquisition under this article of a right over land by the creation of a new right or the imposition of restrictive covenants.

(5) In any case where the acquisition of new rights under paragraph (1) is required for the purpose of diverting, replacing or protecting apparatus of a statutory undertaker, the undertaker may, with the consent of the Secretary of State, transfer the power to acquire such rights to the statutory undertaker in question.

(6) The exercise by a statutory undertaker of any power in accordance with a transfer under paragraph (5) is subject to the same restrictions, liabilities and obligations as would apply under this Order if that power were exercised by the undertaker.

Private rights

18.—(1) Subject to the provisions of this article, all private rights over land subject to compulsory acquisition under this Order shall be extinguished—

- (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 over land subject to the compulsory acquisition of rights under this article (and including those lands included in column (1) of **Schedule F** (land in which only new rights etc. may be acquired)) shall be extinguished in so far as their continuance would be inconsistent with the exercise of the right—

- (a) as from the date of acquisition of the right 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 earlier.

(3) Subject to the provisions of this article, all private rights over land of which the undertaker takes temporary possession under this Order shall be suspended and unenforceable 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 under this article shall be 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 25** (statutory undertakers) applies.

(6) Paragraphs (1) to (3) shall 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 entry onto it; or

(iii) the undertaker's taking temporary possession of it,

that any or all of those paragraphs do not apply to any right specified in the notice; and

(b) any agreement made at any time between the undertaker and the person in or to whom the right of way in question is vested or belongs.

(7) If any such agreement as is 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,

it shall be 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

19.—(1) The 1981 Act shall apply as if this Order were a compulsory purchase order.

(2) The 1981 Act, as so applied, shall have effect with the following modifications.

(3) In section 3 (preliminary notices), for subsection (1) there shall be substituted—

“(1) Before making a declaration under section 4 with respect to any land which is subject to a compulsory purchase order, the acquiring authority shall include the particulars specified in subsection (3) in a notice which is—

(a) given to every person with a relevant interest in the land with respect to which the declaration is to be made (other than a mortgagee who is not in possession); and

(b) published in a local newspaper circulating in the area in which the land is situated.

”.

(4) In that section, in subsection (2), for “(1)(b)” there shall be substituted “(1)” and after “given” there shall be inserted “and published”.

(5) In that section, for subsections (5) and (6) there shall be substituted—

“(5) For the purposes of this section, a person has a relevant interest in land if—

(a) that person is for the time being entitled to dispose of the fee simple of the land, whether in possession or in reversion; or

(b) that person holds, or is entitled to the rents and profits of, the land under a lease or agreement, the unexpired term of which exceeds one month.”.

(6) In section 5 (earliest date for execution of declaration)—

(a) in subsection (1), after “publication” there shall be inserted “in a local newspaper circulating in the area in which the land is situated”; and

(b) subsection (2) shall be omitted.

(7) In section 7 (constructive notice to treat), in subsection (1)(a), the words “(as modified by section 4 of the Acquisition of Land Act 1981)” shall be omitted.

(8) References to the 1965 Act in the 1981 Act shall be construed as references to that Act as applied by section 125 of the 2008 Act to the compulsory acquisition of land under this Order.

Acquisition of subsoil only

20.—(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 15** (compulsory acquisition of land) or **article 17** (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 shall not be required to acquire an interest in any other part of the land.

(3) Paragraph (2) shall not prevent **article 21** (acquisition of part of certain properties) from applying where the undertaker acquires a cellar, vault, arch or other construction forming part of a house, building or manufactory.

Acquisition of part of certain properties

21.—(1) This article shall apply instead of section 8(1) of the 1965 Act (other provisions as divided land) (as applied by section 125 of the 2008 Act) where—

- (a) a notice to treat is served on a person (“the owner”) under the 1965 Act (as so applied) in respect of land forming only part of a house, building or manufactory or of land consisting of a house with a park or garden (“the land subject to the notice to treat”); and
- (b) a copy of this article is served on the owner with the notice to treat.

(2) In such a case, the owner may, within the period of 21 days beginning with the day on which the notice was served, serve on the undertaker a counter-notice objecting to the sale of the land subject to the notice to treat which states that the owner is willing and able to sell the whole (“the land subject to the counter-notice”).

(3) If no such counter-notice is served within that period, the owner shall be required to sell the land subject to the notice to treat.

(4) If such a counter-notice is served within that period, the question whether the owner shall be required to sell only the land subject to the notice to treat shall, unless the undertaker agrees to take the land subject to the counter-notice, be referred to the tribunal.

(5) If on such a reference the tribunal determines that the land subject to the notice to treat can be taken—

- (a) without material detriment to the remainder of the land subject to the counter-notice; or
- (b) where the land subject to the notice to treat consists of a house with a park or garden, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house,

the owner shall be required to sell the land subject to the notice to treat.

(6) If on such a reference the tribunal determines that only part of the land subject to the notice to treat can be taken—

- (a) without material detriment to the remainder of the land subject to the counter-notice; or
- (b) where the land subject to the notice to treat consists of a house with a park or garden, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house, the notice to treat is deemed to be a notice to treat for that part.

(7) If on such a reference the tribunal determines that—

- (a) the land subject to the notice to treat cannot be taken without material detriment to the remainder of the land subject to the counter-notice; but

- (b) the material detriment is confined to a part of the land subject to the counter-notice, the notice to treat is deemed to be a notice to treat for the land to which the material detriment is confined in addition to the land already subject to the notice, whether or not the additional land is land which the undertaker is authorised to acquire compulsorily under this Order.

(8) If the undertaker agrees to take the land subject to the counter-notice, or if the tribunal determines that—

- (a) none of the land subject to the notice to treat can be taken without material detriment to the remainder of the land subject to the counter-notice or, as the case may be, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house; and
- (b) the material detriment is not confined to a part of the land subject to the counter-notice, the notice to treat is deemed to be a notice to treat for the land subject to the counter-notice whether or not the whole of that land is land which the undertaker is authorised to acquire compulsorily under this Order.

(9) Where, by reason of a determination by the tribunal under this article, a notice to treat is deemed to be a notice to treat for less land or more land than that specified in the notice, the undertaker may, within the period of 6 weeks beginning with the day on which the determination is made, withdraw the notice to treat; and, in that event, shall pay the owner compensation for any loss or expense occasioned to the owner by the giving and withdrawal of the notice, to be determined in case of dispute by the tribunal.

(10) Where the owner is required under this article to sell only part of a house, building or manufactory or of land consisting of a house with a park or garden, the undertaker shall pay the owner compensation for any loss sustained by the owner due to the severance of that part in addition to the value of the interest acquired.

Rights under or over streets

22.—(1) The undertaker may enter on and appropriate so much of the subsoil of any street within the Order limits as may be required for the purposes of the authorised project and may use the subsoil 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, shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) Compensation shall not be 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

23.—(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 H** (land of which temporary possession may be taken) for the purpose specified in relation to that land in column

(3) of that Schedule relating to the part of the authorised project specified in column (4) of that Schedule; and

(ii) any other Order land in respect of which no notice of entry has been served under section 11 of the 1965 Act (other than in connection with the acquisition of rights only) and no declaration has been made under section 4 of the 1981 Act;

- (b) remove any buildings and vegetation from that land;
- (c) construct temporary works (including the provision of means of access), 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; and
- (e) construct any works, or use the land, as specified in relation to that land in column 3 of **Schedule H** (land of which temporary possession may be taken), or any mitigation works.

(2) Not less than 14 days before entering on and taking temporary possession of land under this article the undertaker shall serve notice of the intended entry on the owners and occupiers of the land.

(3) The undertaker shall not remain in possession of any land under this article for longer than reasonably necessary and in any event shall not, without the agreement of the owners of the land, remain in possession of any land under this article after the end of the period of one year beginning with the date of completion of the part of the authorised project specified in relation to that land in column (4) of **Schedule H** (land of which temporary possession may be taken), unless the undertaker has, before the end of that period, served a notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the 1981 Act in relation to that land.

(4) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker shall remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land; but the undertaker shall not be required to replace a building removed under this article.

(5) The undertaker shall 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, shall be determined under Part 1 of the 1961 Act.

(7) Nothing in this article shall affect 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) except that the undertaker shall not be precluded from—

- (a) acquiring new rights or imposing restrictive covenants over any part of that land under **article 17** (compulsory acquisition of rights); or
- (b) acquiring any part of the subsoil (or rights in the subsoil) of that land under **article 20** (acquisition of subsoil only).

(9) Where the undertaker takes possession of land under this article, the undertaker shall not be required to acquire the land or any interest in it.

(10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) shall apply to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).

Temporary use of land for maintaining authorised project

24.—(1) Subject to paragraph (2), at any time during the maintenance period relating to any part of the authorised project, the undertaker may—

- (a) enter on and take temporary possession of any land within the Order limits if such possession is reasonably required for the purpose of maintaining the authorised project; and
- (b) construct such temporary works (including the provision of means of access) and buildings on the land as may be reasonably necessary for that purpose.

(2) Paragraph (1) shall 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 shall 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 shall remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land.

(6) The undertaker shall 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, shall be determined under Part 1 of the 1961 Act.

(8) Nothing in this article shall affect 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 shall not be required to acquire the land or any interest in it.

(10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) shall apply 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 part of the authorised project, means the period of 5 years beginning with the date on which the authorised project first exports electricity to the national electricity transmission network.

Statutory undertakers

25. Subject to the provisions of **Schedule L** (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 plans within the limits to the land to be acquired and described in the book of reference; and
- (b) extinguish the rights of, remove, relocate the rights of or reposition the apparatus belonging to statutory undertakers over or within the Order land.

Recovery of costs of new connections

26.—(1) Where any apparatus of a public utility undertaker or of a public communications provider is removed under **article 25** (statutory undertakers) any person who is the owner or occupier of premises to which a supply was given from that apparatus shall be 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 25**, 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,

(3) shall be entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of making the drain or sewer belonging to that person communicate with any other public sewer or with a private sewerage disposal plant.

(4) This article shall not have effect in relation to apparatus to which Part 3 of the 1991 Act applies.

(5) In this paragraph—

“public communications provider” has the same meaning as in section 151(1) of the Communications Act 2003; and

“public utility undertaker” has the same meaning as in the 1980 Act.

PART 6

OPERATIONS

Operation of generating station

27.—(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 Marine and Coastal Access Act 2009

28. The undertaker is granted the deemed licences under Part 4 Chapter 1 of the 2009 Act to carry out the works and make the deposits specified in Part 1 of **Schedule I** (deemed licence under the Marine and Coastal Access Act 2009 – generation assets) and Part 1 of **Schedule J** (deemed licence under the Marine and Coastal Access Act 2009 – transmission assets), both subject to the conditions set out in Part 2 of those Schedules.

PART 7

MISCELLANEOUS AND GENERAL

Application of landlord and tenant law

29.—(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 shall prejudice the operation of any agreement to which this article applies.

(3) Accordingly, no such enactment or rule of law shall apply 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

30. Development consent granted by this Order shall be 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

31.—(1) The undertaker may fell or lop any tree or shrub near any part of the authorised project, or cut back its roots, if it reasonably believes it to be necessary to do so to prevent the tree or shrub from obstructing or interfering with the construction, maintenance or operation of the authorised project or any apparatus used in connection with the authorised project.

(2) In carrying out any activity authorised by paragraph (1), the undertaker shall do no unnecessary damage to any tree or shrub and shall 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, shall be determined under Part 1 of the 1961 Act.

(4) The undertaker may, for the purposes of the authorised project—

- (a) subject to paragraph (2) above, remove any hedgerows within the Order limits 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 K** (removal of important hedgerows).

(5) In this article “hedgerow” and “important hedgerow” have the same meaning as in the Hedgerow Regulations 1997(a).

Certification of plans etc

32.—(1) The undertaker shall, as soon as practicable after the making of this Order, submit to the decision-maker copies of—

- (a) the works plan—

document reference 2.3(a) sheet 1-4 Sep-13 rev C;

document reference 2.3(b) sheet 5-9 Sep-13 rev C;

(a) S.I. 1997/1160

- document reference 2.3(c) sheet 10-14 Sep-13 rev C;
- document reference 2.3(d) sheet 15-19 Sep-13 rev C;
- document reference 2.3(e) sheet 20-24 Sep-13 rev C;
- document reference 2.3(f) sheet 25-28 Sep-13 rev C;
- (b) the order limits boundary coordinates plan—
 - document reference 2.13 sheet 1 of 2 Nov-13 rev D
 - document reference 2.13 -sheet 2 Nov-12 rev A
- (c) the land plan—
 - document reference 2.2(a) sheet 1-5 Sep-13 rev C;
 - document reference 2.2(b) sheet 6-10 Sep-13 rev C;
 - document reference 2.2(c) sheet 11-15 Sep-13 rev C;
 - document reference 2.2(d) sheet 16 -19 Sep-13 rev C;
 - document reference 2.2(e) sheet 20-22 Sep-13 rev C;
- (d) the important hedgerows plan—
 - document reference 2.6 sheet 1 of 13 Sep-13 rev C
 - document reference 2.6 sheet 2 of 13 Sep-13 rev C
 - document reference 2.6 sheet 3 of 13 Sep-13 rev C
 - document reference 2.6 sheet 4 of 13 Sep-13 rev C
 - document reference 2.6 sheet 5 of 13 Sep-13 rev C
 - document reference 2.6 sheet 6 of 13 Sep-13 rev C
 - document reference 2.6 sheet 7 of 13 Sep-13 rev C
 - document reference 2.6 sheet 8 of 13 Sep-13 rev C
 - document reference 2.6 sheet 9 of 13 Sep-13 rev C
 - document reference 2.6 sheet 10 of 13 Sep-13 rev C
 - document reference 2.6 sheet 11 of 13 Sep-13 rev C
 - document reference 2.6 sheet 12 of 13 Sep-13 rev C
 - document reference 2.6 sheet 13 of 13 Sep-13 rev C
- (e) the public rights of way plan—
 - document reference 2.4 sheet 1 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 2 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 3 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 4 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 6 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 7 of 13 Nov-13 rev E;
 - document reference 2.4 sheet 8 of 13 Nov-13 rev E;
 - document reference 2.4 sheet 9 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 10 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 11 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 12 of 13 Sep-13 rev C;
 - document reference 2.4 sheet 13 of 13 Sep-13 rev C;
- (f) the access to works plan—
 - document reference 2.5 sheet 1 of 22 Sep-13 rev C;
 - document reference 2.5 sheet 2 of 22 Sep-13 rev C;

document reference 2.5 sheet 3 of 22 Sep-13 rev C;
document reference 2.5 sheet 4 of 22 Sep-13 rev C;
document reference 2.5 sheet 5 of 22 Sep-13 rev C;
document reference 2.5 sheet 6 of 22 Sep-13 rev C;
document reference 2.5 sheet 7 of 22 Sep-13 rev C;
document reference 2.5 sheet 8 of 22 Sep-13 rev C;
document reference 2.5 sheet 9 of 22 Sep-13 rev C;
document reference 2.5 sheet 10 of 22 Sep-13 rev C;
document reference 2.5 sheet 11 of 22 Nov-13 rev D;
document reference 2.5 sheet 12 of 22 Nov-13 rev E;
document reference 2.5 sheet 13 of 22 Sep-13 rev C;
document reference 2.5 sheet 14 of 22 Sep-13 rev C;
document reference 2.5 sheet 15 of 22 Sep-13 rev C;
document reference 2.5 sheet 16 of 22 Sep-13 rev C;
document reference 2.5 sheet 17 of 22 Sep-13 rev C;
document reference 2.5 sheet 18 of 22 Sep-13 rev C;
document reference 2.5 sheet 19 of 22 Sep-13 rev C;
document reference 2.5 sheet 20 of 22 Sep-13 rev C;
document reference 2.5 sheet 21 of 22 Sep-13 rev C;
document reference 2.5 sheet 22 of 22 Sep-13 rev C;

- (g) the book of reference (November 2013 – version 6);
- (h) the outline converter station design principles statement (November 2013 – version 3);
- (i) the outline written scheme of investigation: archaeology and cultural heritage (onshore) (July 2013 rev 1);
- (j) the outline code of construction practice (October 2013 – version 3);
- (k) the outline landscape and ecological management strategy (October 2013 – version 2);
- (l) the outline traffic management plan (October 2013 – version 3);
- (m) the outline travel plan (October 2013 – version 3);
- (n) the outline access management plan (October 2013 – version 3);
- (o) the outline Bawdsey bed level monitoring and remediation strategy (October 2013 – version 1);
- (p) the draft written scheme of investigation: archaeology and cultural heritage (offshore) (July 2013 – version 1);
- (q) the outline offshore operations and maintenance and monitoring plan (October 2013 – version 1);
- (r) the outline navigation monitoring strategy (October 2013 – version 1);
- (s) the outline skills strategy (October 2013 – version 1);

for certification that they are true copies of the documents referred to in this Order.

(2) A plan or document so certified shall be admissible in any proceedings as evidence of the contents of the document of which it is a copy.

Arbitration

33. Any difference under any provision of this Order, unless otherwise provided for, shall be referred to and settled by a single arbitrator to be agreed between the parties, or failing agreement,

to be appointed on the application of either party (after giving notice in writing to the other) by the decision-maker

Requirements, Appeals, etc

34.—(1) The provisions of section 72 of the 1990 Act shall apply so that the requirements numbered 10 to 32 is deemed to be imposed as and as if they were conditions imposed upon the grant of planning permission pursuant to section 72 of the 1990 Act and the development consent granted by this Order was a planning permission granted under the 1990 Act.

(2) Sub-section (1) of section 78 of the 1990 Act shall apply to the development consent granted by this Order and to the requirements specified in paragraph (1) except that it shall be modified so as to read for the purposes of this Order only as if there were inserted after subsection (b) the following—

“(bb) refuse 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”

(3) Sections 78 and 79 of the 1990 Act shall have effect in relation to any appeal under the terms of this article except that the Secretary of State in question shall be 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.

(4) The terms of any development order, and other rules and regulations, including without limitation regulations requiring environmental impact assessment, and which apply to applications pursuant to conditions or the subject matter of section 78 of the 1990 Act shall apply to any application or appeal made under the requirements specified in paragraph (1).

Abatement of works abandoned or decayed

35. Where Work No.1(a) to (c) and Work No.2 or any part of it is abandoned or allowed to fall into decay the Secretary of State may, following consultation with the undertaker, issue a written notice requiring the undertaker at its own expense to repair and restore or remove Work No.1(a) to (c) and Work No.2 or any relevant part of it, without prejudice to any notice served under section 105(2) of the 2004 Act. The notice may also require the restoration of the site of the relevant part(s) of Work No.1(a) to (c) and Work No.2 to a safe and proper condition within an area and to such an extent as may be specified in the notice.

Saving provisions for Trinity House

36. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

Crown rights

37.—(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;
 - (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

- (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; or
 - (b) to exercise any right under this Order compulsorily to acquire an interest in any land which is Crown land (as defined in the 2008 Act) which is for the time being held otherwise than by or on behalf of the Crown without the consent in writing of the appropriate Crown authority (as defined in the 2008 Act).
- (2) 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

38. Schedule L (protective provisions) shall have effect.

Signed by authority of the Secretary of State for Energy and Climate Change

[Address]

[Date] 201[X]

[Name]
Head of [Unit]
Department for Energy and Climate Change

SCHEDULES

SCHEDULE A

Article 2

AUTHORISED PROJECT

PART 1

Authorised Development

1. A nationally significant infrastructure project as defined in sections 14 and 15 of the 2008 Act which is located in the North Sea approximately 43.4 km from the Suffolk coast, comprising:

Work No. 1

- (a) an offshore wind turbine generating station with a gross electrical output capacity of up to 1,200 MW comprising up to 325 wind turbine generators each fixed to the seabed by one of three foundation types (namely, jacket foundation, gravity base foundation or suction caisson foundation), fitted with rotating blades and situated within the area shown on the works plan and further comprising (b) to (d) below;
- (b) up to three HVAC offshore collector stations fixed to the seabed within the area shown on the works plan by one of two foundation types (namely jacket foundation or gravity base foundation);
- (c) up to 1 meteorological mast fixed to the seabed within the area shown on the works plan by one of four foundation types (namely jacket foundation, gravity base foundation, suction caisson foundation or monopile foundation);
- (d) a network of subsea cables within the area shown on the works plan between the WTGs and the HVAC offshore collector stations, up to two interconnection cables between the HVAC offshore collector stations, up to ten export cables between the HVAC offshore collector stations and Work No. 2, and up to one interconnection cable between the HVDC offshore converter stations comprising Work No. 2 for the transmission of electricity and electronic communications between these different structures including one or more cable crossings;

and associated development within the meaning of section 115(2) of the 2008 Act comprising:

Work No. 2 – Up to two HVDC offshore converter stations fixed to the seabed within the area shown on the works plan by one of two foundation types (namely jacket foundation or gravity base foundation);

Work No. 3A – Up to four HVDC export cables between Work No. 2 and Work No. 3B consisting of subsea cables along routes within the Order limits seaward of MHWS including one or more cable crossings;

In the county of Suffolk, district of Suffolk Coastal

Work No. 3B – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from mean low water at Bawdsey Cliffs to Work No. 4 together with new temporary horizontal directional drilling compounds and a new temporary secondary construction consolidation site;

Work No. 3C – A new temporary vehicular access track from the temporary compound to the adopted highway at Ferry Road including modifications to the junction of the new vehicular access track and the adopted highway at Ferry Road and a new temporary vehicular access ramp from the temporary compound to the beach at Bawdsey Cliffs;

Work No. 4 – Up to twelve transition cable jointing bays, with associated cables, connecting Work No. 3B to Work No. 5 to the east of Ferry Lane, Bawdsey together with new temporary horizontal directional drilling compounds and a new temporary secondary construction consolidation site;

Work No. 5 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 4 running in a south westerly direction and passing through Ferry Road and continuing in a south westerly direction and passing through Queen's Fleet drain and then running in a north westerly direction and then continuing in a westerly direction and then continuing in a north westerly direction and then continuing in a south westerly direction to Work No. 7A;

Work No. 6 – A new temporary access track running in a north easterly direction from Work No. 5 to Duke's Lane and an upgraded access track running from Duke's Lane to join the adopted highway at Dock Road and modifications to the junction of Duke's Lane and the adopted highway at Dock Road;

Work No. 7A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 5 running in a south westerly direction and passing under the River Deben to Work No. 9 together with new temporary horizontal directional drilling compounds;

Work No. 7B – A new temporary secondary construction consolidation site on the east bank of the River Deben;

Work No. 8 – A new temporary vehicular access track running in a south westerly direction from Work No. 7B to Sheepgate Lane and upgrading of Sheepgate Lane to the adopted highway at Lower Falkenham Road and modifications to the junction of Sheepgate Lane and the adopted highway at Lower Falkenham Road;

Work No. 9 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running from Work No. 7A in a westerly direction and then running in a north westerly direction to Work No. 10A.

Work No. 10A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running in a north westerly direction from Work No. 9 to Work No. 11;

Work No. 10B – A new temporary secondary construction consolidation site and modifications to the adopted highway at Park Lane to provide vehicular access to the construction consolidation site;

Work No. 11 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 10 running in a northerly direction and passing through Park Lane and then continuing in a northerly direction to Work No. 14;

Work No. 12 – A new temporary vehicular access track running to the south of Low Wood and Cottage Wood from Work No. 11 and then running in a north westerly direction to Kirton Brook and then running in a westerly direction and then running in a south westerly direction to the adopted highway at Newbourn Road together with modifications to the junction of the new temporary vehicular access track and the adopted highway at Newbourn Road.

Work No. 13 – A new temporary vehicular access track running from Work No. 14 in an easterly direction to the north of the Thicket and then in a southerly direction and then westerly direction running along the edge of the Thicket and then in a southerly direction to Sluice Farm and an upgrade of the existing vehicular access track from Sluice Farm to the adopted highway at Park

Lane together with modifications to the junction of the new temporary vehicular access track and the adopted highway at Park Lane.

Work No. 14 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 11 to Work No. 15 running in a northerly direction and passing under Kirton Creek together with new temporary horizontal directional drilling compounds;

Work No. 15 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running from Work No. 14 in a northerly direction and continuing parallel with Mill Road and passing through The Street and then continuing in a northerly direction and passing through Ipswich Road and then continuing in a northerly direction and passing through Low Farm Campsite and then running in an easterly direction to Work No. 18 at Woodbridge Road;

Work No. 16 – A new temporary secondary construction consolidation site to the south east of Glebe Farm adjoining Work No. 15;

Work No. 17 – Modifications to and upgrading of an existing vehicular access track, running in a westerly direction from Work No. 16 to the adopted highway on Woodbridge Road together with modifications to the junction of the upgraded vehicular access track and the adopted highway at Woodbridge Road;

Work No. 18 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running from Work No. 15 and passing through Woodbridge Road and then continuing in a north easterly and then northerly and then north westerly direction and then running parallel with Waldringfield Road and then continuing in a westerly direction passing through Waldringfield Road and continuing to run parallel with Waldringfield Road and then running in a northerly direction passing through Waldringfield Road to Work No. 19;

Work No. 19 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 18 running in a northerly direction and passing under Martlesham Creek and then passing under the East Suffolk Railway to Work No. 21 together with new temporary horizontal directional drilling compounds;

Work No. 20 – Modifications to and upgrading of an existing vehicular access track, running from Work No. 19 in a southerly direction and then in a westerly direction and then in a northerly direction to the adopted highway on Church Lane together with modifications to the junction of the upgraded vehicular access track and the adopted highway at Church Lane;

Work No. 21 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 19 running in a westerly direction and passing under Sandy Lane and continuing in a westerly direction to Work No. 23A at Top Street;

Work No. 21A – A new temporary vehicular access track from Sandy Lane to Work No. 21 together with modifications to the junction of the new temporary vehicular access track and Sandy Lane;

Work No. 22A – Modifications to and upgrading of an existing vehicular access track, running in a westerly direction from Work No. 19 to the adopted highway at Sandy Lane;

Work No. 22B – Modifications to and upgrading of an existing vehicular access track, running in a southerly direction from Sandy Lane to Work No. 21 and Work No. 22A;

Work No. 23A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 21 to Work No. 24;

Work No. 23B – A new temporary primary construction consolidation site;

Work No. 23C – Modification and upgrading of an existing vehicular access track to provide vehicular access from and to the adopted highway at Top Street/Ipswich Road together with

modifications to the junction of the upgraded vehicular access track and the adopted highway at Top Street/Ipswich Road;

Work No. 24 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 23A running in a north westerly direction and passing under the A12 highway to Work No. 25A; together with new temporary horizontal directional drilling compounds;

Work No. 24A – Modifications to and upgrading of an existing vehicular access track known as Brock Lane running in an easterly direction to the adopted highway at Top Street together with modifications to the junction of the upgraded vehicular access track and the adopted highway at Top Street and upgrading of the existing vehicular access through the existing tunnel passing under the A12;

Work No. 25A – Connection works consisting of up to four cables and up to eight additional cable ducts laid underground running in a northerly direction from Work No. 24A and then in a north westerly direction passing through the existing access track leading to Cherry Tree Farm and continuing in a westerly direction passing through the access track from Lodge Road leading to Meadow Cottage and continuing in a westerly direction passing through the River Lark to Work No. 26;

Work No. 25B – Modifications and upgrading of an existing vehicular access track from Work No. 25A leading to the adopted highway at Seckford Hall Road to the south of Birds Hill together with modifications to the junction of the upgraded vehicular access track and the adopted highway at Seckford Hall Road;

Work No. 25C – A new temporary vehicular access track from Work No. 25A leading to the adopted highway at Lodge Road together with modifications to the junction of the new temporary vehicular access track and the adopted highway at Lodge Road;

Work No. 26 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 25A to Work No. 27 running in a north westerly direction and passing under Lodge Road together with new temporary horizontal directional drilling compounds;

Work No. 27 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running in a north westerly direction from Work No. 26 and then continuing in a south westerly direction and passing through Holly Lane and continuing in a westerly direction and passing through Church Road to Work No. 28A;

Work No. 28A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running in a north westerly direction to Work No. 29 at Butts Road;

Work No. 28B – A new temporary secondary construction consolidation site and a new vehicular access from the construction consolidation site to the adopted highway together with modifications to the junction of the new vehicular access track and the adopted highway;

Work No. 29 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running in a westerly direction from Work No. 28A passing through Butts Road and then running parallel with Grundisburgh Road and then continuing in a south westerly direction and then continuing in a westerly direction and then continuing in a north westerly direction passing through Grundisburgh Road and then continuing in a north westerly and then westerly direction passing through Clopton Road and then continuing in a south westerly direction and passing through the River Fynn and then continuing in a westerly direction and then continuing in a south westerly direction and then continuing in a westerly direction to Work No 30A;

Work No 30A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 29 and then passing through Witnessham Road then running in a north westerly direction to Work No. 31;

Work No. 30B – A new temporary secondary construction consolidation site and a new temporary vehicular access to the adopted highway at Witnesham Road together with modifications to the junction of the new temporary vehicular access and the adopted highway at Witnesham Road;

Work No. 31 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 30A passing through Cockfield Hall Lane running in a westerly direction and then continuing in a northerly direction and then continuing in a south westerly direction to Work No. 32;

In the county of Suffolk, district of Mid Suffolk

Work No. 32 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 31 running in a westerly direction and passing through Henley Road and continuing in a westerly direction passing through an unnamed track north east of Akenham and then continuing in a westerly direction and then continuing in a south westerly direction to Work No. 33A;

Work No. 33A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 32 running in a south westerly direction and passing under the Old Ipswich Road and then passing under the A14 highway to Work No. 34A together with new temporary horizontal directional drilling compounds;

Work No. 33B – A new temporary vehicular access track from Work No. 33A and Work No. 34B to the adopted highway at Paper Mill Lane together with modifications to the junction of the new temporary vehicular access track and the adopted highway at Paper Mill Lane;

Work No. 33C – Modifications to the adopted highway at Old Ipswich Road to provide a vehicular access from the adopted highway at Old Ipswich Road to Work No. 33A;

Work No. 34A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground running in a westerly direction from Work No. 33A and continuing in a westerly direction and passing through Paper Mill Lane to Work No. 35A;

Work No. 34B – a new temporary primary construction consolidation site;

Work No. 35A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 34A running in a westerly direction and passing under the River Gipping and then continuing in a westerly direction and passing under the Great Eastern Mainline Railway and then continuing in a westerly direction and passing under Bramford Road and then continuing in a westerly direction to Work No. 36 together with new temporary horizontal directional drilling compounds;

Work No. 35B – A new temporary access track and modification of the existing highway to provide access from Work No. 35A to the adopted highway at Paper Mill Lane;

Work No. 35C – A new temporary access track and modification of the existing highway to provide access from Work No. 35A to the adopted highway at Bramford Road;

Work No. 35D – Upgrading of an existing access track and modification of the existing highway to provide access from Work No. 35A and Work No. 36 to the adopted highway at Bramford Road;

Work No. 36 – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 35A running in a south westerly direction and passing through Pound Lane and then continuing in a south westerly direction passing through an unnamed track and then continuing in a south westerly direction passing through Somersham Road and then continuing in a south westerly direction passing through Tye Lane and then continuing in a south westerly direction to Work No. 37A;

Work No. 37A – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 36 running in a south westerly direction

and passing under Miller's Wood to Work No. 37D together with new temporary horizontal directional drilling compounds;

Work No. 37B – New temporary vehicular access tracks providing access between the eastern and western areas within Work No. 37A together with upgrading of the unnamed vehicular access track passing through Miller's Wood;

Work No. 37C – A new temporary vehicular access track from Work No. 37A and Work No. 37E passing through the temporary compound leading to the adopted highway at Bullen Lane together with modifications to the junction of the new temporary vehicular access track and the adopted highway at Bullen Lane;

Work No. 37D – Onshore connection works consisting of up to four cables and up to eight additional cable ducts laid underground from Work No. 37A running in a south westerly direction passing through an unnamed vehicular access track to Bullenhall Farm and continuing in a westerly direction to Work No. 39;

Work No. 37E – A new temporary secondary construction consolidation site and a new temporary access from Work No. 37D to the adopted highway at Bullen Lane;

Work No. 38 – A new temporary works area associated with Work No. 39;

Work No. 39 – An onshore converter station to the north west of the existing National Grid Bramford substation;

Work No. 39A – A new temporary vehicular access track to the un-adopted highway at Bullen Lane together with modifications to the junction of the new temporary vehicular access track and the un-adopted highway at Bullen Lane;

Work No. 40 – Landscaping works comprising of landscape planting in the vicinity of the onshore converter station referred to at Work No. 39 and a sustainable drainage system; and

Work No. 41 – Onshore connection works consisting of up to two cables laid underground from Work No. 39 running in a south easterly direction through bridleway 144 (3126) and continuing towards a connection point at the existing National Grid Bramford substation;

and in connection with Work Nos. 1 to 3A and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised project and which fall within the scope of the work assessed by the environmental statement and the deemed marine licences;

and in connection with such Work Nos. 3B to 41 and to the extent that they do not otherwise form part of any such work, further associated development shown on the plans referred to in the requirements, or approved pursuant to the requirements, including:

- (e) ramps, means of access and footpaths;
- (f) bunds, embankments, swales, landscaping and boundary treatments;
- (g) jointing bays, manholes, kiosks, marker posts and other works associated with cable laying;
- (h) water supply works, foul drainage provision, surface water management systems and culverting;
- (i) works of restoration;
- (j) fencing or other means of enclosure; and
- (k) such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised project;

which fall within the scope of the works assessed by the environmental statement.

2. The grid coordinates for that part of the authorised project which is seaward of MHWS are specified below and more particularly shown on the Order limits boundary coordinates plan:

Coordinates for the Order limits seaward of MHWS

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 0' 0.777"	1° 25' 27.320"	19	52° 0' 0.777"	1° 25' 27.320"
2	52° 0' 41.137"	1° 27' 15.227"	20	52° 0' 41.137"	1° 27' 15.227"
3	52° 3' 53.611"	1° 35' 40.499"	21	52° 3' 53.611"	1° 35' 40.499"
4	52° 5' 44.773"	1° 40' 57.350"	22	52° 5' 44.773"	1° 40' 57.350"
5	52° 8' 21.995"	1° 48' 34.767"	23	52° 8' 21.995"	1° 48' 34.767"
6	52° 9' 37.650"	1° 53' 5.293"	24	52° 9' 37.650"	1° 53' 5.293"
7	52° 9' 40.842"	1° 57' 7.198"	25	52° 9' 40.842"	1° 57' 7.198"
8	52° 11' 6.526"	2° 2' 15.690"	26	52° 11' 6.526"	2° 2' 15.690"
9	52° 12' 27.654"	2° 10' 3.953"	27	52° 12' 27.654"	2° 10' 3.953"
10	52° 12' 22.845"	2° 11' 9.965"	A	52° 17' 50.395"	2° 21' 1.372"
11	52° 13' 33.795"	2° 15' 22.225"	B	52° 19' 10.175"	2° 27' 36.407"
12	52° 13' 57.058"	2° 23' 6.622"	C	52° 23' 22.654"	2° 31' 40.044"
13	52° 9' 17.925"	2° 25' 36.436"	D	52° 21' 53.636"	2° 34' 13.872"
14	52° 11' 7.988"	2° 11' 30.888"	E	52° 18' 15.833"	2° 34' 13.645"
15	52° 10' 13.221"	2° 5' 28.775"	F	52° 7' 14.982"	2° 32' 58.021"
16	52° 8' 12.739"	1° 57' 41.369"	G	52° 4' 46.512"	2° 31' 2.669"
17	52° 8' 37.192"	1° 57' 49.886"	H	52° 4' 45.732"	2° 28' 1.913"
18	52° 8' 1.912"	1° 54' 31.662"			

3. The grid coordinates for that part of the authorised project which is landward of MLW are specified below and more particularly shown on the Order limits boundary coordinates plan:

Coordinates for the Order limits landward of MLW

<i>Point</i>	<i>Easting</i>	<i>Northing</i>	<i>Point</i>	<i>Easting</i>	<i>Northing</i>
1	617171	249404	26	617180	249325
2	618190	248721	27	612053	248923
3	618960	249173	28	610583	246204
4	620210	248413	29	610057	246124
5	625998	247781	30	609739	245985
6	629270	239493	31	609918	245942
7	630483	239547	32	609884	245833
8	631351	240084	33	609642	245891
9	633561	238981	34	609353	245766
10	634660	239242	35	609318	246028
11	634728	239318	36	609487	246133
12	635017	239232	37	609420	246159

<i>Point</i>	<i>Easting</i>	<i>Northing</i>	<i>Point</i>	<i>Easting</i>	<i>Northing</i>
13	635146	239181	38	609446	246180
14	635221	239151	39	609475	246203
15	635144	239066	40	609485	246210
16	635024	238959	41	609497	246218
17	634642	239170	42	609578	246292
18	633558	238900	43	609616	246313
19	631362	240010	44	609627	246317
20	630482	239481	45	609669	246338
21	629227	239432	46	609899	246396
22	626017	247711	47	609920	246409
23	620207	248338	48	609922	246357
24	618966	249122	49	610290	246374
25	618205	248646	50	610417	246545
			51	611926	248920

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) 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

Interpretation

1. In this Part of this Schedule—

“AOD” means above ordnance datum;

“highway authority” means the local highway authority for the relevant area;

“onshore cable corridor” means the onshore area in which the cables will be located within the Order limits;

“stage” means one of the nine stages of the connection works comprised in—

- (i) Work Nos. 3B and 3C (using the construction consolidation site at Work No. 4);
- (ii) Work Nos. 5 to 7A (using the construction consolidation site at Work No. 7B);
- (iii) Work Nos. 8 to 10A (using the construction consolidation site at Work No. 10B);
- (iv) Work Nos. 11 to 15 (using the construction consolidation site at Work No. 16);
- (v) Work Nos. 17 to 23A (using the construction consolidation site at Work No. 23B);
- (vi) Work Nos. 23C to 28A (using the construction consolidation site at Work No 28B);
- (vii) Works Nos. 29 to 30A (using the construction consolidation site at Work No 30B);

- (viii) Works Nos. 31 to 34A (using the construction consolidation site at Work No. 34B);
- (ix) Work No. 35A to 37D (using the construction consolidation site at Work No. 37E);
- (x) Work Nos. 38 to 41;

or such other stage of the connection works agreed in writing with the relevant local planning authority;

“working width” means the construction width of the onshore cable corridor including haul route, spoil storage and temporary drainage during installation of cables and/or cable ducts.

Time limits

2. The authorised project must commence no later than the expiration of five years beginning with the date this Order comes into force or such longer period as the Secretary of State may hereafter direct in writing.

Detailed offshore design parameters

3.—(1) Subject to paragraph (2), no wind turbine generator forming part of the authorised project shall—

- (a) exceed a height of 200 metres when measured from LAT to the tip of the vertical blade;
- (b) exceed a height of 120 metres to the height of the centreline of the generator shaft forming part of the hub when measured from LAT;
- (c) exceed a rotor diameter of 170 metres;
- (d) be less than 675 metres from the nearest WTG in either direction perpendicular to the approximate prevailing wind direction (crosswind) or be less than 900 metres from the nearest WTG in either direction which is in line with the approximate prevailing wind direction (downwind);
- (e) have a distance of less than 22 metres between the lowest point of the rotating blade of the wind turbine and MHWS.

(2) References to the location of a wind turbine generator are references to the centre point of that turbine.

4. No meteorological mast, wind turbine generator or offshore substation forming part of the authorised project shall be erected within the areas hatched black on the works plan, whose coordinates are specified below and more particularly shown on the Order limits boundary coordinates plan—

Coordinates for restricted build area

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
i	52° 17' 29.501"	2° 21' 18.183"	vii	52° 21' 52.244"	2° 34' 8.586"
ii	52° 19' 32.953"	2° 29' 16.557"	viii	52° 18' 15.948"	2° 34' 8.368"
iii	52° 19' 47.657"	2° 34' 8.460"	ix	52° 7' 15.824"	2° 32' 52.848"
iv	52° 20' 36.356"	2° 34' 8.509"	x	52° 4' 49.734"	2° 30' 59.349"
v	52° 20' 18.296"	2° 28' 48.188"	xi	52° 4' 48.985"	2° 28' 5.706"
vi	52° 23' 17.520"	2° 31' 41.224"			

5.—(1) The total number of offshore substations forming part of the authorised project must not exceed 5.

(2) The dimensions of any HVAC offshore collector stations forming part of the authorised project (excluding towers, helipads, masts and cranes) must not exceed 60 metres in height when measured from LAT, 30 metres in length and 40 metres in width.

(3) The dimensions of any HVDC offshore converter stations forming part of the authorised project (excluding towers, helipads, masts and cranes) must not exceed 60 metres in height when measured from LAT, 75 metres in length and 120 metres in width.

6.—(1) The total length of the cables comprising Work No. 3A must not exceed 400 kilometres.

(2) The total length of the cables comprising Work No. 1(d) must not exceed 680 kilometres.

(3) The total amount of cable protection for the cables comprising Work No. 3A must not exceed 24,000m³.

(4) The total amount of cable protection for the cables comprising Work No. 1(d) must not exceed 3,000m³.

7.—(1) In relation to a WTG, each gravity base foundation must not have—

(a) a diameter at the level of the seabed which is more than 50 metres;

(b) a base height, where there is a flat base and a cylindrical shaft, which is more than 10 metres above the level of the seabed;

(c) a column diameter, where there is a flat or conical base, of more than 7.5 metres at LAT;

(2) In relation to a WTG, each suction caisson foundation must not have:

(a) a diameter at the level of the seabed which is more than 25 metres;

(b) a base height where there is a flat base, which is more than 5 metres above the level of the seabed;

(c) a column diameter which is more than 7.5 metres at LAT.

(3) In relation to a WTG, each jacket foundation must not have—

(a) a width spacing between its legs at the level of the seabed which is more than 35 metres;

(b) a pile diameter which is more than 2.5 metres in the case of pin piles or a suction bucket diameter of more than 5 metres;

(c) more than one pile per leg or more than one suction bucket per leg;

(d) more than four legs.

(4) In relation to a meteorological mast, each monopile foundation must not have a diameter greater than 6.5 metres.

(5) The total number of WTGs with gravity base foundations must not exceed 240.

(6) The total amount of scour protection for the WTGs, HDVC offshore converter stations and HVAC offshore collector stations forming part of the authorised project must not exceed 3.529km².

Aviation safety

8.—(1) The undertaker must exhibit such lights, with such shape, colour and character as are required in writing by Air Navigation Order 2009(a) and determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation and as directed by the CAA.

(2) The undertaker must notify the Defence Infrastructure Organisation, at least 14 days prior to the commencement of the authorised scheme, in writing of the following information—

(a) the date of the commencement of construction of the authorised scheme;

(b) the date any wind turbine generators are brought into use;

(c) the maximum height of any construction equipment to be used;

(a) S.I. 2009/3015

- (d) the maximum heights of any wind turbine generator, mast and platform to be constructed;
- (e) the latitude and longitude of each wind turbine generator, mast and platform to be constructed,

and the Defence Infrastructure Organisation must be notified of any changes to the information supplied under this paragraph and of the completion of the construction of the authorised scheme.

Offshore decommissioning

9. No authorised development shall commence until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2) of the 2004 Act has been submitted to the Secretary of State for approval.

Detailed design approval onshore

10.—(1) No part of Work No. 39 shall commence until details of the layout, scale and external appearance of the same, have been submitted to and approved in writing by the relevant planning authority. Work No. 39 must be carried out in accordance with the approved details.

(2) Any details provided by the undertaker pursuant to paragraph (1) must accord with the outline converter station design principles statement and be within the Order limits.

(3) No building comprised in Work No. 39 shall exceed 79 metres AOD and no external electrical equipment comprised in Work No. 39 shall exceed 64 metres AOD.

(4) The total footprint of the building(s) housing the converters comprised in Work No. 39 must not exceed 130 metres in length and 85 metres in width.

(5) The fenced compound (excluding its accesses) comprised in Work No. 39 must not exceed 190 metres by 150 metres.

(6) The working width of the onshore cable corridor must not exceed 55 metres, save in respect of the following—

- (a) works for which horizontal directional drilling is proposed for the purpose of passing under the relevant obstruction named in the relevant Work No., as follows—
 - (i) Work No. 3B for which the working width of the onshore cable corridor must not exceed 160 metres;
 - (ii) Work No. 7A for which the working width of the onshore cable corridor must not exceed 160 metres;
 - (iii) Work No. 14 for which the working width of the onshore cable corridor must not exceed 110 metres;
 - (iv) Work No. 19 for which the working width of the onshore cable corridor must not exceed 160 metres;
 - (v) Work No. 24 for which the working width of the onshore cable corridor must not exceed 120 metres;
 - (vi) Work No. 26 for which the working width of the onshore cable corridor must not exceed 120 metres;
 - (vii) Work No. 33A for which the working width of the onshore cable corridor must not exceed 160 metres;
 - (viii) Work No 35A for which the working width of the onshore cable corridor must not exceed 130 metres;
 - (ix) Work No. 37A for which the working width of the onshore cable corridor must not exceed 130 metres;

(b) plot 340 in the book of reference within Work No. 31 must not exceed 97 metres.

(7) Works Nos. 3B, 7A, 14, 19, 24, 26, 33A, 35A, and 37A must comprise horizontal directional drilling for the purpose of passing under the relevant obstruction named in the relevant Work No.

(8) In the event of the use of open trenching for construction of the connection works at Work No. 26, that open trenching must be carried out in accordance with figure 6.1 of the further environmental information.

(9) The footprint of the construction consolidation sites must not exceed the following—

- (a) 15,000 m² in the case of primary construction consolidation sites; or
- (b) 10,000 m² in the case of secondary construction consolidation sites.

(10) In relation to the kiosks to be located within the onshore cable corridor—

- (a) no stage of the connection works shall commence until details of the number, location, scale and appearance of the kiosks have been submitted to and approved in writing by the relevant planning authority;
- (b) the footprint of each kiosk must not exceed 1 metre in width, 0.75 metres in length and 1 metres in height; and
- (c) the kiosks must be constructed in accordance with the approved details.

Landfall method statement

11.—(1) No part of Work No. 3B, Work No. 3C or Work No. 4 shall commence until a method statement for the construction of Work Nos. 3B, 3C and 4 has been submitted to and approved in writing by the relevant planning authority in consultation with Natural England.

(2) The method statement referred to in paragraph (1) must include measures to minimise the impact of the works on cliff stability and coastal erosion.

(3) The method statement must be implemented as approved.

Provision of landscaping

12.—(1) No stage of the connection works shall commence until for that stage a written landscaping management scheme and associated work programme (which accords with the outline landscape and ecological management strategy) has been submitted to and approved in writing by the relevant planning authority in consultation with Natural England.

(2) The landscaping management scheme must include details of all proposed hard and soft landscaping works, including:

- (a) location, number, species, size and planting density of any proposed planting, including any trees;
- (b) cultivation, importing of materials and other operations to ensure plant establishment;
- (c) proposed finished ground levels;
- (d) hard surfacing materials;
- (e) vehicular and pedestrian access, parking and circulation areas;
- (f) minor structures, such as furniture, refuse or other storage units, signs and lighting;
- (g) proposed and existing functional services above and below, ground, including drainage, power and communications cables and pipelines, manholes and supports;
- (h) details of existing trees to be retained with measures for their protection during the construction period;
- (i) retained historic landscape features and proposals for restoration, where relevant;
- (j) implementation timetables for all landscaping works;
- (k) proposed finished heights, form and gradient of earthworks in relation to Work No. 39 and Work No. 40; and
- (l) in relation to Work No. 39 and Work No. 40 only, maintenance of the landscaping, including irrigation arrangements.

(3) The landscaping management scheme must be implemented as approved.

Implementation and maintenance of landscaping

13.—(1) All landscaping works must be carried out in accordance with the landscaping management schemes approved under **requirement 12**, and in accordance with the relevant recommendations of appropriate British Standards.

(2) Any tree or shrub planted as part of an approved landscaping management scheme that, within a period of five years (save in relation to Work No. 38 and Work No. 40, which shall be ten years) after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased must be replaced in the first available planting season with a specimen of the same species and size as that originally planted.

Highway accesses and improvements

14.—(1) No stage of the connection works shall commence until for that stage written details (which accord with the outline access management plan) of the siting, design, layout and any access management measures for any new permanent or temporary means of access to a highway to be used by vehicular traffic, or any alteration to an existing means of access to a highway used by vehicular traffic, has, after consultation with the highway authority, been submitted to and approved by the relevant planning authority.

(2) The highway accesses for that stage must be constructed or altered and the works described in paragraph (1) above in relation to access management measures must be carried out, as the case may be, in accordance with the approved details before they are brought into use for the purposes of the authorised project.

(3) No stage of the connection works shall commence until for that stage, a scheme of highway improvements within the highway boundary (in accordance with table 1 of the outline traffic management plan) has been submitted to, and approved by the local planning authority in consultation with the relevant highway authority. The scheme must describe whether the proposed improvements are to be temporary or permanent.

(4) The highway improvements must be constructed in accordance with the approved details before they are brought in to use for the purposes of the authorised project.

Fencing and other means of enclosure

15.—(1) No stage of the connection works shall be commenced until for that stage written details of all proposed permanent and temporary fences, walls or other means of enclosure of the connection works have been submitted to and approved by the relevant planning authority.

(2) All construction consolidation sites must remain securely fenced in accordance with the approved details at all times during construction of the relevant stage of the connection works.

(3) Any temporary fencing must be removed on completion of the relevant stage of the connection works.

(4) Any approved permanent fencing in relation to Work No. 39 must be completed before the relevant work is brought into use and maintained for the operational lifetime of Work No. 39.

Surface and foul water drainage

16.—(1) No stage of the connection works shall be commenced until for that stage written details of the surface and (if any) foul water drainage system (including means of pollution control) have, after consultation with the relevant drainage authorities, Suffolk County Council and the Environment Agency, been submitted to and approved by the relevant planning authority.

(2) The details agreed in paragraph (1) must include a surface water drainage scheme for Work No. 39, which is based on sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development.

(3) The surface and foul water drainage system for the relevant stage must be constructed in accordance with the approved details unless agreed otherwise in writing by the relevant planning authority.

(4) Contaminated land and ground water

17.—(1) No connection works comprised in stage (vii) shall commence until a written scheme applicable to that stage, to mitigate the potential for release of contaminants within the Order limits has, after consultation with the Environment Agency, been submitted to and approved by the relevant planning authority.

(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 within the Order limits comprised in stage (vii) and mitigation measures to be undertaken to limit impacts arising from the potential release of contaminants.

(3) The written scheme referred to in paragraph (1) must be implemented as approved.

Archaeology

18.—(1) No stage of the connection works shall be commenced until for that stage a written scheme of archaeological investigation (which accords with the outline written scheme of investigation: archaeology and cultural heritage (onshore)) has, after consultation with English Heritage and Suffolk County Council, been submitted to and approved in writing by the relevant planning authority.

(2) The scheme must include details of the following—

- (a) an assessment of significance and research questions; and
- (b) the programme and methodology of site investigation and recording;
- (c) the programme for post investigation assessment;
- (d) provision to be made for analysis of the site investigation and recording;
- (e) provision to be made for publication and dissemination of the analysis and records of the site investigation;
- (f) provision to be made for archive deposition of the analysis and records of the site investigation; and
- (g) nomination of a competent person or persons/organisation to undertake the works set out within the written scheme of investigation.

(3) Any archaeological works or watching brief must be carried out in accordance with the approved scheme.

(4) The site investigation and post investigation assessment must be completed for that stage 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 stage.

Ecological management plan

19.—(1) No stage of the connection works shall be commenced until for that stage a written ecological management plan (which accords with the outline landscape and ecological management strategy) reflecting the survey results and ecological mitigation and enhancement measures included in the environmental statement has been submitted to and approved in writing by the relevant planning authority in consultation with Natural England.

(2) The ecological management plan must include an implementation timetable and must be carried out as approved.

Code of construction practice

20.—(1) No stage of the connection works shall be commenced until for that stage a code of construction practice has been submitted to and approved in writing by the relevant local planning authority, in consultation with the relevant highway authority. The code of construction practice must cover all the matters set out in the outline code of construction practice.

- (2) The code of construction practice must include—
- (a) a surface water and drainage management plan;
 - (b) watercourse crossing method statements;
 - (c) a flood plan;
 - (d) a written scheme for noise and vibration management during construction;
 - (e) an air quality monitoring plan;
 - (f) artificial light emissions plan;
 - (g) a site waste management plan;
 - (h) a pollution prevention and emergency incident response plan; and
 - (i) a project community and public relations procedure.

(3) The code of construction practice approved in relation to the relevant stage of the connection works must be followed in relation to that stage of the connection works.

External lighting and control of artificial light emissions

21.—(1) No stage of the connection works shall commence until written details of any external lighting to be installed in connection with that stage, including measures to prevent light spillage, have, after consultation with the highway authority, been submitted to and approved by the relevant planning authority; and any approved means of lighting shall be installed in accordance with the approved details and retained for the duration of the construction period.

(2) Any means of construction lighting approved under (1) above must be removed on completion of the relevant stage of the connection works.

(3) Work No. 39 shall not be commenced until a written scheme for the management and mitigation of artificial light emissions during the operation of Work No. 39, including measures to minimise lighting pollution and the hours of lighting, has been submitted to and approved in writing by the relevant planning authority.

(4) The approved scheme for the management and mitigation of artificial light emissions must be implemented before and maintained during the operation of Work No. 39.

Control of noise during construction

22.—(1) No stage of the connection works shall commence until a written scheme for noise and vibration management (which must accord with the outline code of construction practice) during construction of that stage has been submitted to and approved by the relevant planning authority. The scheme for noise and vibration management must form part of the code of construction practice.

(2) The scheme must set out the particulars of—

- (a) the construction works, and the method by which they are to be carried out;
- (b) the noise attenuation measures to be taken to minimise noise resulting from the construction works, including any noise limits; and
- (c) a scheme for monitoring the noise during the construction works to ensure compliance with the noise limits and effectiveness of the attenuation measures.

(3) The approved noise and vibration management scheme must be implemented before and maintained during construction of the relevant stage of the connection works.

(4) The construction works must be undertaken in accordance with the approved noise and vibration management scheme.

Construction hours

23.—(1) Construction work for the connection works and any construction-related traffic movements to or from the site of the connection works shall not take place other than between

0700 hours and 1900 hours Monday to Saturday, with no activity on Sundays or bank holidays, save—

- (a) where continuous periods of operation are required as assessed in the environmental statement, such as concrete pouring and directional drilling (subject to paragraphs (3) and (4) below);
- (b) for internal fitting out works associated with the onshore converter station comprised within Work No. 39;
- (c) for the delivery of abnormal loads to the connection works, which may cause congestion on the local road network; and
- (d) where connection works are being carried out on the foreshore.

(2) All construction operations which are to be undertaken outside the hours specified in paragraph (1) must be agreed with the relevant planning authority in writing in advance, and must be carried out within the agreed times.

(3) Construction of Work No. 21 shall not take place other than between 0700 hours and 1900 hours Monday to Saturday, with no activity on Sunday or bank holidays.

(4) Construction of Work No. 26 shall not take place other than between 0700 hours and 1900 hours Monday to Friday and 0700 hours and 1400 hours on Saturday, with no activity on Sunday or bank holidays.

Control of noise during operational phase

24.—(1) No part of Work No. 39 will commence until written details that provide for the insulation of the onshore converter station against the transmission of noise and vibration have been submitted to and approved in writing by the relevant planning authority. Work No. 39 must thereafter be implemented in accordance with the approved details. The rating level of operational noise immissions (including any relevant penalties for tonal or impulsive noise in accordance with section 8 of BS4142:1997) from Work No. 39 (including transformers, air handling units and cooling fans) shall not exceed 35 dB $L_{Aeq, 5 \text{ min}}$ at Bullenhall Farm (610287, 246601) Hill Farm (609088, 245652) and Woodlands Farm (609597, 246806).

(2) Within three months of the completion of commissioning of Work 39, the undertaker shall submit measurements to the relevant planning authority taken in the vicinity of the relevant property or properties specified at paragraph (1) to confirm the rating level of operational noise immissions do not exceed 35 dB $L_{Aeq, 5 \text{ min}}$, including details of any remedial works and a programme of implementation should the immissions exceed the stated levels.

(3) Measurements shall be undertaken in accordance with the equipment specifications, measurement procedures and monitoring equipment positioning guidelines outlined in section 4, 5 and 6 of BS 4142:1997.

(4) For the purposes of this requirement, “completion of commissioning” means the date when the circuits have been fully tested and verified that they are able to transmit their rated power capacity to the grid connection point and National Grid has issued an FON (final operation notification) to the generator.

Traffic

25.—(1) No stage of the connection works shall be commenced until for that stage, after consultation with the relevant highway authority, the following have been submitted to and approved by the relevant local planning authority in consultation with the relevant highway authority—

- (a) a traffic management plan which must be in accordance with the outline traffic management plan;
- (b) a travel plan which must be in accordance with the outline travel plan; and
- (c) an access management plan which must be in accordance with the outline access management plan.

(2) The plans approved under paragraph (1) must be implemented upon commencement of the relevant stage of the connection works.

Port travel plan

26.—(1) No stage of the connection works shall be commenced until a travel plan for the onshore port-related traffic to and from the selected base port or ports and relating to the authorised project, has been submitted to and approved in writing by the relevant planning authority in consultation with the relevant highway authority. The travel plan must be implemented as approved at all times specified within the travel plan during the construction and/or operation of the authorised project.

(2) For the purposes of this requirement—

“relevant planning authority” and “relevant highway authority” mean the planning or highway authority or authorities in whose area the relevant port is located;

“selected base port” or “ports” means a port or ports situated in England and/or Wales; and

“base port” means the port used by management personnel for construction of the authorised project and for the ongoing operational management of the authorised project.

European protected species

27.—(1) No stage of the connection works shall be commenced until final pre-construction survey work has been carried out to establish whether a European protected species is present on any of the land affected, or likely to be affected, by that stage of the connection works or in any of the trees to be lopped or felled as part of that stage 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 Natural England and the relevant planning authority, a scheme of protection and mitigation measures has been submitted to and approved in writing by the relevant planning authority. The connection works shall be carried out in accordance with the approved scheme.

(3) “European protected species” has the same meaning as in regulations 40 and 44 of the Conservation (Natural Habitats, &c.) Regulations 2010^(a).

Restoration of land used temporarily for construction

28. Any land landward of mean low water 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 the relevant planning authority in consultation with the relevant highway authority may approve, as soon as reasonably practicable and in any event within twelve months of completion of the relevant stage of the connection works.

Installation of cable ducts

29.—(1) Save in relation to plots 448 to 450, 453-454 and 457 to 471 in the book of reference—

(a) all cable ducts forming part of the onshore connection works must be installed simultaneously together with the onshore cables for the authorised project forming part of the onshore connection works unless paragraph (2) applies; and

(b) no stage of the connection works shall commence until a written method statement showing the programme for laying the onshore cables for the authorised project and all cable ducts as part of a single cable laying operation has for that stage been submitted to and approved in writing by the relevant planning authority. The method statement must

(a) S.I. 2010/490

include an implementation timetable for laying the cables for the authorised project and all ducts and must be carried out as approved.

(2) If the Secretary of State, on an application to him from the undertaker shall confirm in writing that other generation projects which would otherwise use the ducts to connect to the National Grid have been abandoned or will not come forward within a reasonable timeframe there shall be no requirement to install the ducts pursuant to paragraph (1) above.

(3) In considering any application to him under paragraph (2) above the Secretary of State shall have regard to—

- (a) the status of any consent process for those other generation projects;
- (b) the status of any agreement for lease for the offshore location of these other generation projects;
- (c) the status of any connection agreement to the National Grid;
- (d) any confirmation from The Crown Estate or National Grid with regard to (b) and (c) respectively.
- (e) any statements from the relevant planning authorities and any other interested party in relation to those other generation projects.

Skills strategy

30.—(1) No stage of the connection works shall be commenced until a skills strategy (which accords with the outline skills strategy) has been submitted to and approved in writing by the relevant planning authority, after consultation with Suffolk County Council.

(2) The skills strategy must be implemented as approved.

Onshore decommissioning

31.—(1) Within three months of the cessation of commercial operation of the connection works, or of Work No. 3B or of Work No. 4 an onshore decommissioning plan shall be submitted to and approved in writing by the relevant planning authority.

(2) The decommissioning plan must be implemented as approved.

Decommissioning of Work No. 3B and Work No. 4

32.—(1) After a period of 24 years but before the expiration of a period of 25 years following completion of construction of Work No. 3B and Work No. 4 or 2043 (whichever is earlier), the undertaker must submit a report to the relevant planning authority detailing the following—

- (a) the extent of coastal retreat experienced following completion of construction;
- (b) whether any remedial works or mitigation measures to protect Work No. 3B and Work No. 4 from coastal retreat have been required during this period, what these works comprised and an assessment of their impacts on coastal processes;
- (c) the length of any proposed extension to the operational lifespan of the authorised project;
- (d) the extent of the likely coastal retreat during the timeframe of any proposed extension and the likely need for, and nature of, any proposed remedial works or mitigation measures to protect Work No. 3B and Work No. 4 from coastal retreat and an analysis of their predicted impact on coastal processes; and
- (e) any proposed remedial works or mitigation measures identified under paragraph (d).

(2) If it cannot be demonstrated to the reasonable satisfaction of the relevant planning authority that, taking into account any proposals for such remedial works or mitigation measures, Work No. 3B and Work No. 4 will not have a significant impact on coastal processes then Work No. 3B and Work No. 4 must be decommissioned in accordance with **requirement 31** (onshore decommissioning).

Requirement for written approval

33. Where under any of the above requirements the approval or agreement of the Secretary of State, the relevant planning authority or another person is required, that approval or agreement must be given in writing.

Amendments to approved details

34.—(1) With respect to any requirement which requires the authorised project to be carried out in accordance with the details approved by the relevant planning authority or another person, the approved details must be carried out as approved unless an amendment or variation is previously agreed in writing by the relevant planning authority or that other person in accordance with paragraph (2).

(2) Any amendments to or variations from the approved details must be in accordance with the principles and assessments set out in the environmental statement.

(3) The approved details shall be taken to include any amendments that may subsequently be approved in writing by the relevant planning authority or that other person.

SCHEDULE B

Article 8

STREETS SUBJECT TO STREET WORKS

(1) Area	(2) Street subject to street works	(3) Grid Co-ordinates	
		Easting	Northing
Suffolk Coastal District	Ferry Road	634614	239177
Suffolk Coastal District	Track leading south to Ferry Road	634370	239139
Suffolk Coastal District	Track parallel to Sheepgate Lane, north of Goseford Hall and south of Falkenham Wood	629732	239454
Suffolk Coastal District	Track leading south from Falkenham Wood to Falkenham at The Old Vicarage	629272	239423
Suffolk Coastal District	Track between Falkenham Wood and sewage works to the west of Falkenham Wood	628851	239776
Suffolk Coastal District	Track perpendicular to Falkenham Road, leading to Corporation Farm	628590	240036
Suffolk Coastal District	Park Lane	628242	240408
Suffolk Coastal District	Track north of Park Lane, south of White Cottages, leading to Lodge Farm	628093	240827
Suffolk Coastal District	Track between Ranglins Wood and Ivy Cottages/Hemley House	628018	242359
Suffolk Coastal District	The Street	627809	243226
Suffolk Coastal District	Track from Newbourne Road leading to New Oak Tree Farm	627408	244468

<i>(1) Area</i>	<i>(2) Street subject to street works</i>	<i>(3) Grid Co-ordinates</i>	
		<i>Easting</i>	<i>Northing</i>
Suffolk Coastal District	Ipswich Road	627462	244841
Suffolk Coastal District	Woodbridge Road	627560	245176
Suffolk Coastal District	Track from Waldringfield Road, leading to Rudd's Barn	627140	245610
Suffolk Coastal District	Track from Waldringfield Road, to the east of Howe's Farm Cottages	626758	245999
Suffolk Coastal District	Waldringfield Road	626581	246126
Suffolk Coastal District	Waldringfield Road	626301	246329
Suffolk Coastal District	Track north of, and roughly parallel to, Waldringfield Road, and south of Hall Farm	626295	246536
Suffolk Coastal District	Sandy Lane	625976	247756
Suffolk Coastal District	Top Street	625448	247817
Suffolk Coastal District	A12	624951	247849
Suffolk Coastal District	Track west of Seckford Hall Golf Course, leading south to Cherry Tree Farm	624569	248354
Suffolk Coastal District	Track leading south from Lodge Road to Meadow Cottage	623853	248241
Suffolk Coastal District	Lodge Road	623195	248243
Suffolk Coastal District	Holly Lane	622419	248534
Suffolk Coastal District	Church Road	621773	248420
Suffolk Coastal District	Butts Road	621310	248603
Suffolk Coastal District	Grundisburgh Road	619720	248770
Suffolk Coastal District	Clopton Road	619275	249287
Suffolk Coastal District	Witnesham Road (B1077)	617716	248813
Suffolk Coastal District	Cockfield Hall Lane	617410	249092
Mid Suffolk District	Henley Road	616129	249053
Mid Suffolk District	Thurleston Lane, track to Bower Farm	615152	248929
Mid Suffolk District	Old Ipswich Road	613343	249033
Mid Suffolk District	A14	613288	248997
Mid Suffolk District	Papermill Lane	612800	248938
Mid Suffolk District	Bramford Road (B1113)	612073	248982
Mid Suffolk District	Pound Lane	611768	248776

<i>(1) Area</i>	<i>(2) Street subject to street works</i>	<i>(3) Grid Co-ordinates</i>	
		<i>Easting</i>	<i>Northing</i>
Mid Suffolk District	Track between Dairy Farm and Lower Dairy Farm	611343	247949
Mid Suffolk District	Somersham Road	611291	247823
Mid Suffolk District	Track to west of Copenhagen Cottage	610997	247466
Mid Suffolk District	Tye Lane	610767	247054
Mid Suffolk District	Track to Bullenhall Farm	610239	246401
Mid Suffolk District	Track to Bullenhall Farm	610253	246206
Mid Suffolk District	Track leading west of Bullenhall farm towards Fore Grove and Bushey Grove	609682	246278

SCHEDULE C

Article 9

PUBLIC RIGHTS OF WAY TO BE TEMPORARILY STOPPED UP

Part 1

Rights of way for which a replacement will be provided during stopping up

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>		<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>		
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Eastings</i>	<i>Northing</i>		<i>Eastings</i>	<i>Northing</i>
Suffolk Coastal District	4	7201	Falkenham	Footpath 5	629762.11	239491.15	629446.033	239390.206	Approximately 350m between the points marked 4a and 4b on Sheet 2 of the public rights of way plan

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	5	7187	Falkenham	Footpath 3	629255.96	239503.29	629271.137	239410.645	Approximately 95m between the points marked 5a and 5b on Sheet 3 of the public rights of way plan		
Suffolk Coastal District	6	7951	Kirton	Bridleway 34	628588.47	240038.5	628588.909	239941.064	Approximately 97m between points 6a and 6b on Sheet 2 of the public rights of way plan		
Suffolk Coastal District	7	7953	Kirton	Footpath 37	628438.75	240170.03	628352.531	240145.308	Approximately 90m between points 7a and 7b on Sheet 3 of the public rights of way plan		

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	8	7937	Kirton	Bridleway 13	628127.41	241041.84	628052.63	241047.582	Approximately 75m between points 8a and 8b on Sheet 3 of the public rights of way plan		
Suffolk Coastal District	9	7632	Hemley	Footpath 1	628081.92	242364.68	628007.861	242352.799	Approximately 75m between points 9a and 9b on Sheet 4 of the public rights of way plan		
Suffolk Coastal District	10	8257	Newbourne	Footpath 8	627752.7	243616.2	627726.774	243540.518	Approximately 80m between points 10a and 10b on Sheet 4 of the public rights of way plan		
Suffolk Coastal District	11	8256	Newbourne	Bridleway 6	627749.77	243624.07	627685.34	243684.181	Approximately 90m between points 11a and 11c on Sheet 4 of the public rights of way plan		

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	13	9280	Waldringfield	Bridleway 24	627448.33	244473.13	627354.093	244467.614	Approximately 94m between points 13a and 13b on Sheet 5 of the public rights of way plan		
Suffolk Coastal District	14	8152	Martlesham	Footpath 46	626347.9	246536.68	626265.414	246537.349	Approximately 85m between points 14 a and 14b on Sheet 5 of the public rights of way plan		
Suffolk Coastal District	15	8151	Martlesham	Footpath 45	626467.9	246590.85	626480.279	246678.221	Approximately 85m between points 15 a and 15 b on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	16	8132	Martlesham	Footpath 16	626515.57	246822.71	626407.605	246806.392	Approximately 110m between points 16a and 16c on Sheet 6 of the public rights of way plan		

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	19	8126	Martlesham	Footpath 10	625352.38	247889.94	625331.517	247815.983	Approximately 77m between points 19a and 19b on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	20	7487	Great Bealings	Footpath 10	625040.59	247855.61	625149.021	247784.742	Approximately 130m between points 20a to 20c on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	20	8125	Martlesham	Footpath 9A	625331.18	247746.55	625149.021	247784.742	Approximately 190m between points 20c and 20b on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	21	7486	Great Bealings	Footpath 9	625061.51	247841.43	625148.594	247632.023	Approximately 109m between points 21a and 21c on Sheet 6 of the public rights of way plan		

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	21	8124	Martlesham	FP9	625102.54	247740.95	625148.594	247632.023	Approximately 118m between points 21c and 21b on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	24	7487	Great Bealings	Footpath 10	624855.62	247958.77	624759.366	248071.035	Approximately 150m between points 24a and 24b on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	25	7485	Great Bealings	Footpath 8	624568.95	248404.92	624579.152	248329.744	Approximately 75m between points 25a and 25b on Sheet 6 of the public rights of way plan		
Suffolk Coastal District	26	7488	Great Bealings	Footpath 11	623857.55	248290.41	623855.276	248216.273	Approximately 75m between points 26a and 26b on Sheet 7 of the public rights of way plan		

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	27	8080	Little Bealings	Footpath 6	622871.87	248398.13	623034.96	248224.917	Approximately 241m between points 27a and 27b on Sheet 7 of the public rights of way plan		
Suffolk Coastal District	28	8079	Little Bealings	Footpath 5	622860.97	248401.34	622906.256	248262.876	Approximately 145m between points 28a and 28b on Sheet 7 of the public rights of way plan		
Suffolk Coastal District	29	8078	Little Bealings	Footpath 3	622341.91	248516.49	622375.604	248449.204	Approximately 75m between 29a and 29b on Sheet 7 of the public rights of way plan		
Suffolk Coastal District	30	8441	Playford	Footpath 5	622050.32	248386.62	621987.635	248326.694	Approximately 85m between points 30a and 30b on Sheet 7 of the public rights of way plan		

(1) Area	(2) Footpath to be temporarily stopped up						(3) Grid coordinates at start of crossing (point a on the public rights of way plan)		(4) Grid coordinates at start of crossing (point b on the public rights of way plan)		(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan
	Plan Ref	Definitive Map Ref	Parish	Path Number	Easting	Northing	Easting	Northing			
Suffolk Coastal District	31	7062	Culpho	Footpath 1	620954.65	248615.05	621002.94	248540.599	Approximately 95m between points 31a and 31b on Sheet 8 of the public rights of way plan		
Suffolk Coastal District	32	9511	Witnesham	Bridleway 30	618816.16	249221.3	618872.031	249144.698	Approximately 95m between points 32a and 32b on Sheet 9 of the public rights of way plan		
Suffolk Coastal District	33	9363	Westerfield	Restricted Byway 5	617722.38	248876.35	617639.768	248879.475	Approximately 85m between points 33a and 33b on Sheet 9 of the public rights of way plan		
Suffolk Coastal District	34	9362	Westerfield	Footpath 3	617304.42	249200.19	617226.427	249197.095	Approximately 85m between points 34a and 34b on Sheet 9 of the public rights of way plan		

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>						<i>(3) Grid coordinates at start of crossing (point a on the public rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the public rights of way plan)</i>		<i>(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>			
Suffolk Coastal District	35	9366	Westerfield	Bridleway 10	617020.45	249343.53	617052.008	249274.196	Approximately 75m between points 35a and 35b on Sheet 9 of the public rights of way plan		
Mid Suffolk District	36	2084	Akenham	Bridleway 19	615361.22	249018.93	615231.344	248943.904	Approximately 150m between points 36a and 36b on Sheet 10 of the public rights of way plan		
Mid Suffolk District	37	2071	Akenham	Bridleway 5	615157.21	249019.61	615155.328	248943.933	Approximately 80m between points 37a and 37b on Sheet 10 of the public rights of way plan		
Mid Suffolk District	38	2069	Akenham	Bridleway 5	614504.84	249086.25	614537.79	249012.879	Approximately 80m between points 38a and 38b on Sheet 10 of the public rights of way plan		

(1) Area	(2) Footpath to be temporarily stopped up						(3) Grid coordinates at start of crossing (point a on the public rights of way plan)		(4) Grid coordinates at start of crossing (point b on the public rights of way plan)		(5) Extent of temporary stopping up as shown on sheet X of the rights of way plan
	Plan Ref	Definitive Map Ref	Parish	Path Number	Easting	Northing	Easting	Northing			
Mid Suffolk District	39	3542	Claydon	Footpath 21	613668.71	249167.47	613636.165	249093.197	Approximately 80m between points 39a and 39b on Sheet 10 of the public rights of way plan		
Mid Suffolk District	41	3136	Bramford	Footpath 10	611276.71	247828.58	611265.877	247701.159	Approximately 130m between points 41a and 41b on Sheet 11 of the public rights of way plan		
Mid Suffolk District	42	3133	Bramford	Footpath 8	610838.69	247434.12	610932.772	247452.79	Approximately 95m between points 42a and 42b on Sheet 11 of the public rights of way plan		

Part 2

Rights of way for which no replacement will be provided during the temporary stopping up

<i>(1) Area</i>	<i>(2) Footpath to be temporarily stopped up</i>				<i>(3) Grid coordinates at start of crossing (point a on the rights of way plan)</i>		<i>(4) Grid coordinates at start of crossing (point b on the rights of way plan)</i>		<i>(5) Extent of temporary stopping up a shown on sheet X of the public rights of way plan</i>
	<i>Plan Ref</i>	<i>Definitive Map Ref</i>	<i>Parish</i>	<i>Path Number</i>	<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>	
Mid Suffolk District Council	43	3127	Bramford	Footpath 2	610402.43	246523.82	610582.125	246209.592	Approximately 384m between points 43a and 43b on Sheet 12 of the public rights of way plan
Mid Suffolk District Council	44	3126	Bramford	Bridleway 1	610273.83	246161.91	609351.995	245761.891	Approximately 1022m between points 44a and 44b on Sheet 12 of the public rights of way plan

SCHEDULE D

Article 10

STREETS TO BE TEMPORARILY STOPPED UP

<i>(1) Area</i>	<i>(2) Street to be temporarily stopped up</i>	<i>(3) Grid Co-ordinates (Start)</i>		<i>(3) Grid Co-ordinates (end)</i>		<i>(4) Extent of temporary stopping up</i>
		<i>Easting</i>	<i>Northing</i>	<i>Easting</i>	<i>Northing</i>	
Suffolk Coastal District	Park Lane, Kirton	628,187	240,381	628,253	240,417	For 75 metres within the area shown hatched on sheet 3 of the public rights of way plan
Suffolk Coastal District	The Street, Newbourne	627,799	243,228	627,871	243,217	For 75 metres within the area shown hatched on sheet 4 of the public rights of way plan
Suffolk Coastal District	Ipswich Road, Waldringfield	627,416	244,840	627,501	244,857	For 75 metres within the area shown hatched on sheet 5 of the public rights of way plan

SCHEDULE E

Article 11

ACCESS TO WORKS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Grid Reference Point</i>	<i>(3)</i> <i>Description of access</i>
Suffolk Costal District	634614, 239177	Vehicular access to Ferry Road from the east and west marked at point A on the access to works plan (sheet 1)
Suffolk Costal District	632047, 241321	Vehicular access to Dock Road from the south via Duke’s Lane (Track) marked at point B on the access to works plan (Sheet 4)
Suffolk Costal District	629662, 238830	Vehicular access to Lower Road from the east via Sheepgate Lane marked at point C on the access to works plan (Sheet 5)
Suffolk Costal District	628222, 240400	Vehicular access to Park Lane from the north and south marked at point D on the access to works plan (Sheet 6)
Suffolk Costal District	628399, 240500	Vehicular access to Park Lane at Park Gates Lodge from the north via farm tracks marked at point E on the access to works plan (Sheet 6)
Suffolk Costal District	626630, 241348	Vehicular access to Newbourn Road at Kembroke Hall from the east via farm tracks marked at point F on the access to works plan (Sheet 7)
Suffolk Costal District	627809, 243226	Vehicular access north and south from The Street marked at point G on the access to works plan (Sheet 8)
Suffolk Costal District	626630, 241348	Vehicular access to Woodbridge Road south of Heath Farm from the east via farm tracks marked at point H on the access to works plan (Sheet 9)
Suffolk Costal District	627462, 244841	Vehicular access North and South from The Ipswich Road marked at point I on the access to works plan (Sheet 10)
Suffolk Costal District	627560, 245176	Vehicular access east and west from Woodbridge Road marked at point J on the access to works plan (Sheet 10)
Suffolk Costal District	626581, 246126	Vehicular access east and west from Waldringfield Road marked at point K on the access to works plan (Sheet 11)
Suffolk Costal District	626301, 246329	Vehicular access north and south from Waldringfield Road marked at point L1 on the access to works plan (Sheet 11)
Suffolk Costal District	626355, 246299	Vehicular access south-east from Waldringfield Road marked at point L2 on the access to works plan (Sheet 11)
Suffolk Costal District	626143, 2469245	Vehicular access to Church Lane at the Old Rectory from the south via tracks marked at point M on the access to works plan (Sheet 12)

Suffolk Costal District	625976, 247756	Vehicular access east from Sandy Lane marked point N1 on the access to works plan (Sheet 12)
Suffolk Costal District	626037, 247843	Vehicular access south from Sandy Lane marked point N2 on the access to works plan (Sheet 12)
Suffolk Costal District	625826, 247619	Vehicular access to Sandy Lane from the east marked point O on the access to works plan (Sheet 12)
Suffolk Costal District	625448, 247817	Vehicular access east and west from Top Street marked at point P on the access to works plan (Sheet 12)
Suffolk Costal District	625333, 247744	Vehicular access to Top Street south of the roundabout with the B1438 from the west marked point Q1 on the access to works plan (Sheet 12)
Suffolk Costal District	625337, 247782	Vehicular access to Top Street south of the roundabout with the B1438 from the south marked point Q2 on the access to works plan (Sheet 12)
Suffolk Costal District	624523, 248500	Vehicular access to Seckford Hall Road on Road west of Seckford Hall Hotel from the south marked point R on the access to works plan (Sheet 13)
Suffolk Costal District	623710, 248383	Vehicular access to Lodge Road from the south marked point S on the access to works plan (Sheet 13)
Suffolk Costal District	622419, 248534	Vehicular access east and west from Holly Lane at point T on the access to works plan (Sheet 14)
Suffolk Costal District	621773, 248420	Vehicular access to Church Road from the east and west marked point U on the access to works plan (Sheet 15)
Suffolk Costal District	621310, 248603	Vehicular access to Butts Road from the south and vehicular access to Butts Road from the east and west marked point V on the access to works plan (Sheet 14)
Suffolk Costal District	619720, 248770	Vehicular access north and south from Grundisburgh Road at point W on the access to works plan (Sheet 15)
Suffolk Costal District	619275, 249287	Vehicular access east and west from Clopton Road at point X on the access to works plan (Sheet 16)
Suffolk Costal District	617716, 248813	Vehicular access to Witnesham Road from the east and west marked point Y on the access to works plan (Sheet 16)
Suffolk Costal District	617410, 249092	Vehicular access to Cockfield Hall Lane from the east and west marked point Z on the access to works plan (Sheet 17)
Mid Suffolk District	616128, 249052	Vehicular access east and west from Henley Road at point AA on the access to works plan (Sheet 17)
Mid Suffolk District	615160, 248980	Vehicular access east and west from Thurlestone Lane at point AB on the access to works plans (Sheet 18)

Mid Suffolk District	613310 , 249094	Vehicular access to Old Ipswich Road from the east marked point AC on the access to works plan (Sheet 19)
Mid Suffolk District	612849, 249074	Vehicular access to Papermill Lane from the east at point AD on the access to works plan (Sheet 19)
Mid Suffolk District	612809, 248992	Vehicular access to Papermill Lane from the west at point AE on the access to works plan (Sheet 19)
Mid Suffolk District	612802, 248946	Vehicular access east and west from Papermill Lane at point AF on the access to works plan (Sheet 19)
Mid Suffolk District	612074, 248972	Vehicular access to Bramford Road from the west at point AG on the access to works plan (Sheet 19)
Mid Suffolk District	612098, 249048	Vehicular access to Bramford Road from the east at point AH on the access to works plan (Sheet 19)
Mid Suffolk District	611950, 248776	Vehicular access north and south from Pound Lane at point AI on the access to works plan (Sheet 20)
Mid Suffolk District	611291, 247822	Vehicular access north and south from Somersham Road at point AJ on the access to works plan (Sheet 21)
Mid Suffolk District	610767, 247053	Vehicular access north and south from Tye Lane at point AK on the access to works plan (Sheet 22)
Mid Suffolk District	610571, 246214	Vehicular access to Bullen Lane from the north at point AL on the access to works plan (Sheet 22)
Mid Suffolk District	610052, 246122	Vehicular access to Bullen Lane from the west at point AM on the access to works plan (Sheet 22)

SHEDULE F

Article 17

LAND IN WHICH ONLY NEW RIGHTS ETC., MAY BE ACQUIRED

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
2-7	<p>The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>construct, lay and install by way of directional drilling, adjust, alter, use, maintain, repair, renew, upgrade, inspect, remove and replace underground electrical cables and ducts, together with such telemetry and fibre optic lines, jointing bays, ducting and other apparatus, protection and safety measures and equipment which is ancillary to the purposes of transmitting electricity along such electrical cables</p>

<i>(1)</i> <i>Number of land shown on land plans</i>	<i>(2)</i> <i>Purpose for which rights may be acquired</i>
	<p>(which collectively shall be referred to as the “cables”); enter and be upon the land and remain with or without plant, vehicles, vessels, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity along the cables; retain and use the cables for the purpose of the transmission of telecommunications and electricity; pass and repass with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying down, installing, adjusting, altering, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables; place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables; lay down, use, repair, alter and remove hard standings for the purposes of allowing access; lay out temporary permissive paths for public use; install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduit or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers); and alter, lop, uproot and replant trees, shrubs and hedges for the purposes of enabling the right to pass and repass.</p>
<p>10,11,13,15 44 – 51 70 – 73 99 100 - 102 107 108 – 110 117, 117A, 117B 133 185,186 205, 205A 210 212 214 231, 232 235 – 237 243 257 – 259 268 385 391 398 401 436, 437 439 441</p>	<p>The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>pass and repass with or without vehicles, plant, equipment, materials and machinery to access adjoining land for the purposes of laying, installing, adjusting, altering, constructing, using, maintaining, repairing, renewing, upgrading, inspecting, removing and replacing the cables;</p> <p>lay down, use, repair, alter and remove hard standings for the purposes of access to adjoining land;</p> <p>erect temporary supporting or protective structures (including the bridging over of or protection of the apparatus of the statutory undertakers) for the purposes of access to adjoining land;</p> <p>alter, lop, uproot and replant trees, shrubs and hedges for the purposes of enabling the right to pass and repass to adjoining land;</p> <p>lay out temporary permissive paths for public use;</p> <p>effect access to the highway;</p> <p>straighten, widen, repair, alter, upgrade and use existing access routes for the purposes of accessing adjoining land;</p> <p>remove fences, hedges or other barriers during any</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
448 465	period during which construction, upgrading, improvement, renewal or removal are being carried or for the exercise of the power to access the cables (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement or re-instatement of the fences, hedges or other barriers following the exercise of the rights); and install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts.
60-63 67 118 – 131 191-194 196 249 370 371 377 382 394	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>enter and remain on the sub-soil of the land-to construct, lay, install, adjust, alter, use, maintain, repair, renew, upgrade, inspect, remove and replace the cables;</p> <p>retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>uproot and replant trees, shrubs and hedges which may interfere with the cables;</p> <p>pass and repass with or without vehicles, plant, equipment, materials and machinery for the purposes of uprooting and replanting trees, shrubs, and hedges which may interfere with the cables;</p> <p>construct, lay down, use and remove temporary hardstanding for the purposes of permitting access to uproot and replant trees, shrubs and hedges which may interfere with the cables;</p> <p>lay out temporary permissive paths for public use;</p> <p>install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;</p> <p>maintain cable marker posts to identify the location of the cables; and</p> <p>carry out environmental mitigation and/ or enhancement works.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any</p>

<i>(1)</i> <i>Number of land shown on land plans</i>	<i>(2)</i> <i>Purpose for which rights may be acquired</i>
	<p>other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).</p>
<p>20, 22 24 26-43 52 – 56 79 – 93 103-106 135- 141 145-150 154-158 163 167-175 181-184 199-204 213 216, 217 227-228 230 233 234 238-239 241-242 251, 253 -256 260-267 269-271 292 296-297 300 304-312 316</p>	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>construct, lay and install by way of drilling and/or trenching, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables;</p> <p>install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;</p> <p>pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>lay down, use, repair, alter and remove hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables;</p> <p>retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
320-331 339-340 343-348 354, 357-358,360 362-366 383 413 - 414 416- 418 422- 426 428-431 434 438 442 444-446	<p>cables;</p> <p>install and maintain cable marker posts to identify the location of the cables, manhole covers and kiosks as required for routine integrity testing;</p> <p>store and stockpile materials (including excavated material) within the Order land;</p> <p>remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights);</p> <p>install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;</p> <p>lay out temporary permissive paths for public use;</p> <p>remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables; and</p> <p>carry out environmental mitigation and/ or enhancement works; and</p> <p>install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>prevent the planting or growing within the Order land</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	of any trees, shrubs or underwood without the consent in writing of the undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).
8-9 17 57-59 68-69 76-78 111-116 132 134 187-189 195 198 244-245 250, 252 367-369 384 392 396-397 435 440	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>(a) construct, lay and install by way of horizontal directional drilling and/or trenching, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables;</p> <p>(b) install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;</p> <p>(c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(d) lay down, use, repair, alter and remove hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables;</p> <p>(f) retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>(g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables;</p> <p>(h) install and maintain cable marker posts to identify the location of the cables, manhole covers and kiosks as required for routine integrity testing;</p> <p>(i) store and stockpile materials (including excavated material) within the Order land;</p> <p>(j) remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights);</p> <p>(k) install, alter, re-lay, maintain, protect, adjust or</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	<p>remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>(l) works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;</p> <p>(m) lay out temporary permissive paths for public use;</p> <p>(n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables; and</p> <p>(o) carry out environmental mitigation and/ or enhancement works; and</p> <p>(p) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>(a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>(b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>(c) prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>(d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).</p>
<p>18</p> <p>97</p> <p>143</p> <p>160</p>	<p>The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
<p>165 177 179 215 219 247-248 273 294 298 302 314 318 333 337 350-353 355-356, 359 389 404-407 415 427 433 464 466- 471</p>	<p>construct, lay, install, adjust, alter, use maintain, repair, replace renew, upgrade, inspect and remove the cables by way of drilling and/ or trenching; install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts; pass and repass with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables; enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity along the cables; retain and use the cables for the purpose of the transmission of telecommunications and electricity; install and maintain cable marker posts to identify the location of the cables; lop fell, cut or coppice trees, or remove roots of trees or hedges or shrubs; lay out temporary permissive paths for public use; remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights); carry out environmental mitigation and/ or enhancement works; and lay down, use, repair, alter and remove temporary hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables, except where this may interfere with the operation of an adopted highway.</p>
<p>19 96 98 142 144 159 161 164 166 176 178 180 206-209 211 216A</p>	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to: construct, lay and install by way of drilling and/or trenching, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables; install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts; pass and repass with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
218	lay down, use, repair, alter and remove hardstanding
220	for the purposes of constructing, laying, installing,
222-223	adjusting, altering, using, maintaining, repairing,
293	replacing, renewing, upgrading, inspecting and
295	removing the cables;
299	enter and be upon the land and remain with or without
303	plant, vehicles, machinery, apparatus and equipment
313	which is ancillary to the purposes of transmitting
315	electricity along the cables;
317	retain and use the cables for the purpose of the
319	transmission of telecommunications and electricity;
332	place and use plant, machinery and temporary
334	structures within the land for the installation,
335	construction, maintenance, repairing, renewing,
338	upgrading, inspecting, removal and replacing of the
349	cables;
387	effect access to the highway;
390	install and maintain cable marker posts to identify the
432	location of the cables, manhole covers and kiosks as
449	required for routine integrity testing;
	store and stockpile materials (including excavated
	material) within the Order land;
	remove fences within the land during any period during
	which construction, maintenance, repair or renewal are
	being carried out (subject to the prior erection of any
	temporary stock proof fencing as is reasonably
	required and the replacement of the original fences
	following the exercise of the rights);
	install, alter, re-lay, maintain, protect, adjust or remove
	pipes, cables, conduits or apparatus (including the
	pipes, cables, conduits or apparatus of statutory
	undertakers);
	works to lop, fell, cut or coppice trees or remove roots
	of trees or hedges or shrubs;
	lay out temporary permissive paths for public use;
	remove archaeological artefacts where they would
	prevent or cause it to be materially more difficult or
	expensive to construct, lay, install, adjust, alter, use,
	maintain, repair, replace, renew, upgrade, inspect or
	remove the cables;
	carry out environmental mitigation and/ or
	enhancement works; and
	install, construct, use and remove temporary welfare
	facilities during any periods of maintenance, repair,
	replacement, renewal, upgrade and removal of the
	cables.
	2. A restrictive covenant over the land for the benefit
	of the remainder of the Order land to:
	prevent anything to be done in or upon the Order land
	or any part thereof for the purpose of the erection of
	any buildings or construction erection or works of any
	kind (including the foundations or footings thereto);
	prevent anything to be done by way of hard surfacing

<i>(1)</i> <i>Number of land shown on land plans</i>	<i>(2)</i> <i>Purpose for which rights may be acquired</i>
	<p>of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).</p>
<p>64 – 66 190 197 246 372 – 376 378-379 393 395</p>	<p>The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>enter and remain on the sub-soil of the land-to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew upgrade, inspect and remove the cables;</p> <p>retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>uproot and replant trees, shrubs and hedges which may interfere with the cables;</p> <p>pass and repass with or without vehicles, plant, equipment, materials and machinery for the purposes of uprooting and replanting trees, shrubs, and hedges which may interfere with the cables;</p> <p>install, use, inspect, modify, improve, maintain, adjust, repair, replace, extend, test, cleanse and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts; and</p> <p>maintain cable marker posts to identify the location of the cables.</p>
<p>279 283-286 288</p>	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
291 399-400 402 410-412	<p>project and to:</p> <p>(a) construct, lay and install by way of horizontal directional drilling and/or other form of drilling and/or trenching, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables;</p> <p>(b) install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;</p> <p>(c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(d) lay down, use, repair, alter and remove hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables;</p> <p>(f) retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>(g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables;</p> <p>(h) install and maintain cable marker posts to identify the location of the cables, manhole covers and kiosks as required for routine integrity testing;</p> <p>(i) store and stockpile materials (including excavated material) within the Order land;</p> <p>(j) remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights);</p> <p>(k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>(l) works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;</p> <p>(m) lay out temporary permissive paths for public use;</p> <p>(n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	<p>remove the cables; and</p> <p>(o) carry out environmental mitigation and/ or enhancement works; and</p> <p>(p) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>(a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>(b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>(c) prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>(d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).</p>
272	1. The right to enter onto and remain on the land for
275	the purposes of construction, installation, operation,
403	maintenance and decommissioning of the authorised
408-409	project and to:
	(a) construct, lay and install by way of horizontal directional drilling and/or other form of drilling and/or trenching, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables;
	(b) install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;
	(c) pass and repass, with or without vehicles, plant,

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	<p>equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(d) lay down, use, repair, alter and remove hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables;</p> <p>(f) retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>(g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables;</p> <p>(h) effect access to the highway</p> <p>(i) install and maintain cable marker posts to identify the location of the cables, manhole covers and kiosks as required for routine integrity testing;</p> <p>(j) store and stockpile materials (including excavated material) within the Order land;</p> <p>(k) remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights);</p> <p>(l) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>(m) works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;</p> <p>(n) lay out temporary permissive paths for public use;</p> <p>(o) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables; and</p> <p>(p) carry out environmental mitigation and/ or enhancement works; and</p> <p>(q) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>(a) prevent anything to be done in or upon the Order</p>

<i>(1)</i> <i>Number of land shown on land plans</i>	<i>(2)</i> <i>Purpose for which rights may be acquired</i>
	<p>land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>(b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>(c) prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>(d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).</p>
<p>278 281-282 287 289-290</p>	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>(a) construct, lay and install by way of horizontal directional drilling and/or other form of drilling, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables;</p> <p>(b) install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;</p> <p>(c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(d) lay down, use, repair, alter and remove hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(e) enter and be upon the land and remain with or</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	<p>without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables;</p> <p>(f) retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>(g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables;</p> <p>(h) install and maintain cable marker posts to identify the location of the cables, manhole covers and kiosks as required for routine integrity testing;</p> <p>(i) store and stockpile materials (including excavated material) within the Order land;</p> <p>(j) remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights);</p> <p>(k) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>(l) works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;</p> <p>(m) lay out temporary permissive paths for public use;</p> <p>(n) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables; and</p> <p>(o) carry out environmental mitigation and/ or enhancement works; and</p> <p>(p) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>(a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>(b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	<p>materially more difficult or expensive to maintain the authorised project);</p> <p>(c) prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p> <p>(d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).</p>
<p>274 276-277 280</p>	<p>1. The right to enter onto and remain on the land for the purposes of construction, installation, operation, maintenance and decommissioning of the authorised project and to:</p> <p>(a) construct, lay and install by way of horizontal directional drilling and/or other form of drilling, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect and remove the cables;</p> <p>(b) install, use, inspect, modify, improve, maintain, adjust, repair, extend, test, cleanse, and remove temporary or permanent drainage and manage waterflows in existing drains, watercourses and culverts;</p> <p>(c) pass and repass, with or without vehicles, plant, equipment, materials and machinery for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(d) lay down, use, repair, alter and remove hardstanding for the purposes of constructing, laying, installing, adjusting, altering, using, maintaining, repairing, replacing, renewing, upgrading, inspecting and removing the cables;</p> <p>(e) enter and be upon the land and remain with or without plant, vehicles, machinery, apparatus and equipment which is ancillary to the purposes of transmitting electricity and telecommunications along the cables;</p> <p>(f) retain and use the cables for the purpose of the transmission of telecommunications and electricity;</p> <p>(g) place and use plant, machinery and temporary structures within the land for the installation, construction, maintenance, repairing, renewing, upgrading, inspecting, removal and replacing of the cables;</p>

<i>(1)</i> <i>Number of land shown on land plans</i>	<i>(2)</i> <i>Purpose for which rights may be acquired</i>
	<p>(h) effect access to the highway</p> <p>(i) install and maintain cable marker posts to identify the location of the cables, manhole covers and kiosks as required for routine integrity testing;</p> <p>(j) store and stockpile materials (including excavated material) within the Order land;</p> <p>(k) remove fences within the land during any period during which construction, maintenance, repair or renewal are being carried out (subject to the prior erection of any temporary stock proof fencing as is reasonably required and the replacement of the original fences following the exercise of the rights);</p> <p>(l) install, alter, re-lay, maintain, protect, adjust or remove pipes, cables, conduits or apparatus (including the pipes, cables, conduits or apparatus of statutory undertakers);</p> <p>(m) works to lop, fell, cut or coppice trees or remove roots of trees or hedges or shrubs;</p> <p>(n) lay out temporary permissive paths for public use;</p> <p>(o) remove archaeological artefacts where they would prevent or cause it to be materially more difficult or expensive to construct, lay, install, adjust, alter, use, maintain, repair, replace, renew, upgrade, inspect or remove the cables; and</p> <p>(p) carry out environmental mitigation and/ or enhancement works; and</p> <p>(q) install, construct, use and remove temporary welfare facilities during any periods of maintenance, repair, replacement, renewal, upgrade and removal of the cables.</p> <p>2. A restrictive covenant over the land for the benefit of the remainder of the Order land to:</p> <p>(a) prevent anything to be done in or upon the Order land or any part thereof for the purpose of the erection of any buildings or construction erection or works of any kind (including the foundations or footings thereto);</p> <p>(b) prevent anything to be done by way of hard surfacing of the Order land with concrete of any kind or with any other material or surface whatsoever without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed if the proposed surfacing would not cause damage to relevant part of the authorised project nor make it materially more difficult or expensive to maintain the authorised project);</p> <p>(c) prevent anything to be done by way of excavation of any kind in the Order land nor any activities which increase or decrease ground cover or soil levels in any manner whatsoever without the consent in writing of the Undertaker save as are reasonably required for agricultural activities or are required to be carried out by National Grid in order to exercise their rights in relation to their apparatus within the Order land;</p>

<i>(1)</i>	<i>(2)</i>
<i>Number of land shown on land plans</i>	<i>Purpose for which rights may be acquired</i>
	(d) prevent the planting or growing within the Order land of any trees, shrubs or underwood without the consent in writing of the Undertaker (such consent not to be unreasonably withheld or delayed provided that the proposed trees, shrubs or underwood would not cause damage to the relevant part of the authorised project nor make it materially more difficult or expensive to access the relevant part of the authorised project).

SCHEDULE G

Article 17

MODIFICATION OF COMPENSATION AND COMPULSORY PURCHASE ENACTMENTS FOR CREATION OF NEW RIGHTS

Compensation enactments

1. The enactments for the time being in force with respect to compensation for the compulsory purchase of land shall apply, with the necessary modifications as respects compensation, in the case of a compulsory acquisition under this Order of a right by the creation of a new right or the imposition of a restrictive covenant as they apply as respects compensation on the compulsory purchase of land and interests in land.

2.—(1) Without prejudice to the generality of paragraph 1, the Land Compensation Act 1973(a) shall have effect subject to the modifications set out in sub-paragraphs (2) and (3).

(2) In section 44(1) (compensation for injurious affection), as it applies to compensation for injurious affection under section 7 of the 1965 Act as substituted by paragraph 4—

- (a) for the words “land is acquired or taken” there shall be 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 shall be substituted the words “over which the right is exercisable or the restrictive covenant enforceable”.

(3) In section 58(1) (determination of material detriment where part of house etc. proposed for compulsory acquisition), as it applies to determinations under section 8 of the 1965 Act as substituted by paragraph 5—

- (a) for the word “part” in paragraphs (a) and (b) there shall be substituted the words “a right over or restrictive covenant affecting land consisting”;
- (b) for the word “severance” there shall be substituted the words “right or restrictive covenant over or affecting the whole of the house, building or manufactory or of the house and the park or garden”;
- (c) for the words “part proposed” there shall be substituted the words “right or restrictive covenant proposed”; and
- (d) for the words “part is” there shall be substituted the words “right or restrictive covenant is”.

Application of the 1965 Act

3.—(1) The 1965 Act shall 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

(a) 1973 c. 26.

imposition under this Order of a restrictive covenant, as it applies to the compulsory acquisition under this Order of land, so that, in appropriate contexts, references in that Act to land are read (according to the requirements of the particular context) as referring to, or as including references to—

- (a) the right acquired or to be acquired; or
- (b) the land over which the right is or is to be exercisable.

(2) Without prejudice to the generality of sub-paragraph (1), Part 1 of the 1965 Act shall apply in relation to the compulsory acquisition under this Order of a right by the creation of a new right with the modifications specified in the following provisions of this Schedule.

4. For section 7 of the 1965 Act (measure of compensation) there shall be 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.”

5. For section 8 of the 1965 Act (provisions as to divided land) there shall be substituted the following section—

“8.—(1) Where in consequence of the service on a person under section 5 of this Act of a notice to treat in respect of a right over land consisting of a house, building or manufactory or of a park or garden belonging to a house (“the relevant land”)—

- (a) a question of disputed compensation in respect of the purchase of the right or the imposition of the restrictive covenant would apart from this section fall to be determined by the Upper Tribunal (“the tribunal”); and
- (b) before the tribunal has determined that question the tribunal is satisfied that the person has an interest in the whole of the relevant land and is able and willing to sell that land and—
 - (i) where that land consists of a house, building or manufactory, that the right cannot be purchased or the restrictive covenant imposed without material detriment to that land; or
 - (ii) where that land consists of such a park or garden, that the right cannot be purchased or the restrictive covenant imposed without seriously affecting the amenity or convenience of the house to which that land belongs, the East Anglia ONE Offshore Windfarm Order 201[](a) (“the Order”) shall, in relation to that person, cease to authorise the purchase of the right and be deemed to authorise the purchase of that person’s interest in the whole of the relevant land including, where the land consists of such a park or garden, the house to which it belongs, and the notice is deemed to have been served in respect of that interest on such date as the tribunal directs.

(2) Any question as to the extent of the land in which the Order is deemed to authorise the purchase of an interest by virtue of subsection (1) of this section shall be determined by the tribunal.

(3) Where in consequence of a determination of the tribunal that it is satisfied as mentioned in subsection (1) of this section the Order is deemed by virtue of that subsection to authorise the purchase of an interest in land, the acquiring authority may, at any time within the period of 6 weeks beginning with the date of the determination, withdraw the notice to treat in consequence of which the determination was made; but nothing in this subsection prejudices any other power of the authority to withdraw the notice.”

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),

shall be 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) shall be so modified as to secure that, as from the date on which the acquiring authority has served notice to treat in respect of any right it has power, exercisable in equivalent circumstances and subject to equivalent conditions, to enter for the purpose of exercising that right or enforcing that restrictive covenant (which is deemed for this purpose to have been created on the date of service of the notice); and sections 12 (penalty for unauthorised entry) and 13 (entry on warrant in the event of obstruction) of the 1965 Act shall be modified correspondingly.

8. Section 20 of the 1965 Act (protection for interests of tenants at will, etc.) shall apply 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) shall be so modified as to enable the acquiring authority, in circumstances corresponding to those referred to in that section, to continue to be entitled to exercise the right acquired, subject to compliance with that section as respects compensation.

SCHEDULE H

Article 23

LAND OF WHICH TEMPORARY POSSESSION MAY BE TAKEN

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Area</i>	<i>Number of land shown on land plan</i>	<i>Purpose for which temporary possession may be taken</i>	<i>Relevant part of the Authorised project</i>
County of Suffolk	2 – 8	Construction and carrying out of the authorised project; worksites for construction and the carrying out of the authorised project; access for carrying out the authorised project.	3B, 4, 5, 7A, 7B, 9, 10a, 11, 14, 15, 18, 19, 21, 23A, 24, 25A, 26, 27, 28A, 29, 30A, 31
District of Suffolk	17		
Coastal	18- 20, 22		
	24, 26 – 43		
	52 - 69		
	76 – 93		
	96- 98		
	103 – 106		
	111 – 116		
	118 – 132		
	134 - 150		
	154 – 161		

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Area</i>	<i>Number of land shown on land plan</i>	<i>Purpose for which temporary possession may be taken</i>	<i>Relevant part of the Authorised project</i>
	163 – 184 187 –204 206 -213 215 -220 222, 223 227 – 230 233 - 234 238 - 256 260 – 267 269 – 300 302 – 340 343 - 345 347		
County of Suffolk District of Suffolk Coastal	8 17 57-59 94, 95 151, 152, 153 221 224 226 229 231-232 240 301 336	Construction compound; access for carrying out the authorised project.	3B and 4, 7B, 10B, 16, 17, 23B, 23C, 28B, 30B
County of Suffolk District of Suffolk Coastal	9-11 13, 15 44 – 51 70 -73 99 -102 107 108 -110 117 117A, 117B 133 185 – 186 201-204 205-205A 210, 212 214 235-237 247 257 – 259 268	Laying of hardstandings and improvements to tracks; access for carrying out the authorised project.	3C, 6, 8, 12, 13, 20, 21A, 22A, 22B, 24A, 25B, 25C
County of Suffolk District of Mid-Suffolk	346 – 360 362 – 379 382 - 387	Construction and carrying out of the authorised project;	32, 33A, 34A, 35A, 36, 37A, 37D, 38

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Area</i>	<i>Number of land shown on land plan</i>	<i>Purpose for which temporary possession may be taken</i>	<i>Relevant part of the Authorised project</i>
	389, 390 392 -397 399 400 402 – 418 422 - 435 438 440, 442, 444 – 445A 449 464 - 471	worksites for construction and the carrying out of the authorised project; access for carrying out the authorised project.	
County of Suffolk District of Mid-Suffolk	369 385 391 398 401 405 407 409 410 441 447-448	Laying of hardstandings and improvements to tracks; access for carrying out the authorised project.	33 B, 33C, 35B, 35C, 35D, 39A, 41
County of Suffolk District of Mid-Suffolk	384 386 388 436 - 437 439 443 446	Construction compound; access for carrying out the authorised project.	34B, 37B, 37C, 37E

SCHEDULE I

Article 28

DEEMED LICENCE UNDER MARINE AND COASTAL ACCESS ACT 2009 – GENERATION ASSETS

PART 1

Licensed Marine Activities

1.—(1) In this licence—

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“Annex 1 Habitat” means such habitat as defined under the EU 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 2(3);

“authorised scheme” means Work No. 1 described in paragraph 2 of this licence;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science;

“commence” means the first carrying out of any part of the licensed activities save for pre-construction surveys and monitoring;

“condition” means a condition in Part 2 of this licence;

“draft written scheme of investigation: archaeology and cultural heritage (offshore)” means the document certified as the draft written scheme of investigation: archaeology and cultural heritage (offshore) by the decision-maker for the purposes of this Order;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the Marine and Coastal Access Act 2009;

“environmental statement” means the environmental statement submitted in support of the application;

“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;

“HVAC offshore collector station” means a platform with one or more decks, whether open or fully clad, accommodating electrical power transformers, low, medium and/or high voltage switch gear, instrumentation, protection and control systems, neutral earthing resistors, reactive compensation, standby electrical generation equipment, fuelling facilities, auxiliary and uninterruptible power supply systems and transformers, accommodation and/or emergency shelter, craneage, metering stations, meteorological equipment, helicopter landing facilities, messing facilities, potable water storage, black water separation equipment, control hub, drainage facilities, access equipment, J-tubes, marking and lighting and other associated equipment and facilities to enable the transmission of electronic communications and for electricity to be collected at, and exported from, the platform;

“JNCC” means the Joint Nature Conservation Committee;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at two or more points with steel pin piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment, and “discrete jacket foundation types” shall include pre-piled or post-piled jackets, three-legged or four legged jackets, or straight or battered leg jackets;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;

“MCA” means the Maritime and Coastguard Agency;

“Marine Management Organisation” or “MMO” means the body created under the Marine and Coastal Access Act 2009 which is responsible for the monitoring and enforcement of this licence;

“maintain” includes inspect, maintain, repair, adjust and alter, and further includes remove, reconstruct and replace any of the ancillary works in Part 2 of **Schedule A** (ancillary development) and any component part of any wind turbine generator, offshore substation or meteorological mast described in Part 1 of **Schedule A** (authorised development) (but not including the alteration, removal or replacement of foundations) to the extent assessed in the environmental statement; and “maintenance” shall be construed accordingly;

“major storm event” means a greater than 1 in 10 year wave event within the Order limits seaward of MHWS in terms of a wave height measured from the West Gabbard Waverider buoy (WESTGAB) or any other definition as agreed with the MMO;

“mean high water springs level” or “MHWS” means the highest level which spring tides reach on average over a period of time;

“meteorological mast” means a mast housing equipment to measure wind speed and other wind characteristics, including a topside housing electrical, communication and associated equipment and marking and lighting;

“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;

“notice to mariners” includes any notice to mariners which may be issued by the Admiralty, Trinity House, Queen’s harbourmasters, government departments and harbour and pilotage authorities;

“offshore Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out;

“offshore substation” means a HVAC collector station;

“the Order” means the East Anglia ONE Offshore Windfarm Order 201X;

“Order limits boundary coordinates plan” means the document certified as the Order limits boundary coordinates plan by the decision-maker for the purposes of this Order;

“outline navigation monitoring strategy” means the document certified as the outline navigation monitoring strategy by the decision-maker for the purposes of this Order;

“outline offshore operations and maintenance and monitoring plan” means the document certified as the outline offshore operations and maintenance and monitoring plan by the decision-maker for the purposes of this Order;

“suction buckets” means large diameter steel cylindrical shells which penetrate the seabed assisted by hydrostatic pressure differential for fixity of steel jacket foundations;

“suction caisson foundation” means a tubular steel structure which penetrates the seabed assisted by a hydrostatic pressure differential and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment;

“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 East Anglia ONE Limited, which is the named undertaker, or any other person who has the benefit of this Order in accordance with section 156 of the 2008 Act for such time as that section applies to that person;

“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” or “WTG” 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;

“Work No. 2” means up to two HVDC offshore converter stations;

“Work No. 3A” means up to four HDVC export cables from Work No. 2 to MHWS; and

“works plan” means the plan certified as the works plan by the decision-maker for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument shall be 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 shall be taken to be Greenwich Mean Time (GMT);
- (b) all co-ordinates shall be 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 shall be—

(a) Marine Management Organisation

Offshore Marine Licensing

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032;

(b) Marine Management Organisation (local office)

Marine Environment Team

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) Marine and Coastguard Agency

Navigation Safety Branch

Bay 2/04, Spring Place

105 Commercial Road

Southampton

SO15 1EG

Tel: 023 8032 9191

(f) Centre for Environment, Fisheries and Aquaculture Science
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 562 244

(g) Natural England
Foundry House
3 Millsands
Riverside Exchange
Sheffield
S3 8NH
Tel: 0300 060 4911

(h) English Heritage
Eastgate Court
195-205 High Street
Guildford
GU1 3EH
Tel: 01483 252 057

(i) JNCC
Inverdee House
Baxter Street
Aberdeen
AB11 9QA
Tel: 01224 266 550.

Details of licensed marine activities

2.—(1) 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, subject to the conditions—

- (a) the deposit at sea of the substances and articles specified in paragraph (3) below;
- (b) the construction of works in or over the sea and/or on or under the sea bed; and
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation.

(2) Such activities are authorised in relation to the construction and operation of—

Work No. 1

- (a) an offshore wind turbine generating station with a gross electrical output capacity of up to 1,200 MW comprising up to 325 wind turbine generators each fixed to the seabed by one of three foundation types (namely, jacket foundation, gravity base foundation or suction caisson foundation), fitted with rotating blades and situated within the area shown on the works plan and further comprising (b) to (d) below;

- (b) up to three HVAC offshore collector stations fixed to the seabed within the area shown on the works plan by one of two foundation types (namely jacket foundation or gravity base foundation);
- (c) up to one meteorological mast fixed to the seabed within the area shown on the works plan by one of four foundation types (namely jacket foundation, gravity base foundation, suction caisson foundation or monopile foundation);
- (d) a network of subsea cables within the area shown on the works plan between the WTGs and the HVAC offshore collector stations, up to two interconnection cables between the HVAC offshore collector stations, up to ten export cables between the HVAC offshore collector stations and Work No. 2, and up to one interconnection cable between the HVDC offshore converter stations comprising Work No. 2 for the transmission of electricity and electronic communications between these different structures including one or more cable crossings;

(3) And in connection with such Work No. 1, ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised scheme;
- (b) buoys, beacons, fenders and other navigational warning or ship impact protection works;
- (c) temporary works for the benefit or protection of land or structures affected by the authorised scheme; and
- (d) the disposal of up to 5,603,500m³ of inert material of natural origin within the offshore Order limits produced during construction drilling and seabed preparation for foundation works and cable sandwave preparation works at disposal site reference TH23 East Anglia ONE.

(4) The substances or articles authorised for deposit at sea are—

- (a) iron/steel;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic/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.

3. The grid coordinates for the authorised scheme are specified below and more particularly shown on the Order limits boundary coordinates plan—

Coordinates for the Order limits seaward of MHWS

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
A	52° 17' 50.395"	2° 21' 1.372"	E	52° 18' 15.833"	2° 34' 13.645"
B	52° 19' 10.175"	2° 27' 36.407"	F	52° 7' 14.982"	2° 32' 58.021"
C	52° 23' 22.654"	2° 31' 40.044"	G	52° 4' 46.512"	2° 31' 2.669"
D	52° 21' 53.636"	2° 34' 13.872"	H	52° 4' 45.732"	2° 28' 1.913"

4. This licence shall remain in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004

Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

5. The provisions of Section 72 of the 2009 Act shall apply to this licence except that the provisions of Section 72(7) relating to the transfer of the licence shall only apply to a transfer not falling within **article 5** (benefit of the Order).

PART 2

Conditions

Design parameters

1.—(1) Subject to paragraph (2), no wind turbine generator forming part of the authorised scheme shall—

- (a) exceed a height of 200 metres when measured from LAT to the tip of the vertical blade;
- (b) exceed a height of 120 metres to the height of the centreline of the generator shaft forming part of the hub when measured from LAT;
- (c) exceed a rotor diameter of 170 metres;
- (d) be less than 675 metres from the nearest WTG in either direction perpendicular to the approximate prevailing wind direction (crosswind) or be less than 900 metres from the nearest WTG in either direction which is in line with the approximate prevailing wind direction (downwind);
- (e) have a distance of less than 22 metres between the lowest point of the rotating blade of the wind turbine and MHWS.

(2) References to the location of a wind turbine generator are references to the centre point of that turbine.

2. No meteorological mast, wind turbine generator or HVAC offshore collector station forming part of the authorised scheme shall be erected within the areas hatched black on the works plan, whose coordinates are specified below and more particularly shown on the Order limits boundary coordinates plan:

Coordinates for restricted build area

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
i	52° 17' 29.501"	2° 21' 18.183"	vii	52° 21' 52.244"	2° 34' 8.586"
ii	52° 19' 32.953"	2° 29' 16.557"	viii	52° 18' 15.948"	2° 34' 8.368"
iii	52° 19' 47.657"	2° 34' 8.460"	ix	52° 7' 15.824"	2° 32' 52.848"
iv	52° 20' 36.356"	2° 34' 8.509"	x	52° 4' 49.734"	2° 30' 59.349"
v	52° 20' 18.296"	2° 28' 48.188"	xi	52° 4' 48.985"	2° 28' 5.706"
vi	52° 23' 17.520"	2° 31' 41.224"			

3.—(1) The total number of HVAC offshore collector stations must not exceed 3.

(2) The dimensions of any HVAC offshore collector stations forming part of the authorised scheme (excluding towers, helipads, masts and cranes) must not exceed 60 metres in height when measured from LAT, 30 metres in length and 40 metres in width.

4.—(1) The total length of the cables comprising Work No. 1(d) must not exceed 680 kilometres.

(2) (2) The total amount of cable protection for the cables comprising Work No. 1(d) must not exceed 3,000m³.

- 5.—(1) In relation to a WTG, each gravity base foundation must not have—
- (a) diameter at the level of the seabed which is more than 50 metres;
 - (b) a base height, where there is a flat base and a cylindrical shaft, which is more than 10 metres above the level of the seabed;
 - (c) a column diameter, where there is a flat or conical base, of more than 7.5 metres at LAT;
- (2) In relation to a WTG, each suction caisson foundation must not have—
- (a) a diameter at the level of the seabed which is more than 25 metres;
 - (b) a base height where there is a flat base, which is more than 5 metres above the level of the seabed;
 - (c) a column diameter which is more than 7.5 metres at LAT.
- (3) In relation to a WTG, each jacket foundation must not have:
- (a) a width spacing between its legs at the level of the seabed which is more than 35 metres;
 - (b) a pile diameter which is more than 2.5 metres in the case of pin piles or a suction bucket diameter of more than 5 metres;
 - (c) more than one pile per leg or more than one suction bucket per leg;
 - (d) more than four legs.
- (4) In relation to a meteorological mast, each monopile foundation must not have a diameter greater than 6.5 metres.
- (5) The total number of WTGs with gravity base foundations must not exceed 240.
- (6) The total amount of scour protection for the WTGs and HDVC offshore converter stations forming part of the authorised scheme must not exceed 3.5km².

Notifications and inspections

- 6.—(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 15; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 15;
 - (b) within 28 days of receipt of a copy of this licence those persons referred to at paragraph (a) above must provide a completed form to the MMO confirming their understanding of the terms of conditions of this licence.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 15 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 and at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The document referred to in paragraph (1)(a) must be available for inspection by an authorised enforcement officer at all times at the locations set out in paragraph (3) above.
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.

(6) The undertaker must inform the local MMO office in writing at least ten working days prior to the commencement of the licensed activities or any part of them and within ten working days of completion of any works comprised in the licensed activities.

(7) Prior to the commencement of the licensed activities the undertaker must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes (if appropriate), timings and locations relating to the construction of the authorised scheme.

(8) The undertaker must ensure that a notice to mariners is issued at least 10 working 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 local construction ports to the relevant location.

(9) The undertaker must ensure that the notices to mariners are updated and reissued at regular intervals, and at least fortnightly, and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme approved under condition 11(a). Copies of all notices must be provided to the MMO.

(10) The undertaker must notify—

(a) the Hydrographic Office of both the commencement (within two weeks), progress and completion (within two weeks) of the authorised scheme in order that all necessary amendments to nautical charts are made; and

(b) the MMO, MCA and Trinity House once the authorised scheme is completed and any required lighting or marking has been established.

Offshore safety management

7.—(1) The authorised scheme shall not commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and adequately addressed all MCA recommendations contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes including full details of the Emergency Co-operation Plans (ERCoP) for the construction, operation and decommissioning as appropriate to the authorised scheme.

(2) The undertaker will prepare and implement a project-specific Active Safety Management System, taking account of safety and mitigation measures as referred to in the navigation risk assessment in the environmental statement.

Aids to navigation

8.—(1) The undertaker must at or near the authorised scheme during the whole period of the construction, operation, alteration, replacement or decommissioning of the authorised scheme 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 ensure that timely and efficient notices to mariners and other navigational warnings of the position and nature of the authorised scheme seaward of MHWS, are issued during and after the period of construction, alteration, replacement or decommissioning of the authorised scheme, such information to be promulgated to mariners in the shipping and fishing industry as well as to recreational mariners, in accordance with conditions 6(8) and 6(9).

(3) The undertaker must notify Trinity House as soon as reasonably practicable of both the progress and completion of the authorised scheme seaward of MHWS and any aids for navigation established from time to time.

(4) The undertaker must provide reports on the availability of aids to navigation periodically as requested by Trinity House.

(5) The undertaker must colour all structures yellow 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.

(6) Subject to paragraph (6) above, unless the Secretary of State otherwise directs, the undertaker must ensure that the wind turbine generators must be painted submarine grey (colour code RAL 7035).

(7) In case of injury to, or destruction or decay of, the authorised scheme or any part thereof the undertaker must as soon as reasonably practicable notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as Trinity House may from time to time direct.

Chemicals, drilling and debris

9.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (as amended).

(2) All protective coatings and paints must be suitable for use in the marine environment and, where necessary, approved by the Health and Safety Executive. The use of such coatings must accord with best environmental practice.

(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) Where foundation drilling works are proposed, in the event that any system other than water-based mud is proposed the MMO's written approval in relation to the proposed disposal of any arisings must be obtained before the drilling commences, which may also require a marine licence.

(5) 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.

(6) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team.

(7) The undertaker must ensure that any waste and/or debris arising from the construction of the authorised scheme or from equipment or temporary works placed below MHWS are removed on completion of the authorised scheme.

(8) At least 10 days prior to the commencement of the licensed activities the undertaker must submit and obtain the MMO's approval of an audit sheet covering all aspects of the construction of the authorised scheme. The audit sheet must include details of—

- (a) loading facilities;
- (b) vessels;
- (c) equipment;
- (d) shipment routes;
- (e) working schedules; and
- (f) all components and materials to be used in the construction of the authorised scheme.

(9) The audit sheet must be maintained throughout the construction of the authorised scheme and any changes notified immediately in writing to the MMO.

(10) In the event that the MMO becomes aware that any of the materials on the audit sheet cannot be accounted for it shall require the undertaker to carry out a side scan sonar survey to plot all obstructions across the relevant area(s) within the offshore Order limits where construction works and related activities have been carried out. In the event that the missing material is not located, the survey area may be extended at the discretion of the MMO. Local fishermen shall be invited to send a representative to be present during the survey. Any new obstructions that the MMO believes to be associated with the authorised scheme must be removed at the undertaker's expense.

(11) The undertaker must inform the MMO of the location and quantities of inert material disposed of each month under this licence, 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.

(12) The undertaker must ensure that only inert material of natural origin, produced during construction drilling and seabed preparation for foundation works and cable sandwave preparation works shall be disposed of within the offshore Order limits (disposal site reference TH23 East Anglia ONE).

(13) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(14) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the District Marine Office within 48 hours and the undertaker must locate the material and recover it unless otherwise agreed with the MMO.

Force majeure

10. 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 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.

Pre-construction plans and documentation

11. The licensed activities or any part of those activities shall not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows—
 - (i) the proposed location and choice of foundation of all wind turbine generators, offshore substations and the meteorological mast;
 - (ii) the height to the tip of the vertical blade; height to the centreline of the generator shaft forming part of the hub;
 - (iii) rotor diameter and spacing of all wind turbine generators;
 - (iv) the height length and width of all offshore substations;
 - (v) the height of all lattice towers forming part of the meteorological mast;
 - (vi) the length and arrangement of all cables comprising Work No. 1(d);
 - (vii) the dimensions of all gravity base foundations;
 - (viii) the dimensions of all jacket foundations;
 - (ix) the dimensions of all suction caisson foundations;
 - (x) in relation to the meteorological mast, the dimensions of each monopile foundation;
 - (xi) the proposed layout of all wind turbine generators, offshore substations and meteorological masts including any exclusion zones under condition 2 above and/or identified under condition 11(h)(iv);
 - (xii) a plan showing the indicative layout of all wind turbine generators, offshore substations and meteorological masts including all exclusion zones (insofar as not shown in (xi) above) and showing the indicative programming of particular works as set out in the indicative programme to be provided under condition 11(b)(iv); and
 - (xiii) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to condition 11(i);

to ensure conformity with the description of Work No. 1 and compliance with conditions 1 to 5 above.

- (b) A construction and monitoring programme to include details of—
- (i) the proposed construction start date;
 - (ii) proposed timings for mobilisation of plant, delivery of materials and installation works;
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 11(h), 17, 18 and 19; and
 - (iv) an indicative written construction programme for all wind turbine generators, offshore substations, meteorological masts and cables comprised in the works at paragraph 2(2) of Part 1 (licensed marine activities) of this Schedule (insofar as not shown in (ii) above);
- with details pursuant to (iii) above to be submitted to the MMO at least six months prior to the first survey 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) drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation works and cable sandwave preparation works;
 - (ii) soft start procedures with specified duration periods;
 - (iii) WTG, meteorological mast and offshore substation location and installation, including scour protection;
 - (iv) cable installation, including cable protection;
 - (v) contractors;
 - (vi) vessels and vessels transit corridors; and
 - (vii) associated and ancillary works.
- (d) A project environmental management and monitoring plan 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 during construction and operation of the authorised scheme in relation to all activities carried out;
 - (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;
 - (iv) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer; and
 - (v) a fisheries liaison and coexistence plan to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 6 and to address the interaction of the licensed activities with fishing activities.
- (e) A scour protection management and cable armouring plan providing details of the need, type, sources, quantity and installation methods for scour protection.
- (f) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation, a marine mammal mitigation protocol in line with JNCC guidelines for minimising acoustic disturbance to marine mammals.
- (g) 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 detailed cable laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques, including

cable protection and including contingency plans if burial is not achieved through preferred techniques; and

- (iii) appropriate methods such as trawl or drift net to be deployed along the offshore subsea cables within the authorised scheme as agreed in writing by the MMO, following the survey referred to in condition 19(2)(d) to assess any seabed obstructions resulting from burial of cables as part of the authorised scheme.
- (h) A written scheme of archaeological investigation in relation to the offshore Order limits seaward of mean low water in accordance with the draft written scheme of investigation: archaeology and cultural heritage (offshore), industry good practice and in consultation with English Heritage (and, if relevant, Suffolk Coastal District Council) to include—
 - (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (ii) a methodology for any further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (iii) archaeological analysis and reporting of survey data, and timetable, which is to be submitted to the MMO within four months of any survey being completed;
 - (iv) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
 - (v) monitoring during and post construction, including a conservation programme for finds;
 - (vi) archiving of archaeological material; and
 - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme.
- (i) A mitigation scheme for any Annex 1 features identified by the survey referred to in condition 17(2)(b).
- (j) An offshore operations and maintenance and monitoring plan, in accordance with the outline offshore operations and maintenance and monitoring plan, to be submitted to the MMO at least four months prior to commencement of operation of the licensed activities and to provide for review and resubmission every three years during the operational phase.
- (k) A coexistence statement demonstrating how the scheme design and construction methods, including cable specification, installation and armouring, reasonably avoids or mitigates effects on other marine users, including fisheries.

12.—(1) Any archaeological reports produced in accordance with condition 11(h)(iii) are to be agreed with English Heritage (and, if relevant, Suffolk Coastal District Council).

(2) The undertaker must ensure that a copy of any agreed archaeological report is deposited with the National Monuments Record, by submitting an English Heritage OASIS form with a digital copy of the report. If the report relates to the foreshore, the undertaker must notify Suffolk County Council that the OASIS report has been submitted to the National Monuments Record.

13.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 11 must be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) No licensed activities shall commence until the MMO has approved in writing each programme, statement, plan, protocol or scheme required to be approved under condition 11 and the licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 11, unless otherwise agreed in writing by the MMO.

Foundation restrictions

14. No gravity base foundations may be installed in any area of the seabed with mobile sand waves of 5 metres or more, as identified by the swath-bathymetry survey carried out under condition 17(2)(c), unless otherwise agreed in writing by the MMO.

Reporting of engaged agents, contractors and vessels

15.—(1) The undertaker must provide the following information to the MMO as soon as is reasonably practicable prior to the agent, contractor or vessel engaging in the licensed activities—

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities; 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.

Equipment and operation of vessels engaged in licensed activities

16.—(1) All vessels employed to perform the licensed activities must be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and (save in the case of remotely operated vehicles or vessels) must comply with paragraphs (2) to (7) below.

(2) All motor powered vessels must be fitted with—

- (a) electronic positioning aid to provide navigational data;
- (b) radar;
- (c) echo sounder; and
- (d) multi-channel VHF.

(3) No radio beacon or radar beacon operating on the marine frequency bands must be installed or used without the prior written approval of the Secretary of State.

(4) All vessels' names or identification must be clearly marked on the hull or superstructure.

(5) All vessels must exhibit signals in accordance with the requirements of the International Regulations for the Prevention of Collisions at Sea.

(6) All communication on VHF working frequencies must be in English.

(7) No vessel shall engage in the licensed activities until all the equipment specified in paragraph (2) is fully operational.

Pre-construction monitoring and surveys

17.—(1) The undertaker must, in discharging condition 11(b), submit details for written approval by the MMO in consultation with Natural England and JNCC of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report; and

- (a) the survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to in paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) appropriate surveys to determine the location, extent and composition of any benthic habitats of conservation, ecological or economic importance;
- (b) appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 Habitat in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;
- (c) high resolution swath-bathymetry survey(s), to include a 100% coverage and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works;
- (d) appropriate surveys of existing ornithological activity inside the area(s) within the Order limits in which it is proposed to carry out construction works, and any wider area(s) where appropriate, which is required to test predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme;
- (e) low intensity information gathering of elasmobranch populations within the Order limits in which it is proposed to carry out construction and any wider areas where appropriate, to test predictions made in the environmental statement concerning impacts to elasmobranchs from electromagnetic fields;
- (f) appropriate surveys of existing marine mammal activity inside the area(s) within the Order limits in which it is proposed to carry out construction works and any wider area(s) where appropriate which is required to test predictions in the environmental statement concerning key marine mammal interests of relevance to the authorised scheme.

(3) The undertaker must carry out the surveys agreed under paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO in consultation with Natural England and JNCC.

Construction monitoring

18.—(1) The undertaker must, in discharging condition 11(b), submit details for approval by the MMO in consultation with Natural England and JNCC of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives. In any event, such monitoring must include measurements of noise generated by the installation of the first four jacket foundations of each discrete jacket foundation type to be installed.

(2) The undertaker must carry out the surveys approved under paragraph (1), including any further noise monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England and JNCC.

(3) The results of the initial noise measurements monitored in accordance with paragraph (1) must be provided to the MMO within six weeks of the installation of the first four jacket foundations of each discrete jacket foundation type. The assessment of this report by the MMO shall determine whether any further noise monitoring is required.

(4) Construction monitoring must include traffic monitoring in accordance with the outline navigation monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MCA.

Post construction

19.—(1) The undertaker must, in discharging condition 11(b), submit details of approval by the MMO in consultation with Natural England and JNCC of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction

position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post-construction surveys referred to in paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) appropriate surveys of any benthic communities/benthos constituting Annex 1 Habitat in whole or in part inside the area(s) within the Order limits in which construction works were carried out;
- (b) if existing data is not available, appropriate surveys to validate predictions made in the environmental statement in relation to habitat creation and the ability of structures to act as vectors for non-native species;
- (c) appropriate ornithological surveys covering the area(s) within the Order limits in which construction works were carried out, and any wider area(s) where appropriate, as required to test predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme;
- (d) one high resolution swath bathymetric survey across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring as may be agreed to ensure scour equilibrium has been reached and that the cables have been buried;
- (e) side scan sonar and bathymetry survey(s) within the Order limits in which construction works were carried out after the first occurrence of a major storm event;
- (f) appropriate marine mammal surveys covering the area(s) within the Order limits in which construction works were carried out and any wider area(s) where appropriate, as required to test predictions in the environmental statement concerning key marine mammal interests of relevance to the authorised scheme;
- (g) low intensity information gathering (in conjunction with reports of fisheries catch data) within the Order limits in which construction works were carried out, to test predictions made in the environmental statement concerning impacts to elasmobranchs from electromagnetic fields;
- (h) post-construction traffic monitoring in accordance with the outline navigation monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MCA.

(3) The undertaker must carry out the surveys agreed under paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England and JNCC.

SCHEDULE J

Article 28

DEEMED LICENCE UNDER MARINE AND COASTAL ACCESS ACT 2009 – TRANSMISSION ASSETS

PART 1

Licensed Marine Activities

1.—(1) In this licence—

“the 2008 Act” means the Planning Act 2008;

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“Annex 1 Habitat” means such habitat as defined under the EU 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 2(3);

“authorised scheme” means Work Nos. 2 and 3A described in paragraph 2 of this licence;

“CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982;

“Cefas” means the Centre for Environment, Fisheries and Aquaculture Science;

“commence” means the first carrying out of any part of the licensed activities save for pre-construction surveys and monitoring;

“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;

“enforcement officer” means a person authorised to carry out enforcement duties under Chapter 3 of the Marine and Coastal Access Act 2009;

“environmental statement” means the environmental statement submitted in support of the application;

“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;

“HVDC offshore converter station” means a platform with one or more decks, whether open or fully clad, accommodating electrical power transformers, AC equipment including phase reactors and AC filters, AC/DC converter with switching devices, DC equipment including DC capacitors and DC filters and associated equipment, switch gear, cooling systems, instrumentation, protection and control systems, standby electrical generation equipment, fuelling facilities, auxiliary and uninterruptible power supply systems and transformers, accommodation and/or emergency shelter, craneage, meteorological equipment, helicopter landing facilities, messing facilities, potable water storage, black water separation equipment, control hub, drainage facilities, access equipment, J-tubes, marking and lighting and other associated equipment and facilities to enable the transmission of electronic communication and the conversion and transmission of electricity;

“JNCC” means the Joint Nature Conservation Committee;

“jacket foundation” means a steel jacket/ lattice-type structure constructed of steel which is fixed to the seabed at two or more points with steel pin piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platform(s) and equipment, and “discrete jacket foundation types” shall include pre-piled or post-piled jackets, three-legged or four legged jackets, or straight or battered leg jackets;

“Kingfisher Fortnightly Bulletin” means the bulletin published by the Humber Seafood Institute or such other alternative publication approved in writing by the MMO;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of this licence;

“MCA” means the Maritime and Coastguard Agency;

“Marine Management Organisation” or “MMO” means the body created under the Marine and Coastal Access Act 2009 which is responsible for the monitoring and enforcement of this licence;

“maintain” includes inspect, maintain, repair, adjust and alter, and further includes remove, reconstruct and replace any of the ancillary works in Part 2 of **Schedule A** (ancillary development) and any component part of any wind turbine generator, offshore substation or meteorological mast described in Part 1 of **Schedule A** (authorised development) (but not including the alteration, removal or replacement of foundations) to the extent assessed in the environmental statement; and “maintenance” shall be construed accordingly;

“major storm event” means a greater than 1 in 10 year wave event within the Order limits seaward of MHWS in terms of a wave height measured from the West Gabbard Waverider buoy (WESTGAB) or any other definition as agreed with the MMO;

“mean high water springs level” 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;

“notice to mariners” includes any notice to mariners which may be issued by the Admiralty, Trinity House, Queen’s harbourmasters, government departments and harbour and pilotage authorities;

“offshore Order limits” means the limits shown on the works plan within which the authorised scheme may be carried out;

“offshore substation” means a HVDC converter station;

“outline Bawdsey bed level monitoring and remediation strategy” means the document certified as the outline Bawdsey bed level monitoring and remediation strategy by the decision-maker for the purposes of this Order;

“outline navigation monitoring strategy” means the document certified as the outline navigation monitoring strategy by the decision-maker for the purposes of this Order;

“draft written scheme of investigation: archaeology and cultural heritage (offshore)” means the document certified as the draft written scheme of investigation: archaeology and cultural heritage (offshore) by the decision-maker for the purposes of this Order;

“outline offshore operations and maintenance and monitoring plan” means the document certified as the outline offshore operations maintenance and monitoring plan by the decision-maker for the purposes of this Order;

“the Order” means the East Anglia ONE Offshore Windfarm Order 201X;

“Order limits boundary coordinates plan” means the document certified as the Order limits boundary coordinates plan by the decision-maker for the purposes of this Order;

“suction buckets” means large diameter steel cylindrical shells which penetrate the seabed assisted by hydrostatic pressure differential for fixity of steel jacket foundations;

“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 East Anglia ONE Limited, which is the named undertaker, or any other person who has the benefit of this Order in accordance with section 156 of the 2008 Act for such time as that section applies to that person;

“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” or “WTG” 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;

“Work No. 1” means the offshore generating stations comprising wind turbine generators, HVAC collector stations, meteorological masts and interconnecting subsea cables;

“Work No. 3B” means up to four cables and up to eight additional cable ducts laid underground from mean low water at Bawdsey Cliffs to the cable landfall; and

“works plan” means the plan certified as the works plan by the decision-maker for the purposes of the Order.

(2) A reference to any statute, order, regulation or similar instrument shall be 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 shall be taken to be Greenwich Mean Time (GMT);
- (b) all co-ordinates shall be 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 shall be—

(a) Marine Management Organisation

Offshore Marine Licensing

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 123 1032

(b) Marine Management Organisation (local office)

Marine Environment Team

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) Marine and Coastguard Agency

Navigation Safety Branch

Bay 2/04

Spring Place

105 Commercial Road

Southampton
SO15 1EG
Tel: 023 8032 9191

(f) Centre for Environment, Fisheries and Aquaculture Science
Pakefield Road
Lowestoft
Suffolk
NR33 0HT
Tel: 01502 562 244

(g) Natural England
Foundry House
3 Millsands
Riverside Exchange
Sheffield
S3 8NH
Tel: 0300 060 4911

(h) English Heritage
Eastgate Court
195-205 High Street
Guildford
GU1 3EH
Tel: 01483 252 057

(i) JNCC
Inverdee House
Baxter Street
Aberdeen
AB11 9QA
Tel: 01224 266 550

Details of licensed marine activities

2.—(1) 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, subject to the conditions—

- (a) the deposit at sea of the substances and articles specified in paragraph (3) below;
- (b) the construction of works in or over the sea and/or on or under the sea bed;
- (c) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation.

(2) Such activities are authorised in relation to the construction and operation of—

Work No. 2 – Up to two HVDC offshore converter stations fixed to the seabed within the area shown on the works plan by one of two foundation types (namely jacket foundation or gravity base foundation);

Work No. 3A – Up to four HDVC export cables between Work No. 2 and MHWS consisting of subsea cables along routes within the Order limits seaward of MHWS including one or more cable crossings;

(3) And in connection with such Works No. 2 and 3A, ancillary works within the Order limits which have been subject to an environmental impact assessment recorded in the environmental statement comprising—

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/ or maintenance of the authorised scheme;
- (b) buoys, beacons, fenders and other navigational warning or ship impact protection works;
- (c) temporary works for the benefit or protection of land or structures affected by the authorised scheme; and
- (d) the disposal of up to 245,000m³ of inert material of natural origin within the offshore Order limits produced during construction drilling and seabed preparation for foundation works and cable sandwave preparation works at disposal site reference TH23 East Anglia ONE.

(4) The substances or articles authorised for deposit at sea are—

- (a) iron/steel;
- (b) stone and rock;
- (c) concrete;
- (d) sand and gravel;
- (e) plastic/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.

3. The grid coordinates for the authorised scheme are specified below and more particularly shown on the Order limits boundary coordinates plan—

Coordinates for the Order limits seaward of MHWS

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
1	52° 0' 0.777"	1° 25' 27.320"	19	52° 8' 1.935"	1° 52' 54.350"
2	52° 0' 41.137"	1° 27' 15.227"	20	52° 4' 49.045"	1° 45' 5.590"
3	52° 3' 53.611"	1° 35' 40.499"	21	52° 2' 47.963"	1° 36' 38.722"
4	52° 5' 44.773"	1° 40' 57.350"	22	52° 2' 7.247"	1° 35' 19.374"
5	52° 8' 21.995"	1° 48' 34.767"	23	52° 0' 37.213"	1° 33' 17.008"
6	52° 9' 37.650"	1° 53' 5.293"	24	51° 58' 41.939"	1° 32' 27.850"
7	52° 9' 40.842"	1° 57' 7.198"	25	51° 57' 26.482"	1° 29' 55.449"
8	52° 11' 6.526"	2° 2' 15.690"	26	51° 57' 41.943"	1° 26' 39.492"
9	52° 12' 27.654"	2° 10' 3.953"	27	51° 59' 57.517"	1° 25' 20.806"
10	52° 12' 22.845"	2° 11' 9.965"	A	52° 17' 50.395"	2° 21' 1.372"
11	52° 13' 33.795"	2° 15' 22.225"	B	52° 19' 10.175"	2° 27' 36.407"
12	52° 13' 57.058"	2° 23' 6.622"	C	52° 23' 22.654"	2° 31' 40.044"
13	52° 9' 17.925"	2° 25' 36.436"	D	52° 21' 53.636"	2° 34' 13.872"

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
14	52° 11' 7.988"	2° 11' 30.888"	E	52° 18' 15.833"	2° 34' 13.645"
15	52° 10' 13.221"	2° 5' 28.775"	F	52° 7' 14.982"	2° 32' 58.021"
16	52° 8' 12.739"	1° 57' 41.369"	G	52° 4' 46.512"	2° 31' 2.669"
17	52° 8' 37.192"	1° 57' 49.886"	H	52° 4' 45.732"	2° 28' 1.913"
18	52° 8' 1.912"	1° 54' 31.662"			

4. This licence shall remain in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 of the 2004 Act, including any modification to the programme under section 108, and the completion of such programme has been confirmed by the Secretary of State in writing.

5. The provisions of Section 72 of the 2009 Act shall apply to this licence except that the provisions of Section 72(7) relating to the transfer of the licence shall only apply to a transfer not falling within **article 5** (benefit of the Order).

PART 2

Conditions

Design parameters

1. [Not used]

2. No HVDC offshore converter station forming part of the authorised scheme shall be erected within the areas hatched black on the works plan, whose coordinates are specified below and more particularly shown on the Order limits boundary coordinates plan—

Coordinates for restricted build area

<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>	<i>Point</i>	<i>Latitude (DMS)</i>	<i>Longitude (DMS)</i>
i	52° 17' 29.501"	2° 21' 18.183"	vi	52° 21' 52.244"	2° 34' 8.586"
ii	52° 19' 32.953"	2° 29' 16.557"	vii	52° 18' 15.948"	2° 34' 8.368"
iii	52° 19' 47.657"	2° 34' 8.460"	viii	52° 20' 36.356"	2° 32' 52.848"
iv	52° 20' 36.356"	2° 34' 8.509"	x	52° 4' 49.734"	2° 30' 59.349"
ix	52° 20' 18.296"	2° 28' 48.188"	xi	52° 4' 48.985"	2° 28' 5.706"
v	52° 23' 17.520"	2° 31' 41.224"			

3.—(1) The total number of HVDC offshore converter stations forming part of the authorised scheme must not exceed 2.

(2) The dimensions of any HVDC offshore converter stations forming part of the authorised scheme (excluding towers, helipads, masts and cranes) must not exceed 60 metres in height when measured from LAT, 75 metres in length and 120 metres in width.

4.—(1) The total length of the cables comprising Work No. 3A must not exceed 400 kilometres.

(2) The total amount of cable protection for the cables comprising Work No. 3A must not exceed 24,000m³.

5. The total amount of scour protection for the HVAC offshore collector stations forming part of the authorised scheme must not exceed 0.029km².

Notifications and inspections

- 6.—(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 15; and
 - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 15;
 - (b) within 28 days of receipt of a copy of this licence those persons referred to at paragraph (a) above must provide a completed form to the MMO confirming their understanding of the terms of conditions of this licence.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 15 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 and at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The document referred to in paragraph (1)(a) must be available for inspection by an authorised enforcement officer at all times at the locations set out in paragraph (3) above.
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during construction and operation of the authorised scheme.
- (6) The undertaker must inform the local MMO office in writing at least ten working days prior to the commencement of the licensed activities or any part of them and within ten working days of completion of any works comprised in the licensed activities.
- (7) Prior to the commencement of the licensed activities the undertaker must publish in the Kingfisher Fortnightly Bulletin details of the vessel routes (if appropriate), timings and locations relating to the construction of the authorised scheme.
- (8) The undertaker must ensure that:
- (a) a notice to mariners is issued at least 10 working days prior to the commencement of the licensed activities or any part of them advising of the start date of Work No. 2 and the expected vessel routes from the local construction ports to the relevant location; and
 - (b) a second notice to mariners is issued at least 10 working days prior to the commencement of Work No. 3A (subsea export cables to MHWS) and the route of the subsea export cables.
- (9) The undertaker must ensure that the notices to mariners are updated and reissued at regular intervals, and at least fortnightly, and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme approved under condition 11(a). Copies of all notices must be provided to the MMO.
- (10) The undertaker must notify—
- (a) the Hydrographic Office of both the commencement (within two weeks), progress and completion (within two weeks) of the authorised scheme in order that all necessary amendments to nautical charts are made; and
 - (b) the MMO, MCA and Trinity House once the authorised scheme is completed and any required lighting or marking has been established.

Offshore safety management

7.—(1) The authorised scheme shall not commence until the Secretary of State, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and adequately addressed all MCA recommendations contained within MGN 371 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes including full details of the Emergency Co-operation Plans (ERCoP) for the construction, operation and decommissioning as appropriate to the authorised scheme.

(2) The undertaker will prepare and implement a project-specific Active Safety Management System, taking account of safety and mitigation measures as referred to in the navigation risk assessment in the environmental statement.

Aids to navigation

8.—(1) The undertaker must at or near the authorised scheme during the whole period of the construction, operation, alteration, replacement or decommissioning of the authorised scheme 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 ensure that timely and efficient notices to mariners and other navigational warnings of the position and nature of the authorised scheme seaward of MHWS, are issued during and after the period of construction, alteration, replacement or decommissioning of the authorised scheme, such information to be promulgated to mariners in the shipping and fishing industry as well as to recreational mariners, in accordance with conditions 6(8) and 6(9).

(3) The undertaker must notify Trinity House as soon as reasonably practicable of both the progress and completion of the authorised scheme seaward of MHWS and any aids for navigation established from time to time.

(4) The undertaker must provide reports on the availability of aids to navigation periodically as requested by Trinity House.

(5) The undertaker must colour all structures yellow 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.

(6) In case of injury to, or destruction or decay of, the authorised scheme or any part thereof the undertaker must as soon as reasonably practicable notify Trinity House and must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as Trinity House may from time to time direct.

Chemicals, drilling and debris

9.—(1) Unless otherwise agreed in writing by the MMO all chemicals used in the construction of the authorised scheme must be selected from the List of Notified Chemicals approved for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002 (as amended).

(2) All protective coatings and paints must be suitable for use in the marine environment and, where necessary, approved by the Health and Safety Executive. The use of such coatings must accord with best environmental practice.

(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) Where foundation drilling works are proposed, in the event that any system other than water-based mud is proposed the MMO’s written approval in relation to the proposed disposal of any arisings must be obtained before the drilling commences, which may also require a marine licence.

(5) 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.

(6) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO, Marine Pollution Response Team.

(7) The undertaker must ensure that any waste and/or debris arising from the construction of the authorised scheme or from equipment or temporary works placed below MHWS are removed on completion of the authorised scheme.

(8) At least 10 days prior to the commencement of the licensed activities the undertaker must submit and obtain the MMO's approval of an audit sheet covering all aspects of the construction of the authorised scheme. The audit sheet must include details of—

- (a) loading facilities;
- (b) vessels;
- (c) equipment;
- (d) shipment routes;
- (e) working schedules; and
- (f) all components and materials to be used in the construction of the authorised scheme.

(9) The audit sheet must be maintained throughout the construction of the authorised scheme and any changes notified immediately in writing to the MMO.

(10) In the event that the MMO becomes aware that any of the materials on the audit sheet cannot be accounted for it shall require the undertaker to carry out a side scan sonar survey to plot all obstructions across the relevant area(s) within the offshore Order limits where construction works and related activities have been carried out. In the event that the missing material is not located, the survey area may be extended at the discretion of the MMO. Local fishermen shall be invited to send a representative to be present during the survey. Any new obstructions that the MMO believes to be associated with the authorised scheme must be removed at the undertaker's expense.

(11) The undertaker must inform the MMO of the location and quantities of inert material disposed of each month under this licence, 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.

(12) The undertaker must ensure that only inert material of natural origin, produced during construction drilling and seabed preparation for foundation works and cable sandwave preparation works shall be disposed of within the offshore Order limits (disposal site reference TH23 East Anglia ONE).

(13) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(14) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost below MHWS, the undertaker must report the loss to the District Marine Office within 48 hours and if the MMO shall reasonably consider 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.

(15) The undertaker must undertake the survey agreed under condition 11(g)(iii) following the high resolution swath bathymetric survey referred to in condition 19(2)(d). Should any such obstructions be identified which may reasonably be considered to interfere with fishing the undertaker must take reasonable steps to remove them.

Force majeure

10. 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 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.

Pre-construction plans and documentation

11. The licensed activities or any part of those activities shall not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO—

- (a) A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart, to be agreed in writing with the MMO in consultation with Trinity House and the MCA which shows:
 - (i) the proposed location and choice of foundation of all offshore substations;
 - (ii) the height, length and width of all offshore substations;
 - (iii) the length and arrangement of all cables comprising Work No. 3A;
 - (iv) the dimensions of all gravity base foundations;
 - (v) the dimensions of all jacket foundations;
 - (vi) the proposed layout of all offshore substations including any exclusion zones under condition 2 above and/or identified under condition 11(h)(iv);
 - (vii) a plan showing the indicative layout of all offshore substations including all exclusion zones (insofar as not shown in (vi) above) and showing the indicative programming of particular works as set out in the indicative programme to be provided under condition 11(b)(iv); and
 - (viii) any exclusion zones/micrositing requirements identified in any mitigation scheme pursuant to condition 11(j);to ensure conformity with the description of Works No. 2 and 3A and compliance with conditions 1 to 5 above.
- (b) A construction and monitoring programme to include details of—
 - (i) the proposed construction start date;
 - (ii) proposed timings for mobilisation of plant, delivery of materials and installation works;
 - (iii) proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 11(h), 17, 18 and 19; and
 - (iv) an indicative written construction programme for all offshore substations and cables comprised in the works at paragraph 2(2) of Part 1 (licensed marine activities) of this Schedule (insofar as not shown in (ii) above);with details pursuant to (iii) above to be submitted to the MMO at least six months prior to the first survey 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) drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation works and cable sandwave preparation works;
 - (ii) soft start procedures with specified duration periods;
 - (iii) offshore substation location and installation, including scour protection;
 - (iv) cable installation, including cable landfall and cable protection;
 - (v) contractors;
 - (vi) vessels and vessels transit corridors; and
 - (vii) associated and ancillary works.
- (d) A project environmental management and monitoring plan 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 during construction and operation of the authorised scheme in relation to all activities carried out;

- (ii) a chemical risk assessment to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance;
 - (iii) waste management and disposal arrangements;
 - (iv) the appointment and responsibilities of a fisheries liaison officer and an environmental liaison officer; and
 - (v) a fisheries liaison and coexistence plan to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 6 and to address the interaction of the licensed activities with fishing activities.
- (e) A scour protection management and cable armouring plan providing details of the need, type, sources, quantity and installation methods for scour protection.
- (f) Only when driven or part-driven pile foundations are proposed to be used as part of the foundation installation, a marine mammal mitigation protocol in line with JNCC guidelines for minimising acoustic disturbance to marine mammals.
- (g) 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 detailed cable laying plan for the Order limits, incorporating a burial risk assessment to ascertain suitable burial depths and cable laying techniques, including cable protection; and including contingency plans if burial is not achieved through preferred techniques; and
 - (iii) appropriate methods such as a trawl or drift net to be deployed along the offshore subsea export cables between Work No. 1 in **Schedule I** (deemed licence under Marine and Coastal Access Act 2009 – generation assets) and mean low water mark, following the survey referred to in condition 19(2)(d) to assess any seabed obstructions resulting from burial of the export cables.
- (h) A written scheme of archaeological investigation in relation to the offshore Order limits seaward of mean low water in accordance with the draft written scheme of investigation: archaeology and cultural heritage (offshore), industry good practice and in consultation with English Heritage (and, if relevant, Suffolk Coastal District Council) to include—
- (i) details of responsibilities of the undertaker, archaeological consultant and contractor;
 - (ii) a methodology for any further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
 - (iii) archaeological analysis and reporting of survey data, and timetable, which is to be submitted to the MMO within four months of any survey being completed;
 - (iv) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
 - (v) monitoring during and post construction, including a conservation programme for finds;
 - (vi) archiving of archaeological material; and
 - (vii) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme.
- (i) A bed level monitoring and remediation plan for that area of Work No. 3B below MHWS in accordance with the outline Bawdsey bed level monitoring and remediation strategy, to include—
- (i) monitoring of bed levels of London clay for the operational lifetime of the authorised scheme; and
 - (ii) a methodology for any remedial works in that area identified as necessary by such monitoring.

- (j) A mitigation scheme for any Annex 1 features identified by the survey referred to in condition 17(2)(b).
- (k) An offshore operations and maintenance and monitoring plan, in accordance with the outline offshore operations and maintenance and monitoring 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.
- (l) A coexistence statement demonstrating how the scheme design and construction methods, including cable specification, installation and armouring, reasonably avoids or mitigates effects on other marine users, including fisheries.

12.—(1) Any archaeological reports produced in accordance with condition 11(h)(iii) are to be agreed with English Heritage (and, if relevant, Suffolk Coastal District Council).

(2) The undertaker must ensure that a copy of any agreed archaeological report is deposited with the National Monuments Record, by submitting an English Heritage OASIS form with a digital copy of the report. If the report relates to the foreshore, the undertaker must notify Suffolk County Council that the OASIS report has been submitted to the National Monuments Record.

13.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 11 must be submitted for approval at least four months prior to the intended start of construction, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) No licensed activities shall commence until the MMO has approved in writing each programme, statement, plan, protocol or scheme required to be approved under condition 11 and the licensed activities must be carried out in accordance with the approved plans, protocols, statements, schemes and details approved under condition 11, unless otherwise agreed in writing by the MMO.

Foundation restrictions

14. No gravity base foundations may be installed in any area of the seabed with mobile sand waves of 5 metres or more, as identified by the swath-bathymetry survey carried out under condition 17(2)(c), unless otherwise agreed in writing by the MMO.

Reporting of engaged agents, contractors and vessels

15.—(1) The undertaker must provide the following information to the MMO as soon as is reasonably practicable prior to the agent, contractor or vessel engaging in the licensed activities:

- (a) the name and function of any agent or contractor appointed to engage in the licensed activities; 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.

Equipment and operation of vessels engaged in licensed activities

16.—(1) All vessels employed to perform the licensed activities must be constructed and equipped to be capable of the proper performance of such activities in accordance with the conditions of this licence and (save in the case of remotely operated vehicles or vessels) must comply with paragraphs (2) to (7) below.

(2) All motor powered vessels must be fitted with—

- (a) electronic positioning aid to provide navigational data;
- (b) radar;
- (c) echo sounder; and

(d) multi-channel VHF.

(3) No radio beacon or radar beacon operating on the marine frequency bands must be installed or used without the prior written approval of the Secretary of State.

(4) All vessels' names or identification must be clearly marked on the hull or superstructure.

(5) All vessels must exhibit signals in accordance with the requirements of the International Regulations for the Prevention of Collisions at Sea.

(6) All communication on VHF working frequencies must be in English.

(7) No vessel shall engage in the licensed activities until all the equipment specified in paragraph (2) is fully operational.

Pre-construction monitoring and surveys

17.—(1) The undertaker must, in discharging condition 11(b), submit details for written approval by the MMO in consultation with Natural England and JNCC of proposed pre-construction surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report; and

- (a) the survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement; and
- (b) the baseline report proposals must ensure that the outcome of the agreed surveys together with existing data and reports are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(2) The pre-construction surveys referred to in paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake—

- (a) appropriate surveys to determine the location, extent and composition of any benthic habitats of conservation, ecological or economic importance;
- (b) appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 Habitat in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;
- (c) high resolution swath-bathymetry survey(s), to include a 100% coverage and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works;
- (d) appropriate surveys of existing ornithological activity inside the area(s) within the Order limits in which it is proposed to carry out construction works, and any wider area(s) where appropriate, which is required to test predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme;
- (e) low intensity information gathering of elasmobranch populations within the Order limits in which it is proposed to carry out construction and any wider areas where appropriate, to test predictions made in the environmental statement concerning impacts to elasmobranchs from electromagnetic fields;
- (f) appropriate surveys of existing marine mammal activity inside the area(s) within the Order limits in which it is proposed to carry out construction works and any wider area(s) where appropriate which is required to test predictions in the environmental statement concerning key marine mammal interests of relevance to the authorised scheme.

(3) The undertaker must carry out the surveys agreed under paragraph (1) and provide the baseline report to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing by the MMO in consultation with Natural England and JNCC.

Construction monitoring

18.—(1) The undertaker must, in discharging condition 11(b), submit details for approval by the MMO in consultation with Natural England and JNCC of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The survey proposals must specify each survey's objectives.

(2) Construction monitoring must include traffic monitoring in accordance with the outline navigation monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MCA.

(3) The undertaker must carry out the surveys approved under paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England and JNCC.

Post construction

19.—(1) The undertaker must, in discharging condition 11(b), submit details of approval by the MMO in consultation with Natural England and JNCC of proposed post-construction surveys, including methodologies and timings, and a proposed format, content and timings for providing reports on the results. The survey proposals must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The post-construction surveys referred to in paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake —

- (a) appropriate surveys of any benthic communities/benthos constituting Annex 1 Habitat in whole or in part inside the area(s) within the Order limits in which construction works were carried out;
- (b) if existing data is not available, appropriate surveys to validate predictions made in the environmental statement in relation to habitat creation and the ability of structures to act as vectors for non-native species;
- (c) appropriate ornithological surveys covering the area(s) within the Order limits in which construction works were carried out, and any wider area(s) where appropriate, as required to test predictions in the environmental statement concerning key ornithological interests of relevance to the authorised scheme;
- (d) one high resolution swath bathymetric survey across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring as may be agreed to ensure scour equilibrium has been reached and that the cables have been buried;
- (e) side scan sonar and bathymetry survey(s) within the Order limits in which construction works were carried out after the first occurrence of a major storm event;
- (f) appropriate marine mammal surveys covering the area(s) within the Order limits in which construction works were carried out and any wider area(s) where appropriate, as required to test predictions in the environmental statement concerning key marine mammal interests of relevance to the authorised scheme;
- (g) low intensity information gathering (in conjunction with reports of fisheries catch data) within the Order limits in which construction works were carried out, to test predictions made in the environmental statement concerning impacts to elasmobranchs from electromagnetic fields;
- (h) post-construction traffic monitoring in accordance with the outline navigation monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MCA.

(3) The undertaker must carry out the surveys agreed under paragraph (1) and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with Natural England and JNCC.

SCHEDULE K

Article 31

REMOVAL OF IMPORTANT HEDGEROWS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Number of hedgerow shown on important hedgerow plan</i>
Suffolk Coastal District	Hedgerow 1 on sheet 1
Suffolk Coastal District	Hedgerow 2 on sheet 1
Suffolk Coastal District	Hedgerow 4 on sheet 1
Suffolk Coastal District	Hedgerow 5 on sheet 1
Suffolk Coastal District	Hedgerow 6 on sheet 1
Suffolk Coastal District	Hedgerow 7 on sheet 2
Suffolk Coastal District	Hedgerow 8 on sheet 2
Suffolk Coastal District	Hedgerow 9 on sheet 3
Suffolk Coastal District	Hedgerow 10 on sheet 3
Suffolk Coastal District	Hedgerow 11 on sheet 3
Suffolk Coastal District	Hedgerow 12 on sheet 3
Suffolk Coastal District	Hedgerow 14 on sheet 3
Suffolk Coastal District	Hedgerow 15 on sheet 3
Suffolk Coastal District	Hedgerow 16 on sheet 3
Suffolk Coastal District	Hedgerow 17 on sheet 3
Suffolk Coastal District	Hedgerow 18 on sheet 3
Suffolk Coastal District	Hedgerow 19 on sheet 4
Suffolk Coastal District	Hedgerow 20 on sheet 4
Suffolk Coastal District	Hedgerow 21 on sheet 4
Suffolk Coastal District	Hedgerow 22 on sheet 4
Suffolk Coastal District	Hedgerow 23 on sheet 4
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Suffolk Coastal District	Hedgerow 25 on sheet 5
Suffolk Coastal District	Hedgerow 26 on sheet 5
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Suffolk Coastal District	Hedgerow 30 on sheet 5
Suffolk Coastal District	Hedgerow 31 on sheet 5
Suffolk Coastal District	Hedgerow 32 on sheet 5
Suffolk Coastal District	Hedgerow 33 on sheet 9
Suffolk Coastal District	Hedgerow 37 on sheet 6
Suffolk Coastal District	Hedgerow 38 on sheet 6
Suffolk Coastal District	Hedgerow 39 on sheet 6
Suffolk Coastal District	Hedgerow 40 on sheet 6
Suffolk Coastal District	Hedgerow 41 on sheet 6
Suffolk Coastal District	Hedgerow 42 on sheet 6
Suffolk Coastal District	Hedgerow 43 on sheet 6
Suffolk Coastal District	Hedgerow 44 on sheet 6
Suffolk Coastal District	Hedgerow 45 on sheet 6
Suffolk Coastal District	Hedgerow 46 on sheet 6
Suffolk Coastal District	Hedgerow 47 on sheet 6
Suffolk Coastal District	Hedgerow 48 on sheet 6

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Number of hedgerow shown on important hedgerow plan</i>
Suffolk Coastal District	Hedgerow 49 on sheet 6
Suffolk Coastal District	Hedgerow 50 on sheet 6
Suffolk Coastal District	Hedgerow 51 on sheet 6
Suffolk Coastal District	Hedgerow 52 on sheet 7
Suffolk Coastal District	Hedgerow 53 on sheet 7
Suffolk Coastal District	Hedgerow 54 on sheet 7
Suffolk Coastal District	Hedgerow 55 on sheet 7
Suffolk Coastal District	Hedgerow 56 on sheet 7
Suffolk Coastal District	Hedgerow 61 on sheet 7
Suffolk Coastal District	Hedgerow 62 on sheet 7
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Suffolk Coastal District	Hedgerow 85 on sheet 8
Suffolk Coastal District	Hedgerow 86 on sheet 8
Suffolk Coastal District	Hedgerow 87 on sheet 8
Suffolk Coastal District	Hedgerow 88 on sheet 8
Suffolk Coastal District	Hedgerow 89 on sheet 8
Suffolk Coastal District	Hedgerow 90 on sheet 8
Suffolk Coastal District	Hedgerow 91 on sheet 9
Suffolk Coastal District	Hedgerow 92 on sheet 9
Suffolk Coastal District	Hedgerow 93 on sheet 9
Suffolk Coastal District	Hedgerow 94 on sheet 9
Suffolk Coastal District	Hedgerow 95 on sheet 9
Suffolk Coastal District	Hedgerow 96 on sheet 9
Suffolk Coastal District	Hedgerow 97 on sheet 9
Suffolk Coastal District	Hedgerow 98 on sheet 9
Suffolk Coastal District	Hedgerow 99 on sheet 9
Suffolk Coastal District	Hedgerow 100 on sheet 9
Suffolk Coastal District	Hedgerow 101 on sheet 9

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Number of hedgerow shown on important hedgerow plan</i>
Suffolk Coastal District	Hedgerow 102 on sheet 9
Suffolk Coastal District	Hedgerow 103 on sheet 9
Suffolk Coastal District	Hedgerow 104 on sheet 9
Suffolk Coastal District	Hedgerow 105 on sheet 9
Suffolk Coastal District	Hedgerow 106 on sheet 9
Suffolk Coastal District	Hedgerow 107 on sheet 9
Suffolk Coastal District	Hedgerow 108 on sheet 9
Suffolk Coastal District	Hedgerow 109 on sheet 9
Suffolk Coastal District	Hedgerow 110 on sheet 9
Suffolk Coastal District	Hedgerow 111 on sheet 9
Suffolk Coastal District	Hedgerow 112 on sheet 9
Suffolk Coastal District	Hedgerow 113 on sheet 9
Suffolk Coastal District	Hedgerow 114 on sheet 9
Suffolk Coastal District	Hedgerow 115 on sheet 10
Suffolk Coastal District	Hedgerow 116 on sheet 10
Suffolk Coastal District	Hedgerow 117 on sheet 10
Suffolk Coastal District	Hedgerow 118 on sheet 10
Suffolk Coastal District	Hedgerow 119 on sheet 10
Suffolk Coastal District	Hedgerow 120 on sheet 10
Suffolk Coastal District	Hedgerow 121 on sheet 10
Suffolk Coastal District	Hedgerow 122 on sheet 10
Mid Suffolk District	Hedgerow 123 on sheet 10
Mid Suffolk District	Hedgerow 124 on sheet 10
Mid Suffolk District	Hedgerow 125 on sheet 10
Mid Suffolk District	Hedgerow 126 on sheet 10
Mid Suffolk District	Hedgerow 127 on sheet 10
Mid Suffolk District	Hedgerow 128 on sheet 11
Mid Suffolk District	Hedgerow 129 on sheet 11
Mid Suffolk District	Hedgerow 130 on sheet 11
Mid Suffolk District	Hedgerow 131 on sheet 11
Mid Suffolk District	Hedgerow 132 on sheet 11
Mid Suffolk District	Hedgerow 133 on sheet 11
Mid Suffolk District	Hedgerow 134 on sheet 11
Mid Suffolk District	Hedgerow 135 on sheet 11
Mid Suffolk District	Hedgerow 136 on sheet 11
Mid Suffolk District	Hedgerow 137 on sheet 11
Mid Suffolk District	Hedgerow 137 on sheet 11
Mid Suffolk District	Hedgerow 138 on sheet 11
Mid Suffolk District	Hedgerow 139 on sheet 11
Mid Suffolk District	Hedgerow 140 on sheet 11
Mid Suffolk District	Hedgerow 141 on sheet 11
Mid Suffolk District	Hedgerow 142 on sheet 11
Mid Suffolk District	Hedgerow 143 on sheet 11
Mid Suffolk District	Hedgerow 144 on sheet 11
Mid Suffolk District	Hedgerow 145 on sheet 11
Mid Suffolk District	Hedgerow 146 on sheet 12
Mid Suffolk District	Hedgerow 147 on sheet 12
Mid Suffolk District	Hedgerow 148 on sheet 12

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Number of hedgerow shown on important hedgerow plan</i>
Mid Suffolk District	Hedgerow 149 on sheet 12
Mid Suffolk District	Hedgerow 150 on sheet 12
Mid Suffolk District	Hedgerow 151 on sheet 12
Mid Suffolk District	Hedgerow 152 on sheet 12
Mid Suffolk District	Hedgerow 153 on sheet 12
Mid Suffolk District	Hedgerow 154 on sheet 13
Mid Suffolk District	Hedgerow 155 on sheet 13
Mid Suffolk District	Hedgerow 156 on sheet 13
Mid Suffolk District	Hedgerow 157 on sheet 13
Mid Suffolk District	Hedgerow 158 on sheet 13
Mid Suffolk District	Hedgerow 159 on sheet 13
Mid Suffolk District	Hedgerow 160 on sheet 13
Mid Suffolk District	Hedgerow 161 on sheet 13
Mid Suffolk District	Hedgerow 162 on sheet 13
Mid Suffolk District	Hedgerow 163 on sheet 13
Mid Suffolk District	Hedgerow 164 on sheet 13
Mid Suffolk District	Hedgerow 165 on sheet 13
Mid Suffolk District	Hedgerow 166 on sheet 13
Mid Suffolk District	Hedgerow 167 on sheet 13
Mid Suffolk District	Hedgerow 168 on sheet 13

SCHEDULE L

Article 38

PROTECTIVE PROVISIONS

PART 1

PROTECTION FOR ELECTRICITY, GAS, WATER AND SEWERAGE UNDERTAKERS

1. For the protection of the undertakers referred to in this part of this Schedule the following provisions shall, unless otherwise agreed in writing between the undertaker and the affected undertaking concerned, have effect.

2. In this part of this Schedule—

“affected undertaker” means

- (a) any licence holder within the meaning of Part 1 of the Electricity Act 1989(a);
- (b) a gas transporter within the meaning of Part 1 of the Gas Act 1986(b);
- (c) a water undertaker within the meaning of the Water Industry Act 1991(c); and
- (d) a sewerage undertaker within the meaning of Part 1 of the Water Industry Act 1991,

(a) 1989 c. 29. Section 64 sub-paragraph (1) was amended by section 108 and paragraphs 24, 38(1), (3) of Part II of Schedule 6 of the Utilities Act 2000.

(b) 1986 c. 44. A new section 7 was substituted by section 5 of the Gas Act 1995 (c.45), and was further amended by section 76 of the Utilities Act 2000 (c.27).

(c) 1991 c. 56.

for the area of the authorised development, and in relation to any apparatus, means the undertaker to whom it belongs or by whom it is maintained.

“alternative apparatus” means alternative apparatus adequate to enable the affected undertaker in question to fulfil its statutory functions in a manner not less efficient than previously;

“apparatus” means—

- (e) in the case of an electricity undertaker, electric lines or electrical plant (as defined in the Electricity Act 1989), belonging to or maintained by that affected undertaker;
- (f) 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;
- (g) in the case of a water undertaker, mains, pipes or other apparatus belonging to or maintained by that affected undertaker for the purposes of water supply; and
- (h) in the case of a sewerage undertaker—
 - (i) any drain or works vested in the affected undertaker under the Water Industry Act 1991; and
 - (ii) any sewer which is so vested or is the subject of a notice of intention to adopt given under section 102(4) of that Act or an agreement to adopt made under section 104 of that Act,

and includes a sludge main, disposal main (within the meaning of section 219 of that Act) or sewer outfall and any manholes, ventilating shafts, pumps or other accessories forming part of any such sewer, drain or works, and includes any structure in which apparatus is or is to be lodged or which gives or will give access to apparatus;

“functions” includes powers and duties; and

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over or upon land.

3. This part of this Schedule does not apply to apparatus in respect of which the relations between the undertaker and the affected undertaker are regulated by the provisions of Part 3 of the 1991 Act.

4. Regardless of any provision in this Order or anything shown on the land plans, the undertaker shall not acquire any apparatus otherwise than by agreement.

5.—(1) If, in the exercise of the powers conferred by this Order, the undertaker acquires any interest in any land in which any apparatus is placed, that apparatus shall not be removed under this part of this Schedule and any right of an affected undertaker to maintain that apparatus in that land shall not be extinguished until alternative apparatus has been constructed and is in operation to the reasonable satisfaction of the affected undertaker in question.

(2) If, for the purpose of executing any works in, on or under any land purchased, held, or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it shall give to the affected undertaker in question written notice of that requirement, together with a plan and section of the work proposed, and of the proposed position of the alternative apparatus to be provided or constructed and in that case (or if in consequence of the exercise of any of the powers conferred by this Order an affected undertaker reasonably needs to remove any of its apparatus) the undertaker shall, subject to sub-paragraph (3), afford to the affected undertaker the necessary facilities and rights for the construction of alternative apparatus in other land of the undertaker and subsequently for the maintenance of that apparatus.

(3) If alternative apparatus or any part of such apparatus is to be constructed elsewhere than in other land of the undertaker, or the undertaker is unable to afford such facilities and rights as are mentioned in sub-paragraph (2), in the land in which the alternative apparatus or part of such apparatus is to be constructed, the affected undertaker in question shall, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible use all reasonable endeavours to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed.

(4) Any alternative apparatus to be constructed in land of the undertaker under this part of this Schedule shall be constructed in such manner and in such line or situation as may be agreed between the affected undertaker in question and the undertaker or in default of agreement settled by arbitration in accordance with **article 33** (arbitration).

(5) The affected undertaker in question shall, after the alternative apparatus to be provided or constructed has been agreed or settled by arbitration in accordance with **article 33** (arbitration), and after the grant to the affected undertaker of any such facilities and rights as are referred to in sub-paragraph (2) or (3), proceed without unnecessary delay to construct and bring into operation the alternative apparatus and subsequently to remove any apparatus required by the undertaker to be removed under the provisions of this part of this Schedule.

(6) Regardless of anything in sub-paragraph (5), if the undertaker gives notice in writing to the affected undertaker in question that it desires itself to execute any work, or part of any work in connection with the construction or removal of apparatus in any land controlled by the undertaker, that work, instead of being executed by the affected undertaker, shall be executed by the undertaker without unnecessary delay under the superintendence, if given, and to the reasonable satisfaction of the affected undertaker.

(7) Nothing in sub-paragraph (6) shall authorise the undertaker to execute the placing, installation, bedding, packing, removal, connection or disconnection of any apparatus, or execute any filling around the apparatus (where the apparatus is laid in a trench) within 300 millimetres of the apparatus.

6.—(1) Where, in accordance with the provisions of this part of this Schedule, the undertaker affords to an affected undertaker facilities and rights for the construction and maintenance in land of the undertaker of alternative apparatus in substitution for apparatus to be removed, those facilities and rights shall be granted upon such terms and conditions as may be agreed between the undertaker and the affected undertaker in question or in default of agreement settled by arbitration in accordance with **article 33** (arbitration).

(2) If the facilities and rights to be afforded by the undertaker in respect of any alternative apparatus, and the terms and conditions subject to which those facilities and rights are to be granted, are in the opinion of the arbitrator less favourable on the whole to the affected undertaker in question than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject, the arbitrator shall make such provision for the payment of compensation by the undertaker to that affected undertaker as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

7.—(1) Not less than 28 days before starting the execution of any works of the type referred to in paragraph 5(2) that are near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 5(2), the undertaker shall submit to the affected undertaker in question a plan, section and description of the works to be executed.

(2) Those works shall be executed only in accordance with the plan, section and description submitted under sub-paragraph (1) and in accordance with such reasonable requirements as may be made in accordance with sub-paragraph (3) by the affected undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the affected undertaker shall be entitled to watch and inspect the execution of those works.

(3) Any requirements made by an affected undertaker under sub-paragraph (2) shall be made within a period of 21 days beginning with the date on which a plan, section and description under sub-paragraph (1) are submitted to it.

(4) If an affected undertaker in accordance with sub-paragraph (3) and in consequence of the works proposed by the undertaker, reasonably requires the removal of any apparatus and gives written notice to the undertaker of that requirement, paragraphs 1 to 6 shall apply as if the removal of the apparatus had been required by the undertaker under paragraph 5(2).

(5) Nothing in this paragraph shall preclude the undertaker from submitting at any time or from time to time, but in no case less than 28 days before commencing the execution of any works, a new plan, section and description instead of the plan, section and description previously

submitted, and having done so the provisions of this paragraph shall apply to and in respect of the new plan, section and description.

(6) The undertaker shall not be required to comply with sub-paragraph (1) in a case of emergency but in that case it shall give to the affected undertaker in question notice as soon as is reasonably practicable and a plan, section and description of those works as soon as reasonably practicable subsequently and shall comply with sub-paragraph (2) in so far as is reasonably practicable in the circumstances.

8.—(1) Subject to the following provisions of this paragraph, the undertaker shall repay to an affected undertaker the reasonable expenses incurred by that affected undertaker in, or in connection with, the inspection, removal, alteration or protection of any apparatus or the construction of any new apparatus (including costs or compensation payable in connection with the acquisition of land for that purpose) which may be required in consequence of the execution of any such works as are referred to in paragraph 5(2).

(2) There shall 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 33** (arbitration) to be necessary, then, if such placing involves cost in the construction of works under this part of this Schedule exceeding that which would have been involved if the apparatus placed had been of the existing type, capacity or dimensions, or at the existing depth, as the case may be, the amount which apart from this sub-paragraph would be payable to the affected undertaker in question by virtue of sub-paragraph (1) shall be reduced by the amount of that excess.

(4) For the purposes of sub-paragraph (3)—

- (a) an extension of apparatus to a length greater than the length of existing apparatus shall not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole shall be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to an affected undertaker in respect of works by virtue of sub-paragraph (1) shall, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on the affected undertaker any financial benefit by deferment of the time for renewal of the apparatus in the ordinary course, be reduced by the amount which represents that benefit.

9.—(1) Subject to sub-paragraphs (2) and (3), if by reason or in consequence of the construction of any such works referred to in paragraph 5(2), any damage is caused to any apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of an affected undertaker, or there is any interruption in any service provided, or in the supply of any goods, by any affected undertaker, the undertaker shall—

- (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) shall impose any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of an affected undertaker, its officers, servants, contractors or agents.

(3) An affected undertaker shall give the undertaker reasonable notice of any such claim or demand and no settlement or compromise shall be made without the consent of the undertaker which, if it withholds such consent, shall have the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

10. Nothing in this part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and an affected undertaker in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

PART 2

PROTECTION FOR OPERATORS OF ELECTRONIC COMMUNICATIONS CODE NETWORKS

1.—(1) For the protection of any operator, the following provisions shall, unless otherwise agreed in writing between the undertaker and the operator, have effect.

(2) In this part of this Schedule—

“conduit system” has the same meaning as in the electronic communications code and references to providing a conduit system shall be 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.

2. The exercise of the powers of **article 25** (statutory undertakers) are subject to paragraph 23 of Schedule 2 to the Telecommunications Act 1984^(b).

3.—(1) Subject to sub-paragraphs (2) to (4), if as the result of the authorised development or their construction, or of any subsidence resulting from any of those works—

(a) any damage is caused to any electronic communications apparatus belonging to an operator (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works, or other property of an operator); or

(b) there is any interruption in the supply of the service provided by an operator, the undertaker shall bear and pay the cost reasonably incurred by the operator in making good such damage or restoring the supply and shall—

(a) See section 106.

(b) 1984 c.12.

- (i) make reasonable compensation to an operator for loss sustained by it; and
- (ii) indemnify an operator against claims, demands, proceedings, costs, damages and expenses which may be made or taken against, or recovered from, or incurred by, an operator by reason, or in consequence of, any such damage or interruption.

(2) Nothing in sub-paragraph (1) shall impose any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of an operator, its officers, servants, contractors or agents.

(3) The operator shall give the undertaker reasonable notice of any such claim or demand and no settlement or compromise of the claim or demand shall be made without the consent of the undertaker which, if it withholds such consent, shall have the sole conduct of any settlement or compromise or of any proceedings necessary to resist the claim or demand.

(4) Any difference arising between the undertaker and the operator under this paragraph shall be referred to and settled by arbitration under **article 33** (arbitration).

4. 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.

5. Nothing in this part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and an operator in respect of any apparatus laid or erected in land belonging to the undertaker on the date on which this Order is made.

PART 3

PROTECTION OF NETWORK RAIL INFRASTRUCTURE LIMITED

1. The following provisions of this Schedule have effect unless otherwise agreed in writing between the undertaker and Network Rail and, in the case of paragraph 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 Kings Place, 90 York Way, London, N1 9AG and any associated company of Network Rail 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;

“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;

(a) 1993 c.43.

(b) 2006 c.46.

“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 development as is situated upon, across, under, over or within 15 metres of, or may in any way adversely affect, railway property.

3.—(1) Where under this part of this Schedule Network Rail is required to give its consent, agreement or approval in respect of any matter, that consent, agreement 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 its reasonable endeavours to avoid any conflict arising between the application of those procedures and the proper implementation of the authorised development under this Order.

4.—(1) The undertaker must not exercise the powers conferred by **article 14** (authority to survey and investigate the land) or the powers conferred by section 11(3) of the 1965 Act (powers of entry) in respect of any railway property unless the exercise of such powers is with the consent of Network Rail.

(2) The undertaker must not in the exercise of the powers conferred by this Order prevent pedestrian or vehicular access to any railway property, unless preventing such access is with the consent of Network Rail.

(3) The undertaker shall not exercise the powers conferred by sections 271 or 272 of the 1990 Act (extinguishment of rights of statutory undertakers and electronic code communications operators: preliminary notices), or **article 25** (statutory undertakers), in relation to any right of access of Network Rail to railway property, but such right of access may be diverted with the consent of Network Rail.

(4) The undertaker must not under the powers conferred by this Order acquire or use or acquire new rights over, or seek to impose any restrictive covenants over, any railway property, or extinguish any existing rights of Network Rail in respect of any third party property except with the consent of Network Rail.

(5) Where Network Rail is asked to give its consent or agreement pursuant to this paragraph, such consent or agreement must not be unreasonably withheld but may be given subject to reasonable conditions.

5.—(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 shall not be commenced except in accordance with such plans as have been approved in writing by the engineer or settled by arbitration under **article 33** (arbitration).

(2) The approval of the engineer under sub-paragraph (1) shall 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 with all reasonable dispatch on behalf of and to the reasonable satisfaction of the undertaker in accordance with the plans approved or deemed to be approved or settled under this paragraph, and under the supervision (where appropriate and if given) of the undertaker.

(4) When signifying approval of the plans the engineer may specify any protective works (whether temporary or permanent) which in the engineer's opinion should be carried out before the commencement of the construction of a specified work to ensure the safety or stability of railway property or the continuation of safe and efficient operation of the railways of Network Rail or the services of operators using the same (including any relocation de-commissioning and removal of works, apparatus and equipment necessitated by a specified work and the comfort and safety of passengers who may be affected by the specified works), and such protective works as may be reasonably necessary for those purposes are to be constructed by Network Rail or by the undertaker, if Network Rail so desires, and such protective works shall be carried out at the expense of the undertaker in either case with all reasonable dispatch and the undertaker shall not commence the construction of the specified works until the engineer has notified the undertaker that the protective works have been completed to the engineer's reasonable satisfaction.

6.—(1) Any specified work and any protective works to be constructed by virtue of paragraph 5(4) shall, when commenced, be constructed—

- (a) with all reasonable dispatch in accordance with the plans approved or deemed to have been approved or settled under paragraph 5;
- (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 6(1)(a), make good such damage and shall 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 Schedule imposes any liability on the undertaker with respect to any damage, costs, expenses or loss attributable to the negligence of Network Rail or its servants, contractors or agents or any liability on Network Rail with respect of any damage, costs, expenses or loss attributable to the negligence of the undertaker or its servants, contractors or agents.

7. 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.

8. 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.

9.—(1) If any permanent or temporary alterations or additions to railway property, or to any protective works under paragraph 5(4), are reasonably necessary in consequence of the construction of a specified work, or during a period of 24 months after the completion of that work in order to ensure the safety of railway property or the continued safe operation of the railway of Network Rail or the services of operators using the same, such alterations and additions may be carried out by Network Rail and if Network Rail gives to the undertaker reasonable notice of its intention to carry out such alterations or additions (which must be specified in the notice), the undertaker must pay to Network Rail the reasonable cost of those alterations or additions including, in respect of any such alterations and additions as are to be permanent, a capitalised sum representing the increase of the costs which may be expected to be reasonably incurred by Network Rail in maintaining, working and, when necessary, renewing any such alterations or additions.

(2) If during the construction of a specified work by the undertaker, Network Rail gives notice to the undertaker that Network Rail desires itself to construct that part of the specified work which in the opinion of the engineer is endangering the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the undertaker decides that part of the specified work is to be constructed, Network Rail must assume construction of that part of the specified work and the undertaker must, notwithstanding any such approval of a specified work under paragraph 5(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 10(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.

10. The undertaker must repay to Network Rail all reasonable fees, costs, charges and expenses reasonably incurred by Network Rail—

- (a) in constructing any part of a specified work on behalf of the undertaker as provided by paragraph 5(3) or in constructing any protective works under the provisions of paragraph 5(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, signalmen, watchmen and other persons whom it shall be reasonably necessary to appoint for inspecting, signalling, watching and lighting railway property and for preventing, so far as may be reasonably practicable, interference, obstruction, danger or accident arising from the construction or failure of a specified work;
- (d) in respect of any special traffic working resulting from any speed restrictions which may in the opinion of the engineer, require to be imposed by reason or in consequence of the construction or failure of a specified work or from the substitution or diversion of services which may be reasonably necessary for the same reason; and
- (e) in respect of any additional temporary lighting of railway property in the vicinity of the specified works, being lighting made reasonably necessary by reason or in consequence of the construction or failure of a specified work.

11.—(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 development where such interference is of a level which adversely affects the safe operation of Network Rail’s apparatus; and

“Network Rail’s apparatus” means any lines, circuits, wires, apparatus or equipment (whether or not modified or installed as part of the authorised development) which are owned or used

by Network Rail for the purpose of transmitting or receiving electrical energy or of radio, telegraphic, telephonic, electric, electronic or other like means of signalling or other communications.

(2) This paragraph applies to EMI only to the extent that such EMI is not attributable to any change to Network Rail's apparatus carried out after approval of plans under paragraph 5(1) for the relevant part of the authorised development giving rise to EMI (unless the undertaker has been given notice in writing before the approval of those plans of the intention to make such change).

(3) Subject to sub-paragraph (5), the undertaker must in the design and construction of the authorised development take 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 5(1)) in order to identify all potential causes of EMI and the measures required to eliminate them;
- (b) Network Rail must make available to the undertaker all information in the possession of Network Rail reasonably requested by the undertaker in respect of Network Rail's apparatus identified pursuant to sub-paragraph (a); and
- (c) Network Rail must allow the undertaker reasonable facilities for the inspection of Network Rail's apparatus identified pursuant to sub-paragraph (a).

(5) In any case where it is established that EMI can only reasonably be prevented by modifications to Network Rail's apparatus, Network Rail must not withhold its consent unreasonably to modifications of Network Rail's apparatus, but the means of prevention and the method of their execution must be selected in the reasonable discretion of Network Rail, and in relation to such modifications paragraph 5(1) shall have effect subject to this sub-paragraph.

(6) If at any time prior to the commencement of commercial operation of the authorised development and regardless of any measures adopted under to sub-paragraph (3), the testing or commissioning of the authorised development causes EMI then the undertaker shall immediately upon receipt of notification by Network Rail of such EMI either in writing or communicated orally (such oral communication to be confirmed in writing as soon as reasonably practicable after it has been issued) forthwith cease to use (or procure the cessation of use of) the undertaker's apparatus causing such EMI until all measures necessary have been taken to remedy such EMI by way of modification to the source of such EMI or (in the circumstances, and subject to the consent, specified in sub-paragraph (5)) to Network Rail's apparatus.

(7) In the event of EMI having occurred—

- (a) the undertaker must afford reasonable facilities to Network Rail for access to the undertaker's apparatus in the investigation of such EMI;
- (b) Network Rail must afford reasonable facilities to the undertaker for access to Network Rail's apparatus in the investigation of such EMI; and
- (c) Network Rail must make available to the undertaker any additional material information in its possession reasonably requested by the undertaker in respect of Network Rail's apparatus or such EMI.

(8) Where Network Rail approves modifications to Network Rail's apparatus pursuant to sub-paragraphs (5) or (6)—

- (a) Network Rail must allow the undertaker reasonable facilities for the inspection of the relevant part of Network Rail's apparatus;
- (b) any modifications to Network Rail's apparatus approved pursuant to those sub-paragraphs must be carried out and completed by the undertaker in accordance with paragraph 6.

(9) To the extent that it would not otherwise do so, the indemnity in paragraph 15(1) applies to the costs and expenses reasonably incurred or losses suffered by Network Rail through the implementation of the provisions of this paragraph (including costs incurred in connection with the consideration of proposals, approval of plans, supervision and inspection of works and facilitating access to Network Rail's apparatus) or in consequence of any EMI to which sub-paragraph (6) applies.

(10) For the purpose of paragraph 10(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 33** (arbitration) to an arbitrator to be agreed shall be read as a reference to an arbitrator being a member of the Institution of Electrical Engineers.

12. 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.

13. 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.

14. 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 56 days' previous notice of the commencement of such alteration, reconstruction or maintenance has been given to the undertaker, are to be repaid by the undertaker to Network Rail.

15.—(1) The undertaker must pay to Network Rail all reasonable costs, charges, damages and expenses not otherwise provided for in this Schedule which may be occasioned to or reasonably incurred by Network Rail—

- (a) by reason of the construction or maintenance of a specified work or the failure thereof; or
- (b) by reason of any act or omission of the undertaker or of any person in its employ or of its contractors or others whilst engaged upon a specified work,

and the undertaker must indemnify and keep indemnified Network Rail from and against all claims and demands arising out of or in connection with a specified work or any such failure, act or omission: and the fact that any act or thing may have been done by Network Rail on behalf of the undertaker or in accordance with plans approved by the engineer or in accordance with any requirement of the engineer or under his supervision will not (if it was done without negligence on the part of Network Rail or of any person in its employ or of its contractors or agents) excuse the undertaker from any liability under the provisions of this sub-paragraph.

(2) Network Rail must give the undertaker reasonable notice of any such claim or demand and no settlement or compromise of such a claim or demand is to be made without the prior consent of the undertaker, such consent not to be unreasonably withheld.

(3) The sums payable by the undertaker under sub-paragraph (1) will include a sum equivalent to the relevant costs.

(4) Subject to the terms of any agreement between Network Rail and a train operator regarding the timing or method of payment of the relevant costs in respect of that train operator, Network Rail must promptly pay to each train operator the amount of any sums which Network Rail receives under sub-paragraph (3) which relates to the relevant costs of that train operator.

(5) The obligation under sub-paragraph (3) to pay Network Rail the relevant costs will, in the event of default, be enforceable directly by any train operator concerned to the extent that such sums would be payable to that operator pursuant to sub-paragraph (4).

(6) In this paragraph—

“the relevant costs” means the costs, direct losses and expenses (including loss of revenue) reasonably incurred by each train operator as a consequence of any restriction of the use of Network Rail’s railway network as a result of the construction, maintenance or failure of a specified work or any such act or omission as mentioned in sub-paragraph (1); and

“train operator” means any person who is authorised to act as the operator of a train by a licence under section 8 of the Railways Act 1993.

16. Network Rail must, on receipt of a request from the undertaker, from time to time provide the undertaker free of charge with written estimates of the costs, charges, expenses and other liabilities for which the undertaker is or will become liable under this Schedule (including the amount of the relevant costs mentioned in paragraph 15) 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 Schedule (including any claim relating to those relevant costs).

17. In the assessment of any sums payable to Network Rail under this Schedule there must not be taken into account any increase in the sums claimed that is attributable to any action taken by or any agreement entered into by Network Rail if that action or agreement was not reasonably necessary and was taken or entered into with a view to obtaining the payment of those sums by the undertaker under this Schedule or increasing the sums so payable.

18. The undertaker and Network Rail may, subject in the case of Network Rail to compliance with the terms of its network licence, enter into, and carry into effect, agreements for the transfer to the undertaker of—

- (a) any railway property shown on the works and land plans and described in the book of reference;
- (b) any lands, works or other property held in connection with any such railway property; and
- (c) any rights and obligations (whether or not statutory) of Network Rail relating to any railway property or any lands, works or other property referred to in this paragraph.

19. Nothing in this Order, or in any enactment incorporated with or applied by this Order, shall prejudice or affect the operation of Part I of the Railways Act 1993.

20. The undertaker must give written notice to Network Rail where any application is proposed to be made by the undertaker for the decision-maker’s consent under **article 5** (benefit of the Order) of this Order and any such notice must be given no later than 28 days before any such application is made and must describe or give (as appropriate)—

- (a) the nature of the application to be made;
- (b) the extent of the geographical area to which the application relates; and
- (c) the name and address of the person acting for the decision-maker to whom the application is to be made.

21. The undertaker must no later than 28 days from the date that the plans submitted to and certified by the decision-maker in accordance with **article 32** (certification of plans etc.), provide a set of those plans to Network Rail in the form of a computer disc with read only memory.

PART 4

FOR THE PROTECTION OF ANGLIAN WATER SERVICES LIMITED

1. For the protection of Anglian Water, the following provisions of this Schedule shall, unless otherwise agreed in writing between the undertaker and Anglian Water, have effect.

2. In this part of this schedule—

“Anglian Water” means Anglian Water Services Limited;

“Apparatus” means any works, mains, pipes or other apparatus belonging to or maintained by Anglian Water for the purposes of water supply and sewerage; and

- (a) any drain or works vested in Anglian Water under The Water Industry Act 1991,
- (b) any sewer which is so vested or is the subject of a notice of intention to adopt given under section 102 (4) of The Water Industry Act 1991 or an agreement to adopt made under section 104 of that Act,

and includes a sludge main, disposal main or sewer outfall and any manholes, ventilating shafts, pumps or other accessories forming part of any sewer, drain, or works (within the meaning of section 219 of that Act) and any structure in which apparatus is or is to be lodged or which gives or will give access to apparatus.

“alternative apparatus” means alternative apparatus adequate to enable Anglian Water to fulfil its statutory functions in not less efficient a manner than previously;

“functions” includes powers and duties

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over or upon land; and

“plan” includes sections, drawings, specifications and method statements.

3. The undertaker shall 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:

2.25 metres where the diameter of the pipe is less than 150 millimetres

3 metres where the diameter of the pipe is between 150 and 450 millimetres

4.5 metres where the diameter of the pipe is between 450 and 750 millimetres

6 metres where the diameter of the pipe exceeds 750 millimetres;

unless otherwise agreed in writing with Anglian Water, such agreement not to be unreasonably withheld or delayed, and such provision being brought to the attention of any agent or contractor responsible for carrying out any work on behalf of the undertaker.

4. The alteration, extension, removal or re-location of any Apparatus shall not be implemented until

- (a) any requirement for any permits under the Environmental Permitting (England and Wales) Regulations 2010 or other legislations and any other associated consents are obtained, and any approval or agreement required from Anglian Water on alternative outfall locations as a result of such re-location are approved, such approvals 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.

5. In the situation, where in exercise of the powers conferred by the Order, the undertaker acquires any interest in any land in which Apparatus is placed and such Apparatus is to be relocated, extended, removed or altered in any way, no alteration or extension shall take place until Anglian Water has established to its reasonable satisfaction, contingency arrangements in order to conduct its functions for the duration of the works to relocate, extend, remove or alter the

Apparatus. Anglian Water shall use reasonable endeavours to establish contingency arrangements in a timely manner.

6. Regardless of any provision in this Order or anything shown on any plan, the undertaker must not acquire any Apparatus otherwise than by agreement, and before extinguishing any existing rights for Anglian Water to use, keep, inspect, renew and maintain its Apparatus in the Order land, the undertaker shall, with the agreement of Anglian Water, create a new right to use, keep, inspect, renew and maintain the Apparatus that is reasonably convenient for Anglian Water such agreement not to be unreasonably withheld or delayed, and to be subject to arbitration under **article 33** (arbitration).

7. If in consequence of the exercise of the powers conferred by the Order the access to any Apparatus is materially obstructed the undertaker shall provide such alternative means of access to such Apparatus as will enable Anglian Water to maintain or use the apparatus no less effectively than was possible before such obstruction.

8. 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.

9. If for any reason or in consequence of the construction of any of the works referred to in paragraphs 4 to 6 and 8 above any damage is caused to any Apparatus (other than Apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of Anglian Water, or there is any interruption in any service provided, or in the supply of any goods, by Anglian Water, the undertaker shall,

- (a) bear and pay the cost reasonably incurred by Anglian Water in making good any damage or restoring the supply; and
- (b) make reasonable compensation to Anglian Water for any other expenses, loss, damages, penalty or costs properly and reasonably incurred by Anglian Water

by reason or in consequence of any such damage or interruption.

10. Nothing in paragraph (9) above shall impose any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the act, neglect or default of Anglian Water, its officer, servants, contractors or agents

11. Any difference or dispute arising between the undertaker and Anglian Water under this Schedule shall, unless otherwise agreed in writing between the undertaker and Anglian Water, be determined by arbitration in accordance with **article 33** (arbitration).

PART 5

FOR THE PROTECTION OF NATIONAL GRID GAS PLC AND NATIONAL GRID ELECTRICITY TRANSMISSION PLC

Application

1. For the protection of the statutory undertakers referred to in this part of this Schedule the following provisions shall, unless otherwise agreed in writing between the undertaker and the statutory undertaker concerned, have effect.

Interpretation

2. In this Part of this Schedule—

“1991 Act” means the New Roads and Street Works Act 1991;

“alternative apparatus” means appropriate alternative apparatus to the reasonable satisfaction of the statutory undertaker to enable the statutory 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 Electricity Act 1989, belonging to or maintained by that undertaker;
- (b) in the case of a gas undertaker, any mains, pipes or other apparatus belonging to or maintained by a gas transporter for the purposes of gas supply;

“commence” has the same meaning as article 2 of this Order;

“functions” includes powers and duties;

“in” in a context referring to apparatus or alternative apparatus in land includes a reference to apparatus or alternative apparatus under, over, 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 statutory 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 the works to be executed;

“undertaker” means the undertaker as defined in article 2 of this Order;

“statutory undertaker” means—

- (c) any licence holder within the meaning of Part 1 of the Electricity Act 1989; and
- (d) a gas transporter within the meaning of Part 1 of the Gas Act 1986.
- (e) for the area of the authorised development, and in relation to any apparatus, means the statutory undertaker to whom it belongs or by whom it is maintained.

Apparatus of undertakers in stopped up streets

3. Notwithstanding the temporary stopping up or diversion of any highway under the powers of **article 10** (temporary stopping up of streets), a statutory undertaker shall be at liberty at all times to take all necessary access across any such stopped up highway and/or to execute and do all such works and things in, upon or under any such highway as may be reasonably necessary or desirable to enable it to maintain any apparatus which at the time of the stopping up or diversion was in that highway subject always to the undertaking of works by the undertaker authorised by this Order.

Acquisition of land

4. 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 shall not acquire any interest in land or any apparatus or override any easement or other interest of the statutory undertaker otherwise than by agreement, such agreement not to be unreasonably withheld or delayed.

Removal of apparatus

5.—(1) If, in the exercise of the agreement reached in accordance with paragraph (4) or in any other authorised manner, the undertaker acquires any interest in any land in which any apparatus is placed, that apparatus shall not be removed under this part of this Schedule and any right of a statutory undertaker to maintain that apparatus in that land shall not be extinguished until alternative apparatus has been constructed, and is in operation to the reasonable satisfaction of the statutory undertaker in question in accordance with sub-paragraph (2) to (5) inclusive.

(2) If, for the purpose of executing any works in, on, under or over any land purchased, held, appropriated or used under this Order, the undertaker requires the removal of any apparatus placed in that land, it shall give to the statutory undertaker in question 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 a statutory undertaker reasonably needs to remove any of its apparatus) the undertaker shall, subject to sub-paragraph (3), afford to the statutory undertaker to their reasonable satisfaction (taking into account 6(1) below) the necessary facilities and rights for

- (a) the construction of alternative apparatus in other land of 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 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 statutory undertaker in question shall, on receipt of a written notice to that effect from the undertaker, as soon as reasonably possible take such steps as are reasonable in the circumstances in an endeavour to obtain the necessary facilities and rights in the land in which the alternative apparatus is to be constructed except that this obligation shall not extend to the requirement for the statutory undertaker 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 the undertaker under this part of this Schedule shall be constructed in such manner and in such line or situation as may be agreed between the statutory undertaker in question and the undertaker.

(5) The statutory undertaker in question shall, after the alternative apparatus to be provided or constructed has been agreed, and subject to the grant to the statutory 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.

Facilities and rights for alternative apparatus

6.—(1) Where, in accordance with the provisions of this part of this Schedule, the undertaker affords to a statutory undertaker facilities and rights for the construction and maintenance in land of the undertaker of alternative apparatus in substitution for apparatus to be removed, those facilities and rights shall be granted upon such terms and conditions as may be agreed between the undertaker and the statutory undertaker in question and shall be no less favourable on the whole to the statutory undertaker in question than the facilities and rights enjoyed by it in respect of the apparatus to be removed unless agreed by the statutory undertaker.

(2) If the facilities and rights to be afforded by the undertaker and agreed with the statutory undertaker under 7(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 in the opinion of the arbitrator less favourable on the whole to the statutory undertaker in question than the facilities and rights enjoyed by it in respect of the apparatus to be removed and the terms and conditions to which those facilities and rights are subject, the arbitrator shall make such provision for the payment of compensation by the undertaker to that statutory undertaker as appears to the arbitrator to be reasonable having regard to all the circumstances of the particular case.

Retained apparatus: protection Gas Undertakers

7.—(1) Not less than 56 days before commencing the execution of any works authorised by this Order that are near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 5(2) or otherwise, the undertaker shall submit to the statutory undertaker in question a plan.

(2) In relation to works which will or may be situated on, over, under or within 15 metres measured in any direction of any apparatus, or (wherever situated) impose any load directly upon any apparatus or involve embankment works within 15 metres of any apparatus, the plan to be submitted to the statutory undertaker under sub-paragraph (1) shall be detailed including a material statement and describing—

- (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; and
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus.

(3) The undertaker shall not commence the construction or renewal of any works to which sub-paragraph (1) or (2) applies until the statutory undertaker has given written approval of the plan so submitted.

(4) Any approval of the statutory undertaker required under sub-paragraph (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraph (5) or (7);
- (b) shall not be unreasonably withheld or delayed.

(5) In relation to a work to which sub-paragraph (1) or (2) applies, the statutory undertaker may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its system against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus provided that such modifications are made within a period of 56 days beginning with the date on which the plan under sub-paragraph (1) is submitted to it. For the avoidance of doubt, provided that any further iterations of the plan submitted to the statutory undertaker for approval as a result of modifications required under this paragraph are not materially different to the modifications previously made by the statutory undertaker, any further required modifications will be made by the statutory undertaker as soon as reasonably practicable thereafter and in any event within 21 days of receipt of any further plans.

(6) Works executed under this Order shall be executed only in accordance with the plan, submitted under sub-paragraph (1) or as relevant sub paragraph (2), as amended from time to time by agreement between the undertaker and the statutory undertaker and in accordance with such reasonable requirements as may be made in accordance with sub-paragraph (5) or (7) by the statutory undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the statutory undertaker shall be entitled to watch and inspect the execution of those works.

(7) Where statutory undertakers require any protective works to be carried out either themselves or by the undertaker (whether of a temporary or permanent nature) such protective works shall be carried out to the statutory undertakers' satisfaction prior to the carrying out of any works authorised by the Order (or any relevant part thereof) and the statutory undertakers shall 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 a statutory undertaker 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 8 shall apply as if the removal of the apparatus had been required by the undertaker under paragraph 5(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, 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.

(10) The undertaker shall 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 shall give to the statutory undertaker in question notice as soon as is reasonably practicable and a plan of those works and shall—

- (a) comply with sub-paragraph (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 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/SSW27" and HSE's "HS(~G)47 Avoiding Danger from underground services".

Retained apparatus: Protection: Electricity Undertakers

8.—(1) Not less than 56 days before commencing the execution of any works authorised by this Order that are near to, or will or may affect, any apparatus the removal of which has not been required by the undertaker under paragraph 5(2) or otherwise, the undertaker shall submit to the statutory undertaker in question a plan.

(2) In relation to works which will or may be situated on, over, under or within 8.1 metres measured in any direction of any apparatus, or involve embankment works within 8.1 metres of any apparatus, the plan to be submitted to the statutory undertaker under sub-paragraph (1) shall be detailed including a material statement and describing—

- (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; and
- (e) by way of detailed drawings, every alteration proposed to be made to or close to any such apparatus.

(3) The undertaker shall not commence the construction or renewal of any works to which sub-paragraph (1) or (2) applies until the statutory undertaker has given written approval of the plan so submitted.

(4) Any approval of the statutory undertaker required under sub-paragraph (3)—

- (a) may be given subject to reasonable conditions for any purpose mentioned in sub-paragraph (5) or (7);
- (b) shall not be unreasonably withheld.

(5) In relation to a work to which sub-paragraph (1) or (2) applies, the statutory undertaker may require such modifications to be made to the plans as may be reasonably necessary for the purpose of securing its system against interference or risk of damage or for the purpose of providing or securing proper and convenient means of access to any apparatus provided that such modifications are made within a period of 56 days beginning with the date on which the plan under sub-paragraph (1) is submitted to it. For the avoidance of doubt, provided that any further iterations of the plan submitted to the statutory undertaker for approval as a result of modifications required under this paragraph are not materially different to the modifications previously made by the statutory undertaker, any further required modifications will be made by the statutory undertaker as soon as reasonably practicable thereafter and in any event within 21 days of receipt of any further plans.

(6) Works executed under this Order shall be executed only in accordance with the plan, submitted under sub-paragraph (1) or as relevant sub paragraph (2), as amended from time to time by agreement between the undertaker and the statutory undertaker and in accordance with such reasonable requirements as may be made in accordance with sub-paragraph (5) or (7) by the statutory undertaker for the alteration or otherwise for the protection of the apparatus, or for securing access to it, and the statutory undertaker shall be entitled to watch and inspect the execution of those works.

(7) Where statutory undertakers require any protective works to be carried out either themselves or by the undertaker (whether of a temporary or permanent nature) such protective works shall be carried out to the statutory undertakers' satisfaction prior to the carrying out of any works authorised by the Order (or any relevant part thereof) and the statutory undertakers shall 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 a statutory undertaker 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 8 shall apply as if the removal of the apparatus had been required by the undertaker under paragraph 5(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, 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.

(10) The undertaker shall 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 shall give to the statutory undertaker in question notice as soon as is reasonably practicable and a plan of those works and shall—

- (a) comply with sub-paragraph (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 comply with National Grid's policies for development near overhead lines EN43-8 and HSE's guidance note 6 "Avoidance of Danger from Overhead Lines".

Expenses

9.—(1) Subject to the following provisions of this paragraph, the undertaker shall repay to a statutory undertaker on demand all charges, costs and expenses reasonably and properly incurred by that statutory undertaker in, or in connection with, the inspection, removal, relaying or replacing, 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 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 the statutory undertaker elects to use powers of compulsory acquisition to acquire any necessary rights under 5(3) all costs incurred as a result of such action;
- (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 Schedule.

(2) There shall be deducted from any sum payable under sub-paragraph (1) the value of any apparatus removed under the provisions 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 34 (*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 statutory undertaker in question by virtue of sub-paragraph (1) shall be reduced by the amount of that excess save where it is not possible in the circumstances to obtain the existing type of operations, capacity, dimensions or place at the existing depth in which case full costs shall 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 shall not be treated as a placing of apparatus of greater dimensions than those of the existing apparatus; and
- (b) where the provision of a joint in a pipe or cable is agreed, or is determined to be necessary, the consequential provision of a jointing chamber or of a manhole shall be treated as if it also had been agreed or had been so determined.

(5) An amount which apart from this sub-paragraph would be payable to a statutory undertaker in respect of works by virtue of sub-paragraph (1) shall, if the works include the placing of apparatus provided in substitution for apparatus placed more than 7 years and 6 months earlier so as to confer on the statutory 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.

Compensation

10. Subject to sub-paragraphs (2), (3) and (4), if by reason or in consequence of the construction of any such works authorised by 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 Schedule or any subsidence resulting from any of these works), any damage is caused to any apparatus or alternative apparatus (other than apparatus the repair of which is not reasonably necessary in view of its intended removal for the purposes of those works) or property of a statutory undertaker, or there is any interruption in any service provided, or in the supply of any goods, by any statutory undertaker, or the statutory undertaker becomes liable to pay any amount to any third party, the undertaker shall—

- (a) bear and pay on demand the cost reasonably incurred by that statutory undertaker in making good such damage or restoring the supply; and
- (b) compensate that statutory undertaker for any other expenses, loss, demands, proceedings, damages, claims, penalty or costs incurred by or recovered from the statutory undertaker, by reason or in consequence of any such damage or interruption or the statutory undertaker becoming liable to any third party as aforesaid.

(2) The fact that any act or thing may have been done by a statutory undertaker on behalf of the undertaker or in accordance with a plan approved by a statutory undertaker or in accordance with any requirement of a statutory undertaker or under its supervision shall not (subject to sub-paragraph (3)), excuse the undertaker from liability under the provisions of this sub-paragraph (1)).

(3) Nothing in sub-paragraph (1) shall impose any liability on the undertaker with respect to any damage or interruption to the extent that it is attributable to the neglect or default of a statutory undertaker, its officers, servants, contractors or agents.

(4) A statutory undertaker shall give the undertaker reasonable notice of any such claim or demand and no settlement or compromise shall be made without first consulting the undertaker

and considering their representations (such representations not to be unreasonably withheld or delayed).

Ground subsidence monitoring scheme in respect of Statutory Undertaker's apparatus

11.—(1) No works within 15 metres of any apparatus or alternative apparatus shall commence until a scheme for monitoring ground subsidence (“referred to in this paragraph as the monitoring scheme”) which is capable of interfering with or risking damage to statutory undertaker's apparatus has been submitted to and approved by the relevant statutory undertaker, such approval not to be unreasonably withheld or delayed.

(2) The ground subsidence monitoring scheme described in sub-paragraph (1) shall set out—

- (a) the apparatus which is to be subject to such monitoring;
- (b) the extent of land to be monitored;
- (c) the manner in which ground levels are to be monitored;
- (d) the timescales of any monitoring activities; and
- (e) the extent of ground subsidence which, if exceeded, shall require the undertaker to submit for statutory undertaker's approval a ground subsidence mitigation scheme in respect of such subsidence in accordance with sub-paragraph (3).

(3) The monitoring scheme required by sub paragraph (1) and (2) must be submitted within 56 days prior to the commencement of any works authorised by this Order or comprised within the authorised development. Any requirements of the statutory undertaker will be notified within 28 days of receipt of the monitoring scheme. Thereafter the monitoring scheme must be implemented as approved, unless otherwise agreed in writing with the statutory undertaker.

(4) As soon as reasonably practicable after any ground subsidence identified by the monitoring activities set out in the monitoring scheme has exceeded the level described in sub-paragraph (2)(e), a scheme setting out necessary mitigation measures (if any) for such ground subsidence (referred to in this paragraph as a “mitigation scheme”) shall be submitted to the statutory undertaker for approval, such approval not to be unreasonably withheld or delayed; and any mitigation scheme must be implemented as approved, unless otherwise agreed in writing with the statutory undertaker except that the statutory undertaker retains the right to carry out any further necessary protective works for the safeguarding of their apparatus and can recover any such costs in line with paragraph (10).

Enactments and agreements

12. Nothing in this part of this Schedule shall affect the provisions of any enactment or agreement regulating the relations between the undertaker and a statutory undertaker 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. Where in consequence of the proposed construction of any of the authorised development, the undertaker or a statutory undertaker requires the removal of apparatus under paragraph 5(2) or a statutory undertaker makes requirements for the protection or alteration of apparatus under paragraph 7 or 8 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 the statutory undertaker's undertaking and each statutory undertaker shall use its best endeavours to co-operate with the undertaker for that purpose.

Access

14. If in consequence of the agreement reached in accordance with paragraph 4 or the powers granted under this Order the access to any apparatus is materially obstructed, the undertaker shall

provide such alternative means of access to such apparatus as will enable the statutory undertaker 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 5(2), 5(4), 6(1), 7 and 8 any difference or dispute arising between the undertaker and a statutory undertaker under this Schedule shall, unless otherwise agreed in writing between the undertaker and that statutory undertaker, be determined by arbitration in accordance with article 34 (*arbitration*).

EXPLANATORY NOTES

(This note is not part of the Order)

This Order grants development consent for, and authorises East Anglia ONE Limited to construct, operate and maintain a generating station located in the North Sea approximately 43.4 km from the Suffolk coast, together with all necessary and associated development. For the purposes of the development that it authorises East Anglia ONE Limited is authorised by the Order compulsorily or by agreement to purchase land and rights in land to use land[, as well as to override easements and other rights]. The Order also provides a defence in proceedings in respect of statutory nuisance and to discharge water. The Order imposes requirements in connection with the development for which it grants development consent.

The Order also grants deemed marine licences for the marine licensable activities, being the deposit of substances and articles and the carrying out of works, involved in the construction of the generating station and associated development. The deemed marine licence imposes conditions in connection with the deposits and works for which it grants consent.

A copy of the plans and book of reference referred to in this Order and certified in accordance with **article 32** (certification of plans, etc) of this Order may be inspected free of charge at the offices of Suffolk Coastal District Council at Melton Hill, Woodbridge, Suffolk, IP12 1AU and Mid Suffolk District Council at 131 High Street, Needham Market, Ipswich, Suffolk, IP6 8DL.

Appendix B

EXAMINATION LIBRARY

The following is a list of documents that were submitted during the course of the Examination. The documents are grouped together by document type.

Each document has been given an identification number (e.g. APP1), and all documents are available to view on the Planning Inspectorate's National Infrastructure Planning website at the East Anglia One Offshore Windfarm Project Page:

<http://infrastructure.planningportal.gov.uk/projects/eastern/east-anglia-one-offshore-windfarm/?ipcsection=docs>

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REP-238	<u>EAOL - Statement of Common Ground with Maritime Coastguard Agency, Royal Yachting Association, Chamber of Shipping and Trinity House</u>
REP-239	<u>EAOL - Statement of Common Ground with SITA UK</u>
REP-240	<u>EAOL - Statement of Common Ground with SCC MSDC SCDC EA IDB NE and SWT- Appendix 3A</u>
REP-241	<u>EAOL - Documents accompanying Statement of Common Ground with SCC MSDC SCDC EA IDB NE and SWT - Appendixes 3A1-3A6</u>
REP-242	<u>EAOL- Statement of Common Ground with SCC MSDC SCDC EA IDB NE and SWT - appendices 3A7-3A11</u>
REP-243	<u>EAOL - documents accompanying Statement of Common Ground with SCC MSDC SCDC EA IDB NE and SWT - Appendix 3A12</u>
REP-244	<u>EAOL - Statement of Common Ground with VISNED</u>
REP -245	<u>EAOL - Correspondence with Association of British Ports East Anglia</u>
REP -246	<u>EAOL - Correspondence with Bawdsey Manor Estate</u>
REP -247	<u>EAOL - Correspondence with Harwich Haven Port Authority</u>
REP -248	<u>EAOL - Correspondence with Public Health England</u>
REP -249	<u>EAOL - Correspondence with Rijkswaterstaat</u>
REP -250	<u>EAOL - Correspondence with Royal Society for the Protection of Birds (RSPB)</u>
REP -251	<u>EAOL - Correspondence with Suffolk Wildlife Trust</u>
DOCUMENTS RECEIVED FOR DEADLINE II – 27 August 2013	
Comments	
REP -252	<u>EAOL - updated information on HRA and DCO</u>
REP -253	<u>EAOL - Written Response to Deadline II</u>
REP -254	<u>Royal Society for the Protection of Birds - Comments on Written Representations and Statements of Common Ground</u>
REP -255	<u>Royal Society for the Protection of Birds - Comments on Written Representations and Statements of Common Ground - Summary</u>
REP -256	<u>Taylor Vinters on behalf of Landowners - Comment on Applicant's Response to ExA's First Questions</u>
REP -257	<u>Stephen Wright - Comments on Statement of Common Ground with Sterling Suffolk</u>
REP -258	<u>Suffolk County Council, Mid Suffolk District Council and Suffolk Coastal District Council - Joint Response to Applicant's Deadline II Response</u>
REP -259	<u>EAOL - Comments on Submissions submitted during pre-examination and later accepted by the ExA</u>
REP -260	<u>EAOL - Appendix A for Deadline II- Draft DCO</u>
REP -261	<u>EAOL - Appendix B Update of assessment of potential impacts on herring gull (V2)</u>
REP -262	<u>EAOL - Appendix C Assessment of potential impacts on Gannet</u>
REP -263	<u>EAOL - Appendix D Update of the assessment of potential impacts kittiwake (V2)</u>
REP -264	<u>EAOL - Appendix E Brent Geese Observations October 2011/March 2012</u>
REP -265	<u>EAOL - Appendix F Matrices to inform the RIES</u>

REP -266	EAOL - Appendix G Part 2 Comments on Relevant Representations
REP -267	Natural England and Joint Nature Conservation Committee - covering letter to accompany 27 August submission
REP -268	Natural England and Joint Nature Conservation Committee - tracked comments on Draft RIES -document submitted by EAOL
FURTHER INFORMATION REQUESTED BY THE EXAMINING AUTHORITY	
Response to Rule 17 Request	
REP-269	EAOL - Response to Rule 17 Request (9 September 2013)
REP-270	EAOL - Rule 17 Notice dated 23 September 2013
REP-271	EAOL - Responses to Published Rule 17 Notice dated 23 September 2013
REP-272	Norfolk County Council
REP-273	Phillip Hall
REP-274	English Heritage
DOCUMENTS RECEIVED FOR DEADLINE III – 21 October 2013	
Post Hearing documents	
REP-275	Marine Management Organisation
REP-276	Suffolk County Council, Suffolk Coastal District Council and Mid Suffolk District Council
REP-277	Bawdsey Parish Council
REP-278	Natural England - Written Summary of the Oral Case put at ISH on 17 and 18 September 2013
REP-279	Thomas O'Brien
REP-280	The Orford and District Inshore Fisherman's Association
REP-281	Joint Nature Conservation Committee
REP-282	EAOL - Note on amendments to temporary and permanent rights
REP-283	EAOL - Converter Station Bed Levels Note
REP-284	EAOL - Agreed Statement with National Grid
REP-285	EAOL - Board Report and Written Resolutions
REP-286	EAOL - Diagram 2-5 of Non Technical Summary showing working width
REP-287	EAOL - Draft Ducting Requirement - Superseded
REP-288	EAOL - Draft Highways Requirement - Superseded
REP-289	EAOL - Position statement - East Anglia ONE onshore cables
REP-290	EAOL - Errata to EAOL Rule 17 Request Submitted Sept 2013 (Ornithology table 3.3)
REP-291	EAOL - Flow Chart of Requirements Documents
REP-292	EAOL - Highways Agency Letter of Consent
REP-293	EAOL - Images of archaeological preservation during construction
REP-294	EAOL - Images of Construction and Drilling Activity
REP-295	EAOL - Images of fishing activity in wind farm sites
REP-296	EAOL - Images of landscaping and hedgerow reinstatement
REP-297	EAOL - Letter of consent from The Crown Estate
REP-298	EAOL - Letter of withdrawal of representation from Mr Richard Mayhew
REP-299	EAOL - Onshore Ecological Mitigation Summary
REP-300	EAOL - Order Limit Boundary Coordinates Offshore Plan Sheet 1 of 2 (V3)
REP-301	EAOL - Outline Access Management Plan (V3)
REP-302	EAOL - Outline Bawdsey Bed Level Monitoring and Remediation

	<u>Strategy</u>
REP-303	<u>EAOL - Outline Code of Construction Practice (V3)</u>
REP-304	<u>EAOL - Outline Landscape and Ecological Management Strategy (V2)</u>
REP-305	<u>EAOL - Outline Navigational Monitoring Strategy</u>
REP-306	<u>EAOL - Outline Offshore Operations and Maintenance Monitoring Plan</u>
REP-307	<u>EAOL - Outline Skills Strategy</u>
REP-308	<u>EAOL - Outline Traffic Management Plan (V3)</u>
REP-309	<u>EAOL - Outline Travel Plan (V3)</u>
REP-310	<u>EAOL - Response to the Tiered Approach</u>
REP-311	<u>EAOL - Schematic showing activities within EA ONE onshore cable route</u>
REP-312	<u>EAOL - Section 106 and 111 (engrossed)</u>
REP-313	<u>EAOL - Status of consents and licenses (V2)</u>
REP-314	<u>EAOL - Table of Heritage Assets which may be affected by development</u>
REP-315	<u>EAOL - Table of outstanding issues with MMO</u>
REP-316	<u>EAOL - Updated Access to Works Sheet 12 (V3)</u>
REP-317	<u>EAOL - Updated Public Rights of Way Sheet 7 and 8 (V3)</u>
REP-318	<u>EAOL - Written Response to Deadline III</u>
REP-319	<u>EAOL - Co-ordinates Map</u>
REP-320	<u>Deben Estuary Partnership - including late accepted documents</u>
REP-321	<u>Ministry Of Defence - late submission</u>
DOCUMENTS RECEIVED FOR DEADLINE IV – 26 November 2013	
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REP-322	<u>Trinity House</u>
REP-323	<u>Thomas O'Brien</u>
REP-324	<u>Suffolk County Council, Suffolk Coastal and Mid Suffolk District Councils</u>
REP-325	<u>Natural England and Joint Nature Conservation Committee</u>
REP-326	<u>The National Federation of Fishermen's Organisations</u>
REP-327	<u>Maritime and Coastguard Agency</u>
REP-328	<u>Marine Management Organisation</u>
REP-329	<u>Royal Society for the Protection of Birds</u>
REP-330	<u>Environment Agency</u>
REP-331	<u>EAOL - Response to Deadline IV</u>
REP-332	<u>EAOL - Response to Deadline IV Appendix 1 - Draft DCO Version 6</u>
REP-333	<u>EAOL - Response to Deadline IV Appendix 2 - Comparison of Draft DCO Version 6</u>
REP-334	<u>EAOL - Response to Deadline IV Appendix 3 - Schedule of Comments on ExA's Draft DCO</u>
REP-335	<u>EAOL - Response to Deadline IV Appendix 4 - Comments on ExA's Matrices to inform RIES</u>
REP-336	<u>EAOL - Response to Deadline IV Appendix 5 - Updated access to Works Plan (Sheets 11 and 12)</u>
REP-337	<u>EAOL - Response to Deadline IV Appendix 6 - Updated rights of Way Plan</u>
REP-338	<u>EAOL - Response to Deadline IV Appendix 7 - Updated Offshore Order Limits Coordinates Plan (Sheet 1)</u>

REP-339	EAOL - Response to Deadline IV Appendix 8 - Outline Converter Station Design Principles Statement
REP-340	EAOL - Response to Deadline IV Appendix 9 - Deed of Variation to Funding Agreement
DOCUMENTS RECEIVED FOR DEADLINE V – 13 December 2013	
Comments on Marine Management Organisation's and Natural England's Issues	
REP-341	EAOL - Response to Rule 17 Request submitted for the deadline of 13 December 2013
REP-342	EAOL - Appendix 1 - Comments on Natural England's Response to Deadline IV
REP-343	EAOL - Appendix 2 - Schedule of applicant's comments on the MMO's Response to Deadline IV
REP-344	EAOL - Cover letter for applicant's Response to Rule 17
REP-345	Marine Management Organisation
REP-346	Suffolk County Council, Suffolk Coastal District Council and Mid Suffolk District Council
REP-347	Forewind
REP-348	SMart Wind Ltd
REP-349	Royal Society for the Protection of Birds (RSPB)
REP-350	Natural England and Joint Nature Conservation Committee
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HE-01	EAOL - Information prior to the Preliminary Meeting
HE-02	Preliminary Meeting Note
HE-03	Preliminary Meeting Audio session 1
HE-04	Preliminary Meeting Audio session 2
HE-05	Preliminary Meeting Audio overview of attendance
Open Floor Hearing 12 September 2013	
HE-06	Hearing Agendas
HE-07	Open Floor Hearing Audio session 1
HE-08	Open Floor Hearing Audio session 2
HE-09	Playford Parish Council Speaking Note
HE-10	Thomas O'Brien Speaking Note
HE-11	Burstall Parish Council Speaking Note
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HE-12	Issue Specific Hearing Audio 17 September Part 1
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HE-15	Issue Specific Hearing Audio 17 September Part 4
HE-16	Issue Specific Hearing Audio 17 September Part 5
HE-17	Issue Specific Hearing Audio 17 September Part 6
HE-18	Issue Specific Hearing Audio 17 September Part 7
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HE-55	Bawdsey Parish Council - further evidence to support presentation at ISH on 26 September 2013
Compulsory Acquisition Hearing 8 October 2013	
HE-56	Compulsory Acquisition Hearing Agenda
HE-57	Compulsory Acquisition Hearing Audio 8 October Part 1
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HE-59	EAOL - Rule 13 Notice published in Eastern Daily Press 17 August 2013
HE-60	EAOL - Rule 13 Notice published in East Anglian Daily Times 20 August 2013
HE-61	EAOL- Rule 13 Notice published in Ipswich Star 20 August 2013
Unaccompanied Site Visits	
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USV-02	<u>Note of Unaccompanied Site Visit 2 - 23 July 2013</u>
USV-03	<u>Note of Unaccompanied Site Visit 3 - 24 July 2013</u>
USV-04	<u>Note of Unaccompanied Site Visit 4 -19 November 2013</u>
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ASV-02	<u>Accompanied Site Visit Day Two - 11 September 2013</u>
ASV-03	<u>Accompanied Site Visit Note Day One - 10 September 2013</u>
ASV-04	<u>Accompanied Site Visit Day Two (Plans) - 11 September 2013</u>
ASV-05	<u>Note of Accompanied Site Visit Day 2 - 11 September 2013</u>
APP-37	<u>5.4 Section 127 Application to the Department for Transport</u>
S127	
S127-01	<u>Appointment letter for Examination for s127 in relation to Network Rail</u>
S127-02	<u>EAOL - Letter withdrawing s127 application with Network Rail</u>
S127-03	<u>Network Rail - letter withdrawing representation submitted 29 August 2013</u>
S127-04	<u>National Grid letter - withdrawing Representation submitted 30 July 2013</u>
S127-05	<u>Anglian Water - Letter advising that parts of the Written Representation submitted concerning s127 can be withdrawn</u>
S127-06	<u>EAOL - Letter confirming withdrawal of s127 application relating to Network Rail, and withdrawal of representations from National Grid and Anglian Water</u>
S132	
S132-1	<u>Section 132 Application by the Applicant to the SoS for Communities and Local Government</u>
S132-2	<u>Section 132 Application - Appendix 1 Draft Order</u>
S132-3	<u>Section 132 Application - Appendix 2 Plan showing the Open Space Land required</u>
S132-4	<u>Section 132 Application - Appendix 3 Extract of Part 1 of the Book of Reference</u>
S132-5	<u>Section 132 Application - Appendix 4 Land Plan 1 of 22</u>
S132-6	<u>Section 132 Application - Appendix 5 Statement of Reasons</u>
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C-01	<u>Bond Dickinson LLP on behalf of East Anglia ONE Ltd to Foot Anstey re Costs</u>
CORRESPONDENCE	
Corr-01	<u>Regan Scott - withdrawal of Relevant Representation</u>
Corr-02	<u>EAOL - Letter regarding Crown Consent, dated 23 October 2013</u>
Corr-03	<u>EAOL - Letter of withdrawal of representation from Andrew Bond (Taylor Vinters)</u>

Appendix C

OTHER CONSENTS REQUIRED

In addition to the consent required under the PA 2008, the proposal is subject to the need for the following separate consents and permits:

Offshore Consents:

Appropriate Assessment and Habitats Regulations Assessment

Coast Station Radio Licence

Decommissioning scheme

Energy generation licence

European Protected Species Licence

F10 - Notification of Construction Project

Safety Zones

Onshore Consents

Building Regulation approval (if necessary)

Environmental Permit for water discharge or waste operations / registration of exempt waste operations and water discharges (if necessary)

European Protected Species Licence

Flood Defence Consent

Land Drainage Consent

Licence for work affecting badgers

Notice of Street Works

Permanent culvers over drains / watercourses

Permit for transport of abnormal loads (if necessary)

Removal of vegetation close to or on a riverbank

Section 132 Application to the Secretary of State for Communities and Local Government

Structures in, under or over a "main river"

Structures in "ordinary watercourses"

Temporary Traffic Orders (if construction phase requires closure of any public highway)

Waste Production.

Appendix D

EVENTS IN THE EXAMINATION

The table below lists the main events occurring during the examination and the main procedural decisions taken by the ExA.

Date	Examination Event
25 June 2013	Preliminary Meeting - Examination begins
25 June 2013	Unaccompanied Site Visit
4 July 2013	Rule 8 Letter Issued: <ul style="list-style-type: none">• Examination timetable,• Examining Authority's (ExA) Questions,• Requests for Statements of Common Ground, and• Notice of publication of Note of the Preliminary Meeting.
9 July 2013	Deadline for Statutory Parties to inform the ExA of: <ul style="list-style-type: none">• A wish to be considered as an Interested Party, and;• Submission by the applicant of any further information.
23 July 2013	Unaccompanied Site Visit
24 July 2013	Unaccompanied Site Visit
30 July 2013	Interested Parties Deadline I: For the receipt of: <ul style="list-style-type: none">• Comments on Local Impact Reports,• Comments on Relevant Representations• Comments on Written Representations,• Comments on responses to ExA's Questions,• Comments on Statements of Common Ground,• Comments on applicant's matrices to inform the Report on the Implications for European Sites (RIES), and• Notification of wish to make oral representations at a Compulsory Acquisition Hearing.
5 August 2013	Rule 17 Letter Issued – Regarding the format of submissions of the RIES and Development Consent Order (DCO)
6 August 2013	Issue of: <ul style="list-style-type: none">• Details of date time and place of ExA's

	<p>inspection of a site to which the application/specific matters relate in the company of Interested Parties, and</p> <ul style="list-style-type: none"> • Final notification by ExA of date, time and place for Open Floor and Issue Specific Hearings.
27 August 2013	<p>Interested Parties Deadline II: For the receipt of:</p> <ul style="list-style-type: none"> • Comments on Local Impact Reports • Comments on Relevant Representations • Comments on Written Representations • Comments on responses to ExA's Questions • Comments on Statements of Common Ground • Comments on applicant's matrices to inform the Report on the Implications for European Sites • Notification of wish to make oral representations at a Compulsory Acquisition Hearing.
9 September 2013	<p>Rule 17 Letter Issued – Regarding Environmental Statement and Habitats Regulations Assessment, and request for comments on Compulsory Acquisition Guidance.</p>
10 September 2013	<p>Accompanied Site Visit</p>
11 September 2013	<p>Accompanied Site Visit</p>
12 September 2013	<p>Open Floor Hearing</p>
17 September 2013	<p>Issue Specific Hearing - Ornithology, Protected Species and Habitats, including relevant DCO provisions</p>
18 September 2013	<p>Issue Specific Hearing - Shipping, Navigational Safety, Marine and Coastal Processes</p>
19 September 2013	<p>Issue Specific Hearing - Onshore Construction Process</p>
24 September 2013	<p>Issue Specific Hearing – Heritage and Archaeology</p>
25 September 2013	<p>Issue Specific Hearing – Traffic and Transport</p>
26 September 2013	<p>Issue Specific Hearing – Socio Economic Issues</p>

30 September 2013	New Interested Parties Deadline: For the receipt of Comments on Government's new guidance on Compulsory Acquisition.
8 October 2013	Compulsory Acquisition Hearing
21 October 2013	Interested Parties Deadline III: For the receipt of: <ul style="list-style-type: none"> • Post-Hearing documents including any written summary of an oral case put at any Hearing and any documents/amendments requested by the ExA and; • Comments to the Applicant on further information on environmental matters from 9 September Rule 17 Letter.
5 November 2013	Issue of: <ul style="list-style-type: none"> • ExA's draft Development Consent Order for consultation and; • Matrices prepared by the ExA to inform Report on the Implications for European Sites, for Consultation.
19 November 2013	Unaccompanied Site Visit
26 November 2013	Interested Parties Deadline IV: For receipt of: <ul style="list-style-type: none"> • Any written comments on the ExA's draft Development Consent Order and; • Any written comments on the matrices to inform Report on the Implications for European Sites.
29 November 2013	Rule 17 Letter Issued – Request for comments on documents submitted for Deadline IV
13 December 2013	Interested Parties Deadline V: For receipt of comments on Marine Management Organisation's and Natural England's comments made in their submission for deadline IV.
23 December 2013	Close of Examination

Appendix E

LIST OF ABBREVIATIONS

AA	Appropriate Assessment
AC	Alternating Current
AD	Associated Development
AD Guidance	Planning Act 2008: Guidance on associated development applications for major infrastructure projects
ALARP	As low as reasonably practicable
AMP	Access Management Plan
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
AP	Affected Person
APFP	Applications: Prescribed Forms and Procedures
AR	Avoidance Rate
ASV	Accompanied Site Visit
BAP	Biodiversity Action Plan
BDC	Babergh District Council
BoR	Book of Reference
CA	Compulsory Acquisition
CAA	Civil Aviation Authority
CAH	Compulsory Acquisition Hearing
CCS	Construction Consolidation Site
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CoCP	Code of Construction Plan
CoS	Chamber of Shipping
CRM	Collision Risk Model
dB	Decibels
dBht	Metric based on the audiogram of a species
DC	Direct Current
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment Food and Rural Affairs
DEP	Deben Estuary Partnership
DML	Deemed Marine Licence
DPD	Development Plan Documents
DWR	Deep Water Route
EA	Environment Agency
EAOL	East Anglia One Project
EAOL	East Anglia One Ltd (the developer)
EAOWL	East Anglia One Offshore Wind Ltd (Parent Company)

EC	European Commission
ECHR	European Convention of Human Rights
ECMP	Ecological Mitigation Plan
EEA	European Economic Area
EEC	European Economic Community
EERS	East of England Regional Strategy
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIFCA	Eastern Inshore Fisheries Conservation Authority
EMF	Electromagnetic Field
EMP	Environmental Management Plan
EPR	Examination Procedure Rules
ERCoP	Emergency Cooperation Plans
ES	Environmental Statement
EU	European Union
ExA	Examining Authority
F&LFFC	Finn and Lark Fly Fishing Club
FHCB	Flamborough Head and Bempton Cliffs
FID	Final Investment Decision
GBBG	Great Black-Backed Gull
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
HPA	Health Protection Agency
HR	Habitats Regulations
HRA	Habitats Regulations Assessment
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
ICES	International Council for the Exploration of the Sea
ICNIRP	International Commission on Non Ionising Radiation Protection
IDB	Internal Drainage Board
IFCA	Inshore Fisheries and Conservation Authority
IMO	International Maritime Organisation
IP	Interested Party
IPC	Infrastructure Planning Commission
IROPI	Imperative reasons of Overriding Public Interest
ISH	Issue Specific Hearing
JNCC	Joint Nature Conservation Committee
KV	Kilovolt
LA	Local Authority
LAT	Lowest Astronomical Tide
LBBG	Lesser Black-Backed Gull
LDF	Local Development Framework
LecMS	Landscape and Ecological Management Strategy
LIR	Local Impact Report

LLAU	Lands to be acquired or used
MCA	Marine and Coastguard Agency
MCA Act	Marine and Coastal Access Act 2009
MCZ	Marine Conservation Zones
MHWS	Mean High Water Spring
MMO	Marine Management Organisation
MOD	Ministry Of Defence
MPS	Marine Policy Statement
MSDC	Mid Suffolk District Council
MSFD	Marine Strategy Framework Directive
MW	Megawatt
NE	Natural England
NERC	The Natural Environment and Rural Communities Act
NFFO	National Federation of Fishermen's Organisations
nm	Nautical Mile
NPPG	National Planning Policy Guidance
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NRA	Navigational Risk Assessment
NSIP	Nationally Significant Infrastructure Project
OCS	Onshore Converter Station
OFH	Open Floor Hearing
OFWAT	Water Services Regulation Authority
OLEMS	Outline Landscape and Ecological Mitigation Strategy
ORPAD	Offshore Renewable Protocol for Archaeological Discoveries
OTMP	Outline Management Plan
OWF	Offshore Wind Farm
PA2008	Planning Act 2008
PAM	Passive Acoustic monitoring
PBR	Potential Biological Removal
PCH	Potential Collision Heights
PEI	Preliminary Environmental Information
PM	Preliminary Meeting
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
PSPA	Potential Special Protection Area
PVA	Population Viability Analysis
RAMS	Risk Assessment and method Statement
Ramsar	The Ramsar Convention on Wetlands
REZ	Renewable Energy Zone
RIES	Report on the Implications for European Sites

RR	Relevant Representation
RSPB	The Royal Society for the Protection of Birds
RYA	Royal Yachting Association
SAC	Special Area of Conservation
SCC	Suffolk County Council
SCDC	Suffolk Coastal District Council
SCHAONB	Suffolk Coast and Heaths Area Of Outstanding Natural Beauty
SEA	Strategic Environmental Assessment
SEI	Supplementary Environmental Information
SEL	Sound Exposure Level
SGT	Super Grid Transformer
SNCB	Statutory Nature Conservation Body
SNH	Scottish Natural Heritage
SoCG	Statement Of Common Ground
SPA	Special Protection Area
SPR	Scottish Power Renewable
SSCLG	Secretary of State for Communities and Local Government
SSECC	Secretary of State for Energy and Climate Change
SSSI	Sites of Special Scientific Interest
SuDS	Sustainable Urban Drainage Solution for the site
SVIA	Seascape and Visual Impact Assessment
SWT	Suffolk Wildlife Trust
TB	Trans-boundary
TH	Trinity House
TMP	Traffic Management Plan
TKO	Triton Knoll Offshore Wind Farm Order 2013
TP	Travel Plan
USV	Unaccompanied Site Visit
Vattenfall	Vattenfall Wind Power Ltd
VisNed	Dutch Demersal Fisheries Organisation
WCA	Wildlife and Countryside Act
WFD	Water Framework Directive
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

Appendix F

REPORT ON THE IMPLICATIONS FOR EUROPEAN SITES

REPORT ON THE IMPLICATIONS FOR EUROPEAN SITES

UPDATE SHEET

The Report on the Implications for European Sites (RIES) was issued for consultation by the Examining Authority on 4 November 2013. Page 2 of the RIES lists the documents used to inform the report and contained document references which were based on the internal referencing applied by the Planning Inspectorate at the time. Since this date, the document references have been updated and finalised, as detailed in the table below. The updated document reference should be used in correlation with the finalised document library appended to the recommendation report at Annex [A].

Document	Document reference contained in the RIES	Updated document reference
EAOL – Less Black Backed Gull Tagging Data Analysis as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013	REP-227	REP-214
EAOL – Lesser Black Backed Gull Technical Clarification Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013	REP-228	REP-215
EAOL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013	REP-216	REP-203
Natural England Representation received on 18 October 2013 for Deadline III	REP-276	REP-278
EAOL – Response to the tiered approach (October 2013)	REP-312	REP-310
EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013	REP-184	REP-236
EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Trust	REP-188	REP-242



The Planning Inspectorate

REPORT on the IMPLICATIONS for EUROPEAN SITES Proposed East Anglia ONE Offshore Windfarm

An Examining Authority report prepared with the support
of the Environmental Services Team

5 November 2013

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1.0 INTRODUCTION

Background

East Anglia ONE Limited (the applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (as amended) for the proposed East Anglia ONE Offshore Windfarm. The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.

The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive¹ and the 2010 Habitats Regulations² for applications submitted under the Planning Act regime (as amended). The findings and conclusions on nature conservation issues reported by the Examining Authority will assist the Secretary of State in performing its duties under the Habitats Regulations.

This report compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the examination by both the applicant and interested parties. It is issued to ensure that interested parties including the statutory nature conservation bodies, Joint Nature Conservation Committee (JNCC) and Natural England (NE), are consulted formally on habitats regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 61(3) of the Habitats Regulations.

Attention is drawn in particular to integrity matrix 3.4 and the potential impacts of the project in-combination with other projects on Gannet and Kittiwake. Please note the comments raised by NE regarding a strategic approach to the allocation of wind resource in the North Sea. The ExA would welcome comments from Interested Parties on this matter spelling out in particular the practical implications of this approach and if possible how this could be progressed and the likely timescales involved.

In addition, the ExA would welcome a copy of the citation documents from NE relating to the consultation on the Flamborough Head and Filey Coast as an SPA and comments from Interested Parties about whether this emerging designation affects the assessment by the applicant of the

¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the 'Habitats Directive')

² The Conservation of Habitats and Species Regulations 2010 (as amended) (the 2010 Habitats Regulations). The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007 (as amended) (Offshore Marine Regulations) will apply beyond UK territorial waters (12 nautical miles). These regulations are relevant when an application is submitted for an energy project in a renewable energy zone (except any part in relation to which the Scottish Ministers have functions).

impact of the project on internationally designated sites and the provision of sufficient information to inform an Appropriate Assessment.

Documents Used to Inform this Report

The applicant completed the screening and integrity matrices in response to a Rule 17 Request issued by the Examining Authority on 5 August 2013 (submitted to the Examining Authority on 27 August 2013).

These matrices presented the applicant's evidence on whether the project, alone or in-combination with other projects, potentially affects a European site³, and whether it is likely to have a significant impact on key features of each European site.

The matrices presented within this report have been updated by the Examining Authority, with the support of the Environmental Services Team of the Planning Inspectorate, throughout the examination using the following documents:

Application Documents

- Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)
- Volume 2 Chapter 11 of the ES (Marine Mammals) (Doc Ref: APP-079)
- Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)
- Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)
- EAOL - Draft Development Consent Order (Version 5 - October 2013) (Doc Ref: APP-246)

Representations

- EOAL – Less Black Backed Gull Tagging Data Analysis as part of the Applicant's response to the Examining Authority's first questions, 30 July 2013 (REP-227)
- EOAL – Lesser Black Backed Gull Technical Clarification Note as part of the Applicant's response to the Examining Authority's first questions, 30 July 2013 (REP-228)

³ European sites include Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs) which are protected under the Habitats Regulations. As a matter of policy, the Government also applies the procedures of the Habitats Regulations to potential SPAs (pSPAs), Ramsar sites, and (in England) proposed Ramsar sites and sites identified, or required, as compensatory measures for adverse effects on any of the above sites.

- EOAL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-216)
- Natural England and JNCC Written Representation, 30 July 2013 (Doc Ref: REP-150)
- Annex D Dr Richard Caldwor expert report on Coastal and Offshore Ornithology HRA of NE and JNCC’s Written Representation, 30 July 2013 (REP-155).
- Natural England Representation received on 18 October 2013 for Deadline III, (Doc Ref: REP-276)
- EAOL - Response to the Tiered Approach (October 2013) (Doc Ref: REP-312)

Statements of Common Ground

- EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184)
- EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Trust (Doc Ref: REP-188)

Structure of this Report

The remainder of this report is in three parts:

Section 2 identifies the European sites, potential impacts, mitigation measures and the main issues that were considered within the HRA process

Section 3 comprises screening matrices for the European sites that might potentially be affected by the project (Stage 1 of the HRA process). These matrices collate evidence on whether the project is likely to have significant effects on the key features of each European site alone, or in combination with other projects. The European sites for which a likely significant effect is identified on one or more of its key features are taken forward to Section 3 of this report, and

Section 4 comprises matrices for the European sites identified in Section 2 for which a likely significant effect cannot be excluded. The matrices summarises the anticipated effects on the integrity of the European sites, in the context of their conservation objectives (Stage 2 of the HRA process).

2.0 KEY POINTS

European Sites

The project is not connected with or necessary to the management for nature conservation of any of the European sites considered within the assessment.

The applicant's HRA Report identified the following European sites for inclusion within the assessment:

- Alde, Ore and Butley Estuaries SAC
- Benacre to Easton Bavents Lagoons SAC
- Essex Estuaries SAC
- Flamborough Head SAC
- Hainsborough, Hammond and Winterton SCI
- Humber Estuary SAC
- Inner Dowsing, Race Bank and North Ridge cSAC
- Margate and Long Sands SCI
- Minsmere to Walberswick Heaths and Marshes SAC
- North Norfolk Coast SAC
- North Norfolk Sandbanks and Saturn Reef cSAC
- Orfordness Shingle Street SAC
- Saltfleeby-Theddlethorpe Dunes and Gibraltar Point SAC
- Thanet Coast SAC
- The Wash and North Norfolk SAC
- Winterton Horsey Dunes SAC
- Alde-Ore Estuary SPA
- Alde-Ore Estuary Ramsar
- Benfleet and Southend Marshes SPA
- Blackwater Estuary SPA
- Chesil Beach and The Fleet SPA
- Chichester and Langstone Harbour SPA
- Colne Estuary SPA
- Crouch and Roach Estuary SPA
- Deben Estuary SPA
- Deben Estuary Ramsar
- Exe Estuary SPA
- Flamborough Head and Bempton Cliffs SPA

- Foulness SPA
- Hamford Water SPA
- Humber Estuary SPA
- Lough Foyle SPA
- Medway Estuary and Marshes SPA
- North Norfolk Coast SPA
- Outer Thames Estuary SPA
- Portsmouth Harbour SPA
- Solent and Southampton Water SPA
- Stour and Orwell Estuaries SPA
- The Swale SPA
- The Wash SPA
- Hermaness, Saxa Vord and Valla Field SPA
- Firth of Forth Islands SPA
- Noss SPA
- Fair Isle SPA
- Fetlar SPA
- Foula SPA
- Hoy SPA

The Applicants' Habitats Regulations Assessment Report (Version 2 - September 2013) submitted in response to Rule 17 request states at Section 5 paragraph 69 that the screening for Likely Significant Effect was carried out as a two stage filtering process (initially a coarse filter, then a more detailed assessment) with re-iteration after the consultation stages and after the detailed discussions held with NE and JNCC in the post submission stage. NE and JNCC have submitted numerous representations during the examination process and with the exception of updated information in relation to the Ministerial consent regarding Flamborough Head and Filey Coast pSPA (Written Summary of the Oral Case put by Natural England during the Issues Specific Hearing 18 October 2013) they have not expressed any concerns regarding the sites considered by the Applicants' HRA.

Potential Impacts

The potential impacts upon the identified European sites which are/ considered within the applicant's HRA Report are provided in the table below.

Potential impacts considered within the screening (Stage 1) and effects on integrity (Stage 2) matrices

Designated sites	Impacts submission information in	Presented matrices as in
e.g. SAC	<ul style="list-style-type: none"> • Development occurring within the SAC leading to direct habitat loss 	<ul style="list-style-type: none"> • Direct Habitat Loss
	<ul style="list-style-type: none"> • Indirect habitat loss from impacts to natural processes e.g, rates of erosion, availability of prey species 	<ul style="list-style-type: none"> • Indirect Habitat Loss
eg SPA	<ul style="list-style-type: none"> • Mortality as a result with collision with wind turbines • Attraction to lit structures 	<ul style="list-style-type: none"> • Collision risk

Designated sites	Impacts submission information	Presented matrices as
	<ul style="list-style-type: none"> • Disturbance and displacement due to presence of vessels and construction equipment • Indirect effects on bird prey species through physical habitat damage/disturbance • Effects on bird prey species through accidental pollution event 	<ul style="list-style-type: none"> • Disturbance / displacement
	<ul style="list-style-type: none"> • Interruption of bird flight paths to avoid wind farms by flying around turbines/array 	<ul style="list-style-type: none"> • Barrier effect

Some impacts have been grouped together for ease of presentation.

A significant effect is considered to be any effect that may be reasonably predicted to occur that may affect the conservation objectives of the features for which the site was designated, and that therefore could have an adverse effect on the integrity of the site. This follows EC guidance on habitats assessment (EC Guidance document: 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (2000)' and EC Guidance document: 'Assessment of plans and projects significantly affecting Natura 2000 sites (2001)').

In-combination impacts

The applicant has addressed in-combination impacts within the matrices. The following projects have been included in the in-combination assessment carried out by the applicant:

- Greater Gabbard
- Gunfleet Sands
- Lynn and Inner Dowsing
- Sheringham Shoal
- Scroby Sands
- Thanet
- London Array
- Kentish Flats
- Beatrice (demonstrator)
- Lincs
- Teeside (South Sharpley)
- Humber Gateway
- Dudgeon
- Galloper
- Westermost Rough
- Race Bank
- Triton Knoll
- European Offshore Wind Deployment Centre

The applicants' approach to the in-combination assessment and specifically which projects should be considered within the assessment is an area of disagreement between the applicant and NE. Following the Issue Specific Hearing held on 17 September 2013 the ExA requested that the applicant respond by 21 October to the tiered approach identified by NE and JNCC as a method of resolving the deliberations regarding what projects should be included in cumulative assessments. The applicant's response to the tiered approach was received by the ExA on 21 October 2013 and provides additional information in relation to in-combination impacts of collision risk for gannet and kittiwake at Flamborough Head and Bempton Cliffs SPA. The additional information does not include an assessment of the in-combination impacts and has only provided data based on a 99% avoidance rate for gannets. The additional projects considered are as follows:

- Rampion
- Hornsea Project 1
- Dogger Bank Creyke Beck

- Neart Ne Goithe
- Firth Of Forth
- Inch Cape
- Moray Firth
- Beatrice
- Navitus Bay
- Hornsea Project 2
- Dogger Bank Teeside
- East Anglia Three
- East Anglia Four
- East Anglia Future Projects
- Hornsea Future Projects

Figures based on a 98% avoidance rate for gannets have been provided in Table 3.7b of the Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269), however these figures do not take into account the additional projects listed above.

Mitigation measures

Mitigation measures have been proposed to avoid/reduce impacts to below significant levels for some key interest features. Specific mitigation measures applicable to interest features considered are identified in the matrices as appropriate.

Issues

There is a continued disagreement between the applicant and the SNCB (NE and JNCC) regarding the projects that should be included within the in-combination assessment. The applicant has recently submitted additional information in response to JNCC and NE's suggested tiers for cumulative impact assessment.

There is a continued disagreement between the applicant and NE and JNCC regarding the appropriate collision risk avoidance rate to use in relation to gannets.

Likely significant effects

As a result of the screening assessment, the applicant concluded that significant effects cannot be excluded on the following European sites:

- Alde Ore Estuary SPA (Herring Gull & Lesser Black Backed Gull)
- Flamborough Head and Bempton Cliffs SPA (Gannet and Kittiwake)

The scope of the screening exercise and its conclusion has been agreed with NE and JNCC following submission of additional information during the examination.

The features of the European sites detailed above have therefore been taken forward to the integrity matrices in Section 4 of this report.

Effects on integrity

The applicant concluded that the project will not adversely affect the integrity of the following European site(s) and feature(s):

- Alde Ore Estuary SPA (Herring Gull & Lesser Black Backed Gull)
- Flamborough Head and Bempton Cliffs SPA (Gannet and Kittiwake)

3.0 STAGE 1: SCREENING FOR LIKELY SIGNIFICANT EFFECTS

Background

The project is not connected with or necessary to the management for nature conservation of the European site(s) considered within the assessment.

This section reports on the screening for likely significant effects of the project in relation to the potentially affected European site(s).

Stage 1 Matrices Key

X = Likely significant effect cannot be excluded

✓ = Likely significant effect can be excluded

C= construction

O = operation

D = decommissioning

Evidence supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European site, the cell in the matrix is formatted as follows:

n/a

Screening Matrices

Stage 1 Matrix 3.1: Alde, Ore and Butley Estuaries SAC (project alone and in-combination)

Site Code: UK0030076

Distance to project: Not stated

European site features	Likely Effects of NSIP													
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects							
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>								
Estuaries	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Mudflats and sandflats not covered by seawater at low tide	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, Parts 4a and 5a,**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.2: Benacre to Easton Barents Lagoons SAC (project alone and in-combination)

Site Code: UK0013104

Distance to project: Not stated

European site features	Likely Effects of NSIP					
	Direct Habitat Loss			Indirect Habitat Loss		
	C	O	D	C	O	D
Coastal Lagoons	xa	xa	xa	xa	xa	xa
				xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, Parts 4a and 5a**). In addition, in **EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.3: Essex Estuaries SAC (project alone and in-combination)

Site Code: UK0013690

Distance to project: Not stated

European site features	Likely Effects of NSIP												
	Direct Habitat Loss				Indirect Habitat Loss			In-combination Effects					
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>							
Estuaries	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Mudflats and sandflats not covered by seawater at low tide	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Salicornia and other annuals colonizing mud and sand	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Spartina swards	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

(Spartinion maritimae)													
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Sandbanks which are slightly covered by sea water all the time	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, Parts 4a and 5a**). In addition, in **EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.4: Flamborough Head SAC (project alone and in-combination)

Site Code: UK00130136

Distance to project: Not stated

European site features	Likely Effects of NSIP													
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects							
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>								
Reefs	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Vegetated sea cliffs of the Atlantic and Baltic Coasts	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Submerged or partially submerged sea caves	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment**)

Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 104).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.5: Hainsborough, Hammond and Winterton SCI (project alone and in-combination)

Site Code: UK0030369

Distance to project: Not stated

European site features	Likely Effects of NSIP						
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>	
Sandbanks which are slightly covered by sea water all of the time	xa	xa	xa	xa	xa	xa	xa
Reefs	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.6: Humber Estuary SAC (project alone and in-combination)

Site code: UK0030170

Distance to project: Not stated

European features	site	Likely Effects of NSIP												In-combination Effects							
		Collision Risk		Disturbance / Displacement		Barrier Effect		Direct Loss		Habitat Loss		Indirect Habitat Loss									
		C	O	D	C	O	D	C	O	D	C	O	D								
Grey seal, <i>Halichoerus grypus</i>	n/a	n/a	n/a	n/a	*a	*a	*a	*a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a,b	
Harbour seal, <i>Phoca vitulina</i>	n/a	n/a	n/a	n/a	*a	*a	*a	*a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a,b
Sea Lamprey, <i>Petromyzon marinus</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*c
River Lamprey, <i>Lampetra fluviatilis</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*c
Twait shad, <i>Alosa fallax</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*c

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Report on the Implications for European Sites

Allis shad, <i>Alosa alosa</i>	xC	xC	xC	xC	xC	xC	xC	xC	xC	n/a	xC	n/a	n/a	xC
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Estuaries	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sandbanks which are slightly covered by sea water all the time (subtidal sandbanks)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Mudflats and sandflats not covered by seawater at low tide (intertidal mudflats and sandflats)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Coastal lagoons	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Annual vegetation of drift lines	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<i>Salicornia</i> and other annuals colonizing mud and sand	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

<i>Spartina</i> swards (<i>Spartinion</i> <i>maritimae</i>)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x d	x d	x d
Embryonic shifting dunes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x d	x d	x d
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x d	x d	x d
Fixed dunes with herbaceous vegetation (grey dunes)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x d	x d	x d
Dunes with <i>Hippophae rhamnoides</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x d	x d	x d

a The potential impacts on marine mammals are reported in **Volume 2 Chapter 11 of the ES (Doc Ref: APP-079)**. Based upon the assessment of disturbance / displacement caused by direct effect of noise, effects of construction and maintenance vessels and indirect effects of noise on its prey species reported within the ES and the information provided within the **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)** the Applicant has concluded that there will be no likely significant effect on the marine mammal interest features of the Humber Estuary SAC.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on marine mammals alone and in combination assuming the inclusion of the embedded mitigation as described, a commitment to the development of the MMMP with agreement with SNCBs and that mitigation is carried out as described (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1. 6a**). Condition 9(f) of the Deemed Marine Licence (**EAOL - Draft**

Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246) secures the MMMP and **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 5a** confirms the agreement that the conditions provided within the deemed marine licence are appropriate and adequate.

b The potential impacts on marine mammals are reported in **Volume 2 Chapter 11 of the ES (Doc Ref: APP-079)**. Based upon the assessment of barrier effects reported within the ES and the information provided within the **Habitats Regulations Assessment Report Version 2 – September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)** the Applicant has concluded that there will be no likely significant effect on the marine mammal interest features of the Humber Estuary SAC.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on marine mammals alone and in combination assuming the inclusion of the embedded mitigation as described, a commitment to the development of the MMMP with agreement with SNCBs and that mitigation is carried out as described (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1. 6a**). Condition 9(f) of the Deemed Marine Licence (**EAOL – Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**) secures the MMMP and **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 5a** confirms the agreement that the conditions provided within the deemed marine licence are appropriate and adequate.

c The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 – September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated features of the Humber Estuary SAC (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1. 6a**).

d The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat

features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.7: Inner Dowsing, Race Bank and North Ridge cSAC (project alone and in-combination)

Site Code: UK0030370

Distance to project: Not stated

European site features	Likely Effects of NSIP												In-combination Effects				
	Collision Risk			Disturbance / Displacement			Barrier Effect		Direct Loss		Habitat Loss			Indirect Habitat Loss			
	C	O	D	C	O	D	C	O	C	O	D	C		O	D		
Harbour porpoise, <i>Phocoena phocoena</i>	n/a	n/a	n/a	xa	xa	xa	n/a	xb	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	xa, b
Grey seal, <i>Halichoerus grypus</i>	n/a	n/a	n/a	xa	xa	xa	n/a	xb	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	xa, b
Sandbanks slightly covered by seawater at all times	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	xc	xc	xc	xc	xc	xc

2013 (Doc Ref: REP-184), Section 3.1. 6a). Condition 9(f) of the Deemed Marine Licence (**EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**) secures the MMMP and **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 5a** confirms the agreement that the conditions provided within the deemed marine licence are appropriate and adequate.

c The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.8: Margate and Long Sands SCI (project alone and in-combination)

Site Code: UK0030371

Distance to project: Not stated

European site features	Likely Effects of NSIP						
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects
	C	O	D	C	O	D	
Sandbanks which are slightly covered by sea water all of the time	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and**

Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.9: Minsmere to Walberswick Heaths and Marshes SAC (project alone and in-combination)

Site Code: UK0012809

Distance to project: Not stated

European site features	Likely Effects of NSIP									
	Direct Habitat Loss		Indirect Habitat Loss			In-combination Effects				
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>				
Annual vegetation of drift lines	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
European dry heaths	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Perennial vegetation of stony banks	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment**)

Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on marine mammals alone and in combination assuming the inclusion of the embedded mitigation as described, a commitment to the development of the MMMP with agreement with SNCBs and that mitigation is carried out as described (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1. 6a**). Condition 9(f) of the Deemed Marine Licence (**EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**) secures the MMMP and **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 5a** confirms the agreement that the conditions provided within the deemed marine licence are appropriate and adequate.

Stage 1 Matrix 3.11: North Norfolk Sandbanks and Saturn Reef cSAC (project alone and in-combination)

Site Code: UK0030358

Distance to project: Not stated

European site features	Likely Effects of NSIP											
	Direct Habitat Loss				Indirect Habitat Loss				In-combination Effects			
	C	O	D		C	O	D					
Sandbanks which are slightly covered by sea water all the time	xa	xa	xa		xa	xa	xa		xa	xa	xa	
Reefs	xa	xa	xa		xa	xa	xa		xa	xa	xa	

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.12: Orfordness Shingle Street SAC (project alone and in-combination)

Site Code: UK0014780

Distance to project: Not stated

European site features	Likely Effects of NSIP													
	Direct Habitat Loss					Indirect Habitat Loss					In-combination Effects			
	C	O	D	C	O	D	C	O	D					
Coastal Lagoons	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Annual vegetation of drift lines	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Perennial vegetation of stony banks	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment**)

Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.13: Saltfleeby-Theddlethorpe Dunes and Gibraltar Point SAC (project alone and in-combination)

Site Code: UK0030270

Distance to project: Not stated

European site features	Likely Effects of NSIP												
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects						
	C	O	D	C	O	D	C	O	D				
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Fixed coastal dunes with herbaceous vegetation ("grey dunes")	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Dunes with <i>Hippophae rhamnoides</i>	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

Humid dune slacks	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Embryonic shifting dunes	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.14: Thanet Coast SAC (project alone and in-combination)

Site Code: UK0013107

Distance to project: Not stated

European site features	Likely Effects of NSIP						
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects
	C	O	D	C	O	D	
Reefs	xa	xa	xa	xa	xa	xa	xa
Submerged or partially submerged sea caves	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and**

Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.15: The Wash and North Norfolk SAC (project alone and in-combination)

Site Code: UK0017075

Distance to project: Not stated

European features	site	Likely Effects of NSIP																
		Collision Risk			Disturbance / Displacement			Barrier Effect		Direct Loss		Habitat Loss		Indirect Habitat Loss		In-combination Effects		
		C	O	D	C	O	D	C	O	C	D	C	O	C	D			
		n/a	n/a	n/a	*a	*a	*a	n/a	*b	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a
Grey seal, <i>Halichoerus grypus</i>	n/a	n/a	n/a	*a	*a	*a	n/a	*b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a, b
Harbour seal, <i>Phoca vitulina</i>	n/a	n/a	n/a	*a	*a	*a	n/a	*b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a, b
Otter, <i>Lutra lutra</i>	*c	*c	*c	*c	*c	*c	*c	*c	n/a	n/a	*c	n/a	n/a	n/a	n/a	n/a	n/a	*c
Sandbanks which are slightly covered by sea water all the time (subtidal sandbanks)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*d

Mudflats and sandflats covered by seawater at low tide (intertidal mudflats and sandflats)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
Coastal lagoons	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
Large shallow inlets and bays	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
Reefs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
<i>Salicornia</i> and other annuals colonising mud and sand	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
<i>Spartina</i> swards, <i>Spartinion maritimae</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
Atlantic salt meadows, <i>Glauco-Puccinellietalia maritimae</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d
Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	x/d	x/d	x/d	x/d

- a The potential impacts on marine mammals are reported in **Volume 2 Chapter 11 of the ES (Doc Ref: APP-079)**. Based upon the assessment of disturbance / displacement caused by direct effect of noise, effects of construction and maintenance vessels and indirect effects of noise on its prey species reported within the ES and the information provided within the **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)** the Applicant has concluded that there will be no likely significant effect on the marine mammal interest features of The Wash and North Norfolk SAC.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on marine mammals alone and in combination assuming the inclusion of the embedded mitigation as described, a commitment to the development of the MMMP with agreement with SNCBs and that mitigation is carried out as described (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1. 6a**). Condition 9(f) of the Deemed Marine Licence (**EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**) secures the MMMP and **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 5a** confirms the agreement that the conditions provided within the deemed marine licence are appropriate and adequate.
- b The potential impacts on marine mammals are reported in **Volume 2 Chapter 11 of the ES (Doc Ref: APP-079)**. Based upon the assessment of barrier effects reported within the ES and the information provided within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)** the Applicant has concluded that there will be no likely significant effect on the marine mammal interest features of the Inner Dowsing, Race Bank and The Wash and North Norfolk SAC.
- c The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on marine mammals alone and in combination assuming the inclusion of the embedded mitigation as described, a commitment to the development of the MMMP with agreement with SNCBs and that mitigation is carried

out as described (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1. 6a**). Condition 9(f) of the Deemed Marine Licence (**EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**) secures the MMMP and **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-18, Section 3.1, 5a** confirms the agreement that the conditions provided within the deemed marine licence are appropriate and adequate.

d The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, Parts 4a and 5a**.. In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.16: Winterton and Horsey Dunes SAC (project alone and in-combination)

Site Code: UK0013043

Distance to project: Not stated

European site features	Likely Effects of NSIP												
	Direct Habitat Loss			Indirect Habitat Loss			In-combination Effects						
	<i>C</i>	<i>O</i>	<i>D</i>	<i>C</i>	<i>O</i>	<i>D</i>							
Atlantic decalcified fixed dunes (Calluno-Ulicetea)	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Humid dune slacks	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Embryonic shifting dunes	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")"	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

a The potential impacts on marine geology, oceanography and physical processes are reported in Chapter 6 of the ES. The results of the hydrodynamic and sedimentological modelling concluded that there would be no LSE on habitat features of those SACs on the coast or offshore areas of eastern England (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraph 104**).

In the Statement of Common Ground with NE/JNCC, it is agreed that there will be no LSE on Annex 1 habitats resulting from the project alone or in-combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, Parts 4a and 5a**). In addition, in **EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.1, 6a** it is agreed that SACs and cSACs can be screened out of further assessment.

Stage 1 Matrix 3.17: Alde-Ore Estuary SPA (project alone)

Site Code: UK9009112

Distance to project: 54 km

European site features	Likely Effects of NSIP												
	Collision Risk				Disturbance / Displacement				Barrier Effect				
	C	O	D		C	O	D		C	O	D		
Lesser Black Backed Gull, <i>Larus fuscus</i>	n/a	*a	n/a		*b	*b			*b	n/a	*c		n/a
Herring Gull as part of a seabird assemblage of international importance including: Herring Gull <i>Larus argentatus</i> , Black-headed Gull <i>Larus ridibundus</i> , Lesser Black-backed Gull <i>Larus fuscus</i> , Little Tern <i>Sterna albigifrons</i> , Sandwich Tern	n/a	√d	n/a		*e	*e			*e	n/a	*f		n/a

East Anglia ONE Offshore Windfarm
Report on the Implications for European Sites

<i>Sterna sandvicensis</i>																			
Marsh Harrier, <i>Circus aeruginosus</i>	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi
Ruff, <i>Philomachus pugnax</i>	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi
Avocet, <i>Recurvirostra avosetta</i>	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi
Little Tern, <i>Sterna albifrons</i>	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi
Sandwich Tern, <i>Sterna sandvicensis</i>	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi
Common Redshank, <i>Tringa totanus</i>	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi
A waterfowl assemblage including Black-tailed Godwit <i>Limosa limosa</i>	n/a	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	xi	n/a

<i>islandica</i> , Dunlin <i>Calidris alpina alpina</i> , Lapwing <i>Vanellus vanellus</i> , Shoveler <i>Anas clypeata</i> , Teal <i>Anas crecca</i> , Wigeon <i>Anas penelope</i> , Shelduck <i>Tadorna tadorna</i> , White-fronted Goose <i>Anser albifrons</i> , Redshank <i>Tringa totanus</i> , Avocet <i>Recurvirostra avosetta</i>									
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a During the EIA (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) the Applicant completed a CRM exercise for lesser black-backed gull; this assumed 98% avoidance, a proportion of birds at flight height of 26.3%, and that 78% of birds were adult birds. The annual mean predicted mortality rates for birds from the Alde-Ore Estuary SPA was 14 adults during the breeding season, 1 adult during autumn and 1 adult during winter (16 birds in total). Incorporation into the PVA model showed that the removal of 16 birds would have a negligible effect on the number of breeding pairs of lesser black-backed gulls expected to be at the Alde-Ore Estuary SPA after 25 years under the medium scenario. The medium scenario assumes site management measures are implemented which reduce predation – this was considered to be a reasonable assumption as it is Natural England’s responsibility, as landowners, to restore the site’s condition from ‘unfavourable declining’ to ‘unfavourable increasing’ and it is understood that such measures are currently under discussion with the relevant parties. On this basis, it was considered that there will be no likely significant effect on this interest feature of the Alde-Ore Estuary SPA, due to collision mortality from the operation of East Anglia One alone (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**).

Following submission of the application documents, newly available tagging data of birds from Orfordness, part of the Alde-Ore Estuary SPA, was analysed by the Applicant (**EOAL – Less Black Backed Gull Tagging Data Analysis as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-227)**) to assess the time spent by birds during the breeding season within the East Anglia One site. The Applicant revised the CRM and the predicted mortality during the breeding season was calculated to be less than one bird (**EOAL – Lesser Black Backed Gull Technical Clarification Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-228)**). With the inclusion of mortality during the autumn and winter periods, the annual predicted mortality through collision is <3 individuals. No likely significant effect on this interest feature of the Alde-Ore Estuary SPA, due to collision mortality from the operation of East Anglia One alone is therefore predicted (**Habitats Regulations Assessment Report Version 2 – September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 151**).

NE’s advice on potential impacts on lesser black backed gulls arising from this development is set out in **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC’s Written Representation, 30 July 2013 (REP-155)**. Dr Caldwell confirmed at the hearing that he had adopted a different approach to the apportionment of collision mortality to that used by the Applicant. Based on its assessment of the data, NE could not exclude a significant effect arising from the proposed development alone on the Alde-Ore Estuary SPA due to collision risk mortality on lesser black backed gulls associated with that site. An appropriate assessment would therefore be required by the Competent Authority in respect of potential impacts arising from the East Anglia One development on this SPA. Following further assessment, NE concluded that no reasonable scientific doubt remains as to the absence of an adverse effect on the integrity of the Alde-Ore Estuary SPA arising from the development alone (**Natural England Representation received on 18 October 2013 for Deadline III (Doc Ref: REP-276)**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on the Alde-Ore Estuary SPA in relation to lesser black backed gulls (**EOAL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6c**).

b The Applicant provided evidence in the ES (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) that disturbance of lesser black-backed gulls due to human activity is most likely to occur at the construction and

decommissioning phases of the development. Large gulls are among the most flexible species in terms of habitat use (Garthe & Hüppop, 2004; Furness & Wade, 2012) and may be observed to take advantage of new foraging opportunities created by human activity. Gulls are expected to tolerate installation activities; birds have rapidly colonised industrial sites across the UK despite high intensity construction activity (Royal Haskoning, 2011). Survey data from Greater Gabbard OWF observed lesser black-backed gulls in association with the construction vessels; this is likely to be a reflection of gulls' foraging strategy of taking discards close to fishing vessels (Camphuysen, 1995; Hüppop and Wurm, 2000; Buckley, 2009). Owing to this tolerance, the Applicant predicts that there would be no likely significant effect from displacement and disturbance on this interest feature of the Alde-Ore Estuary SPA from East Anglia One alone (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 144**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on the Alde-Ore Estuary SPA in relation to lesser black backed gulls (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6c**).

- c In their ES (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**), the Applicant stated that the turbine array of East Anglia One is 54 km from the Alde-Ore Estuary SPA and is therefore within the mean maximum foraging range of 141 km (Thaxter, 2012) and the 91km mean maximum breeding season foraging range (Thaxter, 2012) for lesser black-backed gulls. Tagging data show that a large proportion of birds from the Alde-Ore Estuary SPA forage inland and within inshore waters with a very low proportion in East Anglia One during the breeding season (**EOAL – Less Black Backed Gull Tagging Data Analysis as part of the Applicant's response to the Examining Authority's first questions, 30 July 2013 (REP-227)**). During spring and autumn migration, indications are that lesser black-backed gulls may be tolerant of turbines and therefore long term impacts from avoidance are unlikely. The Applicant believes that any barrier effects will not result in a likely significant effect on this interest feature of the Alde-Ore Estuary SPA as a result of East Anglia One alone (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 157**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on the Alde-Ore Estuary SPA in relation to lesser black backed gulls (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6c**).

d The Applicant, in their ES, has concluded that there is unlikely to be a significant effect on herring gull resulting from collision risk (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**)

In contrast to the Applicant's position NE, in their Statement of Common Ground, has stated that there is potential for a LSE on herring gull features and have requested further clarification from the Applicant, particularly in relation to methods for apportionment to confirm no likely significant effect on this interest feature of the Alde-Ore Estuary SPA and no adverse effect on the integrity of the Alde-Ore Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184)m Section 3.3, 6e**).

As a result, this feature has been taken forward by the Applicant to the Appropriate Assessment stage. Please refer to the corresponding Integrity matrix.

e The Applicant has provided evidence in their ES (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) that herring gulls are expected to tolerate installation activities; birds have rapidly colonised industrial sites across the UK despite high intensity construction activity (Royal Haskoning, 2011). Large gulls are among the most flexible species in terms of habitat use (Garthe & Hüppop, 2004; Furness & Wade, 2012) and may be observed to take advantage of new foraging opportunities created by human activity. Herring gulls nest on buildings away from traditional colonies across the UK, nesting on warehouse roofs for example, and are commonly seen in association with fishing vessels. Owing to this tolerance, no likely significant effect from displacement and disturbance of this interest feature of the Alde-Ore Estuary SPA as a result of East Anglia One alone is predicted (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 146**).

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Herring gull does not form part of this list and was screened out of further consideration by NE/JNCC at this stage (**Natural England and JNCC Written Representation (Doc Ref: REP-150) paragraph 6.3.2**).

- f The Applicant has stated that there is no indication that the East Anglia One site would present a barrier to herring gull movements either during foraging (the site is outside the main foraging range from the Alde-Ore Estuary SPA (Thaxter, 2012)) or during the spring and autumn passage of birds originating from this SPA and migrating to other areas. No likely significant effect from a barrier effect on this interest feature of the Alde-Ore Estuary SPA as a result of East Anglia One alone is predicted (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 159**).
- g In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- g The Applicant in the ES (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on these waterfowl and wader species as they pass through the East Anglia One site on spring and autumn migration. In all cases the results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269) paragraphs 155 and 161**).
- In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from collision risk. Waterfowl and wader species do not form part of this list. In addition, no concern is raised over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150) Section 6.3**).
- h The Applicant in the ES (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) carried out an assessment of potential disturbance and displacement effects as a result of the construction, operation and

dismantling of the East Anglia One development considered alone. In all cases the results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 148**).

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Waterfowl and wader species do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

- i In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on this designated feature of Alde-Ore Estuary SPA alone or in combination (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6g**).

Stage 1 Matrix 3.18: Alde-Ore Estuary SPA (in-combination)

Site Code: UK9009112

Distance to project: 54km

European site features	Likely Effects of NSIP											
	Collision Risk			Disturbance / Displacement				Barrier Effect				
	C	O	D	C	O	D	C	O	D	C	O	D
Lesser Black Backed Gull, <i>Larus fuscus</i>	n/a	√a	n/a	*b	*b	*b	n/a	*c	n/a	*c	n/a	n/a
Herring Gull as part of a seabird assemblage of international importance including: Herring Gull <i>Larus argentatus</i> , Black-headed Gull <i>Larus ridibundus</i> , Lesser Black-backed Gull <i>Larus fuscus</i> , Little Tern <i>Sterna albigrons</i> , Sandwich Tern <i>Sterna sandvicensis</i>	n/a	√d	n/a	*e	*e	*e	n/a	*f	n/a	*f	n/a	n/a
A waterfowl assemblage	n/a	*g	n/a	*h	*h	*h	n/a	*g	n/a	*g	n/a	n/a

NE, in their Statement of Common Ground, has stated that there is a LSE on the LBBG interest feature and that this should be taken through an appropriate assessment. Figures presented by EAOL have been recalculated by Natural England and while not representing a de minimis level of impact, NE has stated that East Anglia One makes a relatively small contribution to an existing in combination total from consented and built developments that to them is unacceptably high (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6d**).

As a result, this feature has been taken forward by the Applicant to the Appropriate Assessment stage. Please refer to the corresponding Integrity matrix.

b For the same reasons as given in footnote b to the screening matrix 3.17 above the Applicant considers that there would be no likely significant effect from displacement and disturbance on this interest feature of the Alde-Ore Estuary SPA in combination with other plans or projects.

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Lesser black backed gulls does not form part of this list and was screened out of further consideration by NE/JNCC at this stage (**Natural England and JNCC Written Representation (Doc Ref: REP-150), paragraph 6.3.2**).

c For the same reasons as given in footnote c to the screening matrix 3.17 above the Applicant considers that there would be no likely significant effect from a barrier effect on this interest feature of the Alde-Ore Estuary SPA in combination with other plans or projects.

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

d The Applicant, in their ES, has concluded that there is unlikely to be a significant in-combination effect on herring gull resulting from collision risk (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**).

In contrast to the Applicant's position NE, in their Statement of Common Ground, has stated that there is potential for a LSE on herring gull features and have requested further clarification from the Applicant, particularly in relation to methods for apportionment to confirm no likely significant effect on this interest feature of the Alde-Ore Estuary SPA and no adverse effect on the integrity of the Alde-Ore Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6e**).

As a result, this feature has been taken forward by the Applicant to the Appropriate Assessment stage. Please refer to the corresponding Integrity matrix.

e For the same reasons as given in footnote e to the screening matrix 3.17 above the Applicant considers that there would be no likely significant effect from displacement and disturbance on this interest feature of the Alde-Ore Estuary SPA in combination with other plans or projects.

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Herring gull does not form part of this list and was screened out of further consideration by NE/JNCC at this stage (**Natural England and JNCC Written Representation (Doc Ref: REP-150), paragraph 6.3.2**).

f For the same reasons as given in footnote f to the screening matrix 3.17 above the Applicant considers that there would be no likely significant effect from a barrier effect on this interest feature of the Alde-Ore Estuary SPA in combination with other plans or projects.

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3, NE/JNCC**).

g For the same reasons as given in footnote g to the screening matrix 3.17 above the Applicant considers that there would be no likely significant effect from collision risk or a barrier effect on this interest feature of the Alde-Ore Estuary SPA in combination with other plans or projects.

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from collision risk. Waterfowl and wader species do not form part of this list. In addition, no concern is raised over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

h For the same reasons as given in footnote h to the screening matrix 3.4 above the Applicant considers that there would be no likely significant effect from displacement and disturbance on this interest feature of the Alde-Ore Estuary SPA in combination with other plans or projects.

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Waterfowl and wader species do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

i In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on this designated feature of Alde-Ore Estuary SPA alone or in combination (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 3.3, 6g**).

Stage 1 Matrix 3.19: Alde-Ore Estuary Ramsar (project alone and in-combination)

Site Code: UK11002

Distance to project: Not stated

European features	Likely Effects of NSIP											
	Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
Ramsar criterion 6 – species/populations occurring at levels of international importance. Lesser black-backed gull <i>Larus fuscus</i>	n/a	✓a	n/a	xb	xb	xb	n/a	xc	n/a	✓a		
Ramsar criterion 2 The site supports a number of nationally-scarce plant species and	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d

British Red Data Book invertebrates.																				
Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds.	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d
Ramsar criterion 6 - species/populations occurring at levels of international importance. Avocet, <i>Recurvirostra avosetta</i>	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d
Ramsar criterion 6 - species/populations occurring at levels of international importance. Common redshank, <i>Tringa totanus totanus</i>	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d

a Refer to footnote 'a' in matrices 3.17 and 3.18

b Refer to footnote 'b' in matrices 3.17 and 3.18

- c Refer to footnote 'c' in matrices 3.17 and 3.18
- d Refer to footnote 'd' in matrices 3.17 and 3.18

Stage 1 Matrix 3.20: Benfleet and Southend Marshes SPA (project alone and in-combination)

Site Code: UK9009171

Distance to project: Not stated

European features	site	Likely Effects of NSIP												In-combination Effects
		Collision Risk			Disturbance/ Displacement			Barrier Effect						
		C	O	D	C	O	D	C	O	D				
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Ringed Plover <i>Charadrius hiaticula</i>	Plover <i>Charadrius hiaticula</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Grey Plover <i>Pluvialis squatarola</i>	Plover <i>Pluvialis squatarola</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Knot <i>canutus</i>	<i>Calidris canutus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A waterfowl assemblage		*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

including <i>Calidris alpina</i> , Plover <i>hiaticula</i> , Oystercatcher <i>Haematopus ostralegus</i> , <i>Calidris canutus</i> , Grey Plover <i>Pluvialis squatarola</i> , Dark-bellied Goose <i>branta bernicla bernicla</i>	Dunlin <i>alpina</i> Ringed <i>Charadrius</i>									
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Benfleet and Southend Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**).

- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Benfleet and Southend Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Benfleet and Southend Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.
- An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Benfleet and Southend Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.21: Blackwater Estuary SPA (project alone and in-combination)

Site Code: UK9009245

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Little Tern <i>Sterna albifrons</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Avocet <i>Recurvirostra avosetta</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Golden Plover <i>Pluvialis apricaria</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Hen Harrier <i>Circus cyaneus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Ruff <i>Philomachus pugnax</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Ringed Plover <i>Charadrius hiaticula</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Black-tailed Godwit <i>Limosa limosa islandica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Dunlin <i>Calidris alpina alpina</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Grey Plover <i>Pluvialis squatarola</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Redshank <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
Shelduck <i>Tadorna tadorna</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b			
A waterfowl assemblage including Crested Grebe <i>Podiceps cristatus</i> , Golden Plover <i>Pluvialis apricaria</i> , Ruff <i>Philomachus</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c			

<p><i>pugnax</i>, Dark-bellied Brent Goose <i>Branta bernicla bernicla</i>, Shelduck <i>Tadorna tadorna</i>, Ringed Plover <i>Charadrius hiaticula</i>, Grey Plover <i>Pluvialis squatarola</i>, Dunlin <i>Calidris alpina alpina</i>, Avocet <i>Recurvirostra avosetta</i>, Redshank <i>Tringa totanus</i>, Curlew <i>Numenius arquata</i>, Cormorant <i>Phalacrocorax carbo</i>, Wigeon <i>Anas penelope</i>, Teal <i>Anas crecca</i>, Pintail <i>Anas acuta</i>, Shoveler <i>Anas clypeata</i>, Goldeneye <i>Bucephala clangula</i>, Red-breasted Merganser <i>Mergus serrator</i>, Lapwing <i>Vanellus vanellus</i>, Black-tailed Godwit</p>													
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<i>Limosa islandica.</i>	<i>limosa</i>								
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Blackwater Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Blackwater Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE and JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Blackwater Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc**

Ref: APP-081). The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Blackwater Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.22: Chesil Beach and The Fleet SPA (project alone and in-combination)

Site Code: UK910091

Distance to project: Not stated

European features	Likely Effects of NSIP												
	Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
	C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Little Tern <i>Sterna albigrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Chesil Beach and The Fleet SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Chesil Beach and The Fleet SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

c An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Chesil Beach and Fleet SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.23: Chichester and Langstone Harbour SPA (project alone and in-combination)

Site Code: UK9011011

Distance to project: Not stated

European features	site	Likely Effects of NSIP												In-combination Effects
		Collision Risk			Disturbance/ Displacement			Barrier Effect						
		C	O	D	C	O	D	C	O	D				
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Little Tern <i>Sterna albifrons</i>	<i>Sterna albifrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Sandwich Tern <i>Sterna sandvicensis</i>	<i>Sterna sandvicensis</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Little Egret <i>Egretta garzetta</i>	<i>Egretta garzetta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Bar-tailed Limosa <i>Limosa lapponica</i>	Godwit <i>Limosa lapponica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

<i>Numenius phaeopus.</i>												
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Chichester and Langstone Harbour SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Chichester and Langstone Harbour SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Chichester and Langstone Harbour SPA (**EAOL –**

Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b).

- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.
- An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Chichester and Langstone Harbour SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.24: Colne Estuary SPA (project alone and in-combination)

Site Code: UK9009243

Distance to project: Not Stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Avocet, <i>Recurvirostra avosetta</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Golden Plover <i>Pluvialis apricaria</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Hen Harrier <i>Circus cyaneus</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Common Redshank, <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
An assemblage of waterfowl including: Black-tailed Godwit <i>Limosa limosa</i> <i>islandica</i> , <i>Calidris alpina</i> <i>alpina</i> , Lapwing <i>Vanellus vanellus</i> , Grey Plover <i>Pluvialis squatarola</i> , Ringed Plover <i>Charadrius hiaticula</i> , Shelduck <i>Tadorna tadorna</i> , Cormorant <i>Phalacrocorax carbo</i> , Great Crested Grebe <i>Podiceps cristatus</i> , Redshank <i>Tringa totanus</i> , Dark-bellied Brent Goose <i>Branta bernicla</i> <i>bernicla</i> , Golden Plover <i>Pluvialis apricaria</i> , Avocet <i>Recurvirostra</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

<i>avosetta.</i>							
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Colne Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Colne Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Colne Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc**

Ref: APP-081). The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Colne Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.25: Crouch and Roach Estuary SPA (project alone and in-combination)

Site Code: UK9009244

Distance to project: Not stated

European features	site	Likely Effects of NSIP											
		Collision Risk		Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D			
Dark-bellied Goose <i>Branta bernicla</i>	Brent	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a	
Hen Harrier <i>Circus cyaneus</i>	Circus	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Crouch and Roach Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Crouch and Roach Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

c An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Crouch and Roach Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.26: Deben Estuary SPA (project alone)

Site Code: UK9009261

Distance to project: 72km

European site features	Likely Effects of NSIP											
	Collision Risk			Disturbance / Displacement						Barrier Effect		
	C	O	D	C	O	D	C	O	D	C	O	D
Dark bellied brent goose <i>Branta bernicla bernicla</i>	n/a	*a	n/a	*b	n/a	*b	n/a	n/a	*b	n/a	*c	n/a
Avocet <i>Recurvirostra avosetta</i>	n/a	*d	n/a	*b	n/a	*b	n/a	n/a	*b	n/a	*c	n/a

a There is no risk of collision directly within the Deben Estuary SPA itself, however the Applicant recognises that birds associated with the Deben Estuary SPA may potentially migrate through the East Anglia One site en route to breeding or staging areas in continental Europe and beyond. A 'migration model' was run for brent geese and reported on in the ES. The predicted collision mortality rate (at 98% avoidance rate) of 34 and 17 individuals in spring and autumn respectively, would create an increase of 0.37% and 0.19% relative to the baseline mortality rate at a national level, and an increase of 0.17% and 0.09% relative to the baseline mortality rate at the international level, both of which are considered to be of negligible magnitude and not to result in a likely significant effect on this interest feature of

the Deben Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 218**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on the Deben Estuary SPA (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal Wildlife Turst (Doc Ref: REP-188), Section 4.14**), however this is on the basis that an Ecological Mitigation Plan is developed to reduce impacts on brent goose (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.13**). The Ecological Mitigation Plan is secured as Requirement 26 in the **EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**.

b An Outline Landscape and Ecological Mitigation Strategy has been developed that includes measures related to the interest features of the Deben Estuary SPA. This Strategy details mitigation measures to reduce the impact on Deben Estuary SPA birds (dark bellied brent goose and avocet) to ensure no likely significant effect and no adverse effect on the integrity of the site should an Appropriate Assessment have been required as part of the Habitat Regulations Assessment process. With the implementation of the measures in the Strategy, there will be no likely significant effect on this interest feature of the Deben Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraphs 214 and 216**).

NE, in their Statement of Common Ground, has stated the residual effect, i.e. post-mitigation, of the development is not expected to result in an impact on Deben Estuary SPA birds alone. Sufficient information has now been presented that, should it have been provided in the HRA, it is likely that the conclusion reached would have been no likely significant effect (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.14**).

c The Applicant has stated that barrier effects are more likely to have a greater impact on birds that regularly commute around the windfarm (e.g. birds heading to / from foraging grounds and roosting / nesting sites - which is not the case

with this development) rather than passage migrants that will have to negotiate the site once per migratory season – as is the case for this development. Speakman et al. 2009 found that for one-off avoidances of up to 30 km during migration, the impact of detours around windfarms had a minimal effect on bird energy requirements (less than 2% of available fat reserves). These one off impacts during migration are unlikely to have a significant impact on the birds' fitness and a conclusion of no likely significant effect on this interest feature of the Deben Estuary SPA can be made (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraphs 222 and 224**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on the Deben Estuary SPA (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.14**), however this is on the basis that an Ecological Mitigation Plan is developed to reduce impacts on brent goose (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.13**).

d There is no risk of collision directly within the Deben Estuary SPA itself, however the Applicant recognises that avocet associated with the SPA may potentially migrate through the East Anglia One site en route to breeding or staging areas in continental Europe and beyond. A 'migration model' was run for avocet and reported in the ES. Collision risk predicted mortality was for two birds during each migration period (two in spring and two during autumn) at 98% avoidance rate. This is an increase of 0.12% relative to the baseline mortality rate at the national population level during both the spring and autumn migration periods and an increase of 0.01% relative to the baseline mortality rates at the international population level for both the spring and autumn migration periods. This is not considered to be a likely significant effect on this interest feature of the Deben Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraphs 218 and 220**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on the Deben Estuary SPA (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal**

Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.14), however this is on the basis that an Ecological Mitigation Plan is developed to reduce impacts on brent goose (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.13**).

Stage 1 Matrix 3.27: Deben Estuary SPA (in-combination)

Site Code: UK9009261

Distance to project: 72km

European site features	Likely Effects of NSIP											
	Collision Risk			Disturbance / Displacement				Barrier Effect				
	C	O	D	C	O	D	C	O	C	O	D	
Dark bellied brent goose <i>Branta bernicla bernicla</i>	n/a	*a	n/a	*b	n/a	*b	n/a	n/a	*c	n/a	*c	n/a
Avocet <i>Recurvirostra avosetta</i>	n/a	*d	n/a	*b	n/a	*b	n/a	n/a	*c	n/a	*c	n/a

a There is no risk of collision directly within the Deben Estuary SPA itself, but the Applicant recognises that birds associated with the SPA may potentially migrate through the East Anglia One site and other windfarms en route to breeding or staging areas in continental Europe and beyond. A 'migration model' was run for brent goose and reported in the ES. Predicted collision mortality was not considered to result in a likely significant effect on this interest feature of the Deben Estuary SPA in combination with other plans and projects (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 230**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on the Deben Estuary SPA (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.14**), however this is on the basis that an Ecological Mitigation Plan is developed to reduce impacts on brent goose (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.15**). The Ecological Mitigation Plan is secured as Requirement 26 in the **EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**.

b An Outline Landscape and Ecological Mitigation Strategy has been developed that includes measures related to the interest features of the Deben Estuary SPA. This Strategy details mitigation measures to reduce the impact on Deben Estuary SPA birds (dark bellied brent goose and avocet) to ensure no likely significant effect and no adverse effect on the integrity of the site should an Appropriate Assessment have been required as part of the Habitat Regulations Assessment process. With the implementation of the measures in the Strategy, there will be no likely significant effect on this interest feature of the Deben Estuary SPA and no effects on integrity in combination with other plans and projects (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraphs 226 and 228**).

NE, in their Statement of Common Ground, has stated the residual effect, ie post mitigation, of the development is not expected to result in an impact on Deben Estuary SPA birds in-combination. Sufficient information has now been presented that, should it have been provided in the HRA, it is likely that the conclusion reached would have been no likely significant effect and no adverse effect on integrity in combination with other plans and projects (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.15**).

c The Applicant has stated that barrier effects are more likely to have a greater impact on birds that regularly commute around the windfarm (e.g. birds heading to / from foraging grounds and roosting / nesting sites) than passage migrants that will have to negotiate the site once per migratory season (Speakman et al. 2009) found that for one-off

avoidances of up to 30 km during migration, the impact of detours around windfarms had a minimal effect on bird energy requirements (less than 2% of available fat reserves). Such impacts, when taken in combination with other windfarms that potentially might lie on the migratory route of brent goose are unlikely to have a significant impact on the birds' fitness and a conclusion of no likely significant effect on this interest feature of the Deben Estuary SPA can be made in combination with other plans and projects (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraphs 234 and 236**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on the Deben Estuary SPA (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.14**), however this is on the basis that an Ecological Mitigation Plan is developed to reduce impacts on brent goose (**EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.15**). The Ecological Mitigation Plan is secured as Requirement 26 in the **EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246)**.

d Avocet from the Deben Estuary SPA do not forage in offshore areas of sea within the East Anglia One site, which is located 72km from the SPA, is situated. There is no risk of collision directly within the Deben Estuary SPA itself, however the Applicant recognises that avocet associated with the SPA may potentially migrate through the East Anglia One site and other windfarms en route to breeding or staging areas in continental Europe and beyond. A 'migration model' was run for avocet and reported in the ES (4 birds 98% avoidance). Considering the very low number of birds predicted for East Anglia One alone, any contribution to an in-combination assessment is considered negligible and mortality from collision risk in-combination is not considered to be a likely significant effect on this interest feature of the Deben Estuary SPA in combination with other plans and projects (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 232**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on the Deben Estuary SPA (**EAOL – Statement of Common Ground with Suffolk County Council**

and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.14), however this is on the basis that an Ecological Mitigation Plan is developed to reduce impacts on brent goose (EAOL – Statement of Common Ground with Suffolk County Council and Mid Suffolk District Council and Suffolk Coastal District Council and Environment Agency and Internal Drainage Board and Natural England and Suffolk Wildlife Turst (Doc Ref: REP-188), Section 4.15). The Ecological Mitigation Plan is secured as Requirement 26 in the EAOL - Draft Development Consent Order (Version 5 – October 2013) (Doc Ref: APP-246.

Stage 1 Matrix 3.28: Deben Estuary Ramsar (project alone and in-combination)

Site Code: UK11017

Distance to project: Not stated

European site features	Likely Effects of NSIP											
	Collision Risk			Disturbance / Displacement				Barrier Effect				
	C	O	D	C	O	D	C	O	D	C	O	D
Ramsar criterion 2 Supports a population of the mollusc <i>Vertigo angustior</i> (Habitats Directive Annex II (S1014); British Red Data Book Endangered).	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Ramsar criterion 6 – species/populations occurring at levels of international importance. Dark bellied brent goose, <i>Branta bernicla bernicla</i>	n/a	xb	n/a	xb	n/a	xb	n/a	xb	n/a	xb	n/a	n/a

- a The potential for likely significant effects on this feature that been screened out of the assessment on the basis that it is known to occur in Martlesham Creek, a location where the proposed onshore transmission cable will be placed under the Ramsar site using HDD thus avoiding damage to the habitat feature (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 244**).
- b See footnotes for Screening Matrices 3.26 and 3.26 in relation to the assessment of potential impacts on dark bellied brent goose.

Stage 1 Matrix 3.29: Exe Estuary SPA (project alone and in-combination)

Site Code: 9010081

Distance to project: Not stated

European features	site	Likely Effects of NSIP													
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects				
		C	O	D	C	O	D	C	O	D	C	O	D		
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Dunlin <i>alpina alpina</i>	<i>Calidris alpina</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Oystercatcher <i>Haematopus ostralegus</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Godwit <i>limosa islandica</i>	<i>Limosa islandica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

Grey Plover <i>Pluvialis squatarola</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Horned Grebe, <i>Podiceps auritus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Avocet, <i>Recurvirostra avosetta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A waterfowl assemblage including Dark-bellied Brent Goose <i>Branta bernicla</i> Dunlin <i>Calidris alpina alpina</i> , Oystercatcher <i>Haematopus ostralegus</i> , Godwit <i>Limosa limosa islandica</i> , Grey Plover <i>Pluvialis squatarola</i> , Horned Grebe, <i>Podiceps auritus</i> , Avocet, <i>Recurvirostra avosetta</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine**

- and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Exe Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Exe Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Exe Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.
- An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations**

Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354, HRA Report).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Exe Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.30: Flamborough Head and Bempton Cliffs SPA (project alone)

Site Code: UK9006101

Distance to project: 254 km

European site features	Likely Effects of NSIP												
	Collision Risk				Disturbance / Displacement				Barrier Effect				
	C	O	D	C	O	D	C	O	C	O	D	C	
Kittiwake <i>Rissa tridactyla</i>	n/a	x a	n/a	x b	x b	x b	n/a	x c	n/a	x c	n/a	O	D
A seabird assemblage of international importance. Kittiwake <i>Rissa tridactyla</i>	n/a	x a	n/a	x b	x b	x b	n/a	x c	n/a	x c	n/a	x c	n/a
A seabird assemblage of international importance. Gannet <i>Morus bassanus</i>	n/a	x d	n/a	x e	x e	x e	n/a	x f	n/a	x f	n/a	x f	n/a
A seabird assemblage of international importance. Herring Gull <i>Larus argentatus</i>	n/a	x g	n/a	x h	x h	x h	n/a	x i	n/a	x i	n/a	x i	n/a
A seabird assemblage of international importance. Razorbill <i>Alca torda</i> , Guillemot <i>Uria aalge</i> and	n/a	x j	n/a	x k	x k	x k	n/a	x l	n/a	x l	n/a	x l	n/a

Puffin <i>Fratercula arctica</i>									
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a Given that Flamborough Head and Bempton Cliffs SPA is approximately 259 km from the East Anglia One site, and based on the mean maximum foraging range of 60km for kittiwake given in Thaxter (2012), the Applicant considers that it is unlikely that breeding birds from this SPA will regularly reach the East Anglia One site. RSPB tagging data also show that birds do not forage from this colony to the East Anglia One site. Within the ES, a highly precautionary approach was taken which assumed that all the birds found in East Anglia One during the breeding season were from the FHBC SPA. Using this assumption, the overall estimated collision risk provided in the ES represents an increase to baseline mortality of less than 1% from the current baseline mortality and was therefore judged not to result in a likely significant effect on the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 271**).

During the passage and winter periods, predicted mortality rates from collision within the Applicant’s ES are much higher. Calculations within the ES were done assuming that the SPA population was around 0.9% of the wider southern North Sea population. Assuming a similar proportion of the predicted additional mortality is of SPA birds, this would equate to a collision rate of 9 birds. It is considered unlikely that this would result in a likely significant effect on the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 272**).

Following an NE/JNCC request, the Applicant re-considered kittiwake population apportionment and collision risk was modelled using three model types – the basic Band model with site-specific data, the basic Band model with flight data from Cook et al 2012 (the BTO SOSS-02 Report), and the extended Band model with flight height distribution data from Cook et al 2012 (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement (Section J), September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). All models were run using a precautionary 98% avoidance rate. The assessment of the outputs from the three CRM Type models concluded that the predicted relative change in the number of adult birds subject to mortality each year would not exceed an increase of 0.48%. This change in annual baseline mortality does not approach a one percentage point difference. The applicant believes that the CRM predictions provide evidence that the impacts through collision mortality from the proposed East Anglia One wind farm alone will not have a likely significant effect on the FHBC SPA

population of kittiwakes (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 273**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on kittiwake as a designated feature of the Flamborough Head and Bempton Cliffs SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184) Section 3.3, 6k**).

b The applicant has asserted that available evidence shows that any potential effects from disturbance and displacement of kittiwake would be negligible and would not lead to a likely significant effect on this interest feature of the FHBC SPA (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**).

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Kittiwake do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

c The Applicant has stated that there is no indication that East Anglia One presents a barrier to the movement of kittiwakes as the site is outside the foraging range for FHBC SPA and will not restrict the movement of birds originating from the SPA to other habitats (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 283**).

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

d Data provided by the Applicant within the **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)** show that the mean maximum foraging range presented for gannet in Thaxter (2012) is 229.4km and the maximum range is 590km. It is therefore possible that gannets from the FHBC SPA could reach the East Anglia One site. The predicted collision rate for gannet at East Anglia One during the breeding season has been calculated as 16 birds per annum. A recent PVA for gannets indicated that, for FHBC, an additional mortality of 150 birds per annum would be

sustainable based on the 2004 population. Using more recent population data published by JNCC on its website, the level of sustainable additional mortality would be 303 birds per annum. On this basis, the Applicant considers that East Anglia One will not result in a likely significant effect on the breeding gannet of FHBC SPA, or adversely affect site integrity (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**, paragraph 275).

During the passage and winter periods, predicted mortality rates from collision are much higher. Within the Environmental Statement (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**), calculations were done assuming that the SPA population was around 3.5 % of the wider southern North Sea population. Assuming a similar proportion of the predicted additional mortality is of SPA birds, this would equate to a collision rate of 29 birds. The Applicant has concluded that it is unlikely that this would result in a likely significant effect on this interest feature of the SPA, or to adversely affect site integrity (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**, paragraph 276).

Following an NE/JNCC request, gannet population apportionment was re-considered by the Applicant, and collision risk was modelled using three model types – the basic Band model with site-specific data, the basic Band model with flight data from Cook et al 2012, and the extended Band model with flight height distribution data from Cook et al 2012 (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement (Section B), September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). All models were run using a realistic 99% avoidance rate. The assessment of the outputs from the three CRM Type models concluded that the predicted relative change in the number of adult birds subject to mortality each year would not exceed an increase of 1.6%. This level of additional mortality, based on the published PVA model for gannet, would not cause the colony at FHBC to change from growth to stagnation or decline for 95% of the model runs. The Applicant believes that this provides evidence that the impacts through collision mortality from the proposed East Anglia One wind farm alone will not have a likely significant effect on the FHBC SPA population of gannets (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**, paragraph 277).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on gannet as a designated feature of the Flamborough Head and Bempton Cliffs SPA (**EAOL** –

Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6i).

e Data from surveys undertaken by the Applicant and presented within the **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)** shows that gannets were uncommon in the East Anglia One site during the breeding season with a peak mean count of 39 birds. Data from tracking studies show that gannets from FHBC do not forage in East Anglia One. Even if those gannets observed during the survey were displaced, this would not lead to a likely significant effect on the FHBC breeding population. Potential effects from displacement and disturbance are not predicted to result in a likely significant effect on gannets on spring and autumn passage associated with the FHBC SPA. Following submission, NE/JNCC requested more detailed analysis of the potential effects of displacement. An additional mortality estimate from displacement was calculated of a maximum of 30 birds across all four biological periods (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). Using the same apportionment from the CRM modelling to estimate the number of displaced birds subject to mortality for each season from FHBC SPA, the maximum number of FHBC SPA birds subjected to mortality as a result of displacement is 2 adult birds (using the maximum displacement and mortality rates).

In order to measure the level of combined impact of East Anglia One on the FHBC SPA population from collision and displacement, the number of breeding birds (adults) subject to mortality from East Anglia One from collision risk has been combined with the maximum displacement mortality rates (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement (Section B), September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). The Applicant has stated that the potential effects of combined displacement induced mortality and collision mortality is not predicted to result in a likely significant effect on gannets that are an interest feature of the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 263**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on gannet as a designated feature of the Flamborough Head and Bempton Cliffs SPA (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6i**).

- f The Applicant has stated that available evidence suggests that FHBC SPA gannets make their way towards Africa either via the English Channel or, to a lesser degree around the northern tip of the UK (Written Representation Appendix 2Q). Data from the Egmond an Zee operational windfarm (Krijgsveld et al 2011) show that gannets strongly avoided the windfarm. Given the large foraging ranges of gannet and the low densities observed during baseline surveys within East Anglia One, it is concluded that the site is not a key foraging area for gannets reducing the potential for significant barrier effects during flights from the colony. The Applicant has concluded that the development of the East Anglia One site would not result in a likely significant effect in the form of a barrier to the migratory movements or to foraging movements of gannets from the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 285**).
- g In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- The Applicant has concluded that it is unlikely that a significant number of breeding herring gulls present within the East Anglia One site are from the Flamborough Head and Bempton Cliffs SPA. The East Anglia One development is approximately 254km from the Flamborough Head and Bempton Cliffs SPA. This is significantly further than the maximum and mean maximum (92km and 61.1km respectively) foraging range for breeding herring gull as reported by Thaxter et al 2012 and therefore no likely significant effect on the SPA is predicted. During the EIA (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**), a CRM was completed; this assumed a 98% avoidance rate and that the proportion of birds flying at rotor swept height is 29.4%, and resulted in 221 birds predicted to collide with the turbines each year. Considering the distance from the colony, the Applicant believes that it is unlikely that a significant proportion of these birds will be from the Flamborough Head and Bempton Cliffs SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 279**).
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on herring gull as a designated feature of the Flamborough Head and Bempton Cliffs SPA (**EAOL** –

Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6k).

- h The Applicant has stated in their ES (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) that gulls are expected to tolerate installation activities; birds have rapidly colonised industrial sites across the UK despite high intensity construction activity (Royal Haskoning, 2011). Herring gulls nest on buildings away from traditional colonies across the UK, nesting on warehouse roofs for example, and are commonly seen in association with fishing vessels. They conclude that there will be no likely significant effects from displacement and disturbance on the Alde-Ore Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 266**).
- i In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Herring gull do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- i The Applicant states that the East Anglia One site is approximately 254km from the Flamborough Head and Bempton Cliffs SPA which is greater than the maximum foraging range for herring gull (92km) (Thaxter, 2012) therefore it is unlikely that birds from the SPA will undertake regular foraging trips to the project area. It has therefore been concluded that during the breeding period there will not be a likely significant effect as a result of East Anglia One alone on this interest feature of the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 287**).
- j In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- j Auks fly low over the water with only 1.8% guillemot and 1.0% razorbill flying at potential collision risk height (Cook et al 2012). The Applicant has concluded that it is highly unlikely that a significant proportion of these birds will be at risk of collision with offshore wind turbines (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 281**).

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from collision risk. Auks do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

k During the breeding period a mean peak of 47 guillemot was observed within the East Anglia One development area. East Anglia One is significantly further than the maximum and mean maximum foraging range (135km and 84.2km respectively) (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**), therefore the Applicant has stated that it is highly unlikely that guillemots present during the breeding period are breeding adults associated with the Flamborough Head and Bempton Cliffs SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 268**).

A mean peak of 23 razorbills was observed during the breeding period within the East Anglia One development area. The development area is significantly further than the maximum and mean maximum foraging range (95km and 48.5km respectively) (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**) therefore the Applicant has stated that it is highly unlikely that razorbills present during the breeding period are breeding adults associated with the Flamborough Head and Bempton Cliffs SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 269**).

l In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone would not have a likely significant effect on designated auk features of the Flamborough Head and Bempton Cliffs SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6k**).

l Auks (guillemot and razorbill) are not considered at risk of barrier effects due to the significant distance of East Anglia One from their breeding colony. This means that it is highly unlikely that auks will undertake regular direct foraging trips within the East Anglia One site (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). The Applicant has therefore concluded that the project will not be a barrier to bird movements and no likely significant effect on this interest feature as a result of East Anglia One alone is predicted (**Habitats Regulations**

Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 289,).

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

Stage 1 Matrix 3.31: Flamborough Head and Bempton Cliffs SPA (in-combination)

Site Code: UK9006101

Distance to project: Approximately 254km

European site features	Likely Effects of NSIP													
	Collision Risk			Disturbance / Displacement				Barrier Effect						
	C	O	D	C	O	D	C	O	D	C	O	D		
Kittiwake <i>Rissa tridactyla</i>	n/a	√a	n/a	xb	xb	xb	xb	xb	xb	xb	xb	xb	n/a	n/a
A seabird assemblage of international importance. Kittiwake <i>Rissa tridactyla</i>	n/a	√a	n/a	xb	xb	xb	xb	xb	xb	xb	xb	xb	n/a	n/a
A seabird assemblage of international importance. Gannet <i>Morus bassanus</i>	n/a	√d	n/a	xe	xe	xe	xe	xe	xe	xe	xe	xe	n/a	n/a
A seabird assemblage of international importance. Herring Gull <i>Larus argentatus</i>	n/a	×g	n/a	×h	×h	×h	×h	×h	×h	×h	×h	×h	n/a	n/a
A seabird assemblage of international importance. Razorbill <i>Alca torda</i> , Guillemot <i>Uria aalge</i> and	n/a	×j	n/a	×k	×k	×k	×k	×k	×k	×k	×k	×k	n/a	n/a

Puffin <i>Fratercula arctica</i>									
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- a The Applicant, in their ES, has concluded that there is unlikely to be a significant in-combination effect on kittiwake resulting from collision risk (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**).
- In contrast to the Applicants position, NE, in their Statement of Common Ground, state that the project will potentially have a LSE on kittiwake in-combination depending on the suite of projects included in the assessment and needs to be subject to appropriate assessment (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6k**).
- As a result, this feature has been taken forward by the Applicant to the Appropriate Assessment stage. Please refer to the corresponding Integrity matrix.
- b The Applicant has stated that available evidence suggests that any potential effects from disturbance and displacement would be negligible and would not lead to a likely significant effect on this interest feature of the FHBC SPA (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**).
- In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Kittiwake do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- c The Applicant has stated that there is no indication that East Anglia One presents a barrier to the movement of kittiwakes as the site is outside the foraging range for FHBC SPA and will not restrict the movement of birds originating from the SPA to other areas. This effect would not lead to a likely significant effect on this interest feature of the FHBC SPA in combination with other plans and projects (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 311**).

- d In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- The Applicant, in their ES, has concluded that there is unlikely to be a significant in-combination effect on gannet resulting from collision risk (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**).
- In contrast to the Applicant's position, NE, in their Statement of Common Ground, advises that the project will potentially have a LSE on gannet in combination and needs to be subject to appropriate assessment (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6j**).
- As a result, this feature has been taken forward by the Applicant to the Appropriate Assessment stage. Please refer to the corresponding Integrity matrix.
- e The applicant has stated that data from tracking studies show that gannets from the FHBC SPA do not forage in East Anglia One during the breeding season (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). Even if the gannets observed during the survey were displaced, this would not lead to a likely significant effect on the FHBC breeding population. Potential effects from displacement and disturbance in-combination with other windfarms are not predicted to result in a likely significant effect on gannets with the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 293**).
- In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Gannet do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).
- f The Applicant has stated that available evidence suggests that FHBC SPA gannets make their way towards Africa either via the English Channel or, to a lesser degree, around the northern tip of the UK (APEM 2013e) (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013**

Submitted in response to Rule 17 request (Doc Ref: REP-269)). Data from the Egmond an Zee operational windfarm (Krijgsveld et al 2011) show that gannets strongly avoided the windfarm. Given the large foraging ranges of gannet and the low densities observed during baseline surveys within East Anglia One, the Applicant has concluded that the site is not a key foraging area for gannets reducing the potential for significant in-combination barrier effects during flights from the colony. The Applicant has therefore concluded that the East Anglia One site acting in-combination with other windfarms would not result in a likely significant effect in the form of a barrier to the migratory movements or to foraging movements of gannets from the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 313**).

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

g In the ES submitted with the application (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**), the Applicant has concluded that the East Anglia One site is approximately 254km from the Flamborough Head and Bempton Cliffs SPA which is greater than the maximum foraging range for Herring gull (92km) (Thaxter, 2012) therefore it is unlikely that birds from the SPA will undertake regular foraging trips to the project area and other projects and plans hindering bird movements (barrier effect). Therefore it is concluded that during the breeding period in-combination there will not be a significant impact on herring gull bird movements (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 307**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in-combination would not have a likely significant effect on herring gull as a designated feature of the Flamborough Head and Bempton Cliffs SPA (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6k**).

h The Applicant concluded that any potential effects from displacement and disturbance of herring gulls from the FHBC SPA would be negligible (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). As the FHBC

SPA is 254km from the East Anglia One site, no further assessment of displacement and disturbance of herring gulls from the FHBC SPA was made and the conclusion was no likely significant effect on this interest feature of the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 295**).

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from disturbance/displacement. Herring Gull do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

i The Applicant states that there is no indication that East Anglia One presents a barrier to the movement of herring gulls as the site is outside the species' foraging range from the FHBC SPA and will not restrict the passage of birds originating from the SPA to other habitats outside of the breeding season and the conclusion was no likely significant effect on this interest feature of the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 315**).

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

j Auks fly low over the water with only 1.8% guillemot and 1% razorbill at collision risk height (Cook et al 2012). Therefore it is highly unlikely that a significant proportion will be at risk of collision with East Anglia One and other project and plans and the conclusion was no likely significant effect on this interest feature of the FHBC SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 309**).

In their Written Representation NE/JNCC list the SPA bird species where they have concerns regarding likely significant effects resulting from collision risk. Auks do not form part of this list (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

k The Applicant has predicted limited effects on auks within East Anglia One and none directly relating to the FHBC SPA population during the breeding season. Guillemots and razorbills are widely dispersed throughout the autumn and winter with low densities (0.01 to 1.99 birds/km²) expected within most offshore wind farm locations across the North

Sea (Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in-combination would not have a likely significant effect on designated auk features of the Flamborough Head and Bempton Cliffs SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6k**).

Auks (guillemot and razorbill) are not considered at risk of barrier effects due to their significant distance of East Anglia One from their breeding colony. It is highly unlikely that auks will undertake regular direct foraging trips within the East Anglia One site and other projects / plans and therefore in-combination barrier effects are not predicted (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 317**).

In their Written Representation NE/JNCC raise no concern over the Applicant's conclusion of no LSE resulting from barrier effects (**Natural England and JNCC Written Representation (Doc Ref: REP-150), Section 6.3**).

Stage 1 Matrix 3.32: Foulness SPA (project alone and in-combination)

Site Code: UK9009246

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Avocet <i>Recurvirostra avosetta</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Tern <i>Sterna hirundo</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Little Tern, <i>Sterna albigrons</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

Sandwich Tern, <i>Sterna sandvicensis</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Avocet, <i>Recurvirostra avosetta</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Bar-tailed Godwit <i>Limosa lapponica</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Golden Plover <i>Pluvialis apricaria</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Hen Harrier <i>Circus cyaneus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Common Redshank, <i>Tringa totanus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Grey Plover <i>Pluvialis squatarola</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Knot <i>Calidris canutus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Oystercatcher <i>Haematopus ostralegus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
A waterfowl assemblage including: Redshank <i>Tringa totanus</i> , Curlew	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c

<p><i>Numenius arquata</i>, Black-tailed Godwit <i>Limosa limosa</i> islandica, Dunlin <i>Calidris alpina</i> alpina, Lapwing Vanellus vanellus, Wigeon penelope, Shelduck Tadorna tadorna, Little Grebe Tachybaptus ruficollis, Knot Calidris canutus, Grey Plover Pluvialis squatarola, Oystercatcher Haematopus ostralegus, Dark- bellied Brent Goose Branta bernicla bernicla, Bar-tailed Godwit lapponica, Golden Plover apricaria, Avocet Recurvirostra avosetta</p>											
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Foulness SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Foulness SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**
- In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Foulness SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Foulness SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.33: Hamford Water SPA (project alone and in-combination)

Site Code: UK9009131

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Avocet, <i>Recurvirostra avosetta</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Golden Plover <i>Pluvialis apricaria</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Ruff, <i>Philomachus pugnax</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Ringed Plover <i>Charadrius hiaticula</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Black-tailed Godwit <i>Limosa limosa islandica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Grey Plover <i>Pluvialis squatarola</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Teal <i>Anas crecca</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
An assemblage of waterfowl: Redshank <i>Tringa totanus</i> , Dunlin <i>Calidris alpina alpina</i> , Lapwing <i>Vanellus vanellus</i> , Wigeon <i>Anas penelope</i> , Shelduck <i>Tadorna tadorna</i> , Black-tailed Godwit <i>Limosa limosa islandica</i> , Grey Plover <i>Pluvialis squatarola</i> , Ringed Plover <i>Charadrius hiaticula</i> , Teal <i>Anas crecca</i> , Dark-bellied Brent Goose <i>Branta</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	

bernicla Ruff pugnax, Plover apricaria, Recurvirostra avosetta										
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a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Hamford Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b)**.

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Hamford Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b)**.

c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Hamford Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Hamford Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

d

Stage 1 Matrix 3.34: Humber Estuary SPA (project alone and in-combination)

Site Code: UK9006111

Distance to project: Not stated

European features	site	Likely Effects of NSIP												In-combination Effects
		Collision Risk			Disturbance/ Displacement			Barrier Effect						
		C	O	D	C	O	D	C	O	D				
Dark-bellied Goose <i>Branta bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Teal	<i>Anas crecca</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Wigeon	<i>Anas penelope</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Mallard, Ruddy	<i>Anas platyrhynchos</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Turnstone, <i>Arenaria interpres</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Common Pochard, <i>Aythya ferina</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Greater Scaup, <i>Aythya marila</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Eurasian Bittern, <i>Botaurus stellaris</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Common Golden Eye, <i>Bucephala clangula</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Sanderling <i>Calidris alba</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Dunlin <i>Calidris alpina alpina</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Knot <i>Calidris canutus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Ringed Plover <i>Charadrius hiaticula</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Marsh Harrier, <i>Circus aeruginosus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Hen Harrier <i>Circus cyaneus</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b

Oystercatcher <i>Haematopus ostralegus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Bar-tailed Godwit <i>Limosa lapponica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Black-tailed Godwit <i>Limosa limosa islandica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Curlew <i>Numenius arquata</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Whimbrel <i>Numenius phaeopus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Ruff, <i>Philomachus pugnax</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Golden Plover <i>Pluvialis apricaria</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Grey Plover <i>Pluvialis squatarola</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Avocet, <i>Recurvirostra avosetta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Little Tern, <i>Sterna albifrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Shelduck <i>Tadorna tadorna</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Greenshank, <i>Tringa nebularia</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Redshank, <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Northern Lapwing, <i>Vanellus vanellus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A waterfowl assemblage including: Anas crecca, Wigeon Anas penelope, Mallard, Anas platyrhynchos, Ruddy Turnstone, Arenaria interpres, Common Pochard, Aythya farina, Greater Scaup, Aythya marila, Eurasian Bittern, Botaurus stellaris, Dark-bellied Brent Goose Branta bernicla	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

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Common Golden Eye, <i>Bucephala clangula</i> , Sanderling <i>Calidris alba</i> , Dunlin <i>Calidris alpina alpina</i> . Knot <i>Calidris canutus</i> , Ringed Plover <i>Charadrius hiaticula</i> , Oystercatcher <i>Haematopus ostralegus</i> , Bar-tailed Godwit <i>Limosa lapponica</i> , Black-tailed Godwit <i>Limosa limosa islandica</i> , Curlew <i>Numenius arquata</i> , Whimbrel <i>Numenius phaeopus</i> . Ruff, <i>Philomachus pugnax</i> , Golden Plover <i>Pluvialis apricaria</i> , Grey Plover <i>Pluvialis squatarola</i> , Avocet, <i>Recurvirostra avosetta</i> , Shelduck																				
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<p><i>Tadorna tadorna</i>, Common Greenshank, <i>Tringa nebularia</i>, Common Redshank, <i>Tringa tetanus</i>, Northern Lapwing, <i>Vanellus vanellus</i></p>									
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a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Humber Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**

c In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Humber Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
 With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Humber Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Humber Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.35: Lough Foyle SPA (project alone and in-combination)

Site Code: UK9020031

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Light-bellied Goose <i>Branta bernicla hrota</i> ,	Brent <i>Branta</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Bar-tailed Godwit <i>Limosa lapponica</i>	Godwit <i>Limosa lapponica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Bewick's Swan <i>Cygnus columbianus bewickii</i>	Swan <i>Cygnus columbianus bewickii</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Golden Plover <i>Pluvialis apricaria</i>	Plover <i>Pluvialis apricaria</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Whooper <i>Cygnus cygnus</i> Swan	*b												*b	
A waterfowl assemblage of Teal <i>Anas crecca</i> , Whooper Swan <i>Cygnus cygnus</i> , Golden Plover <i>Pluvialis apricaria</i> , Bar-tailed Godwit <i>Limosa lapponica</i> , Light-bellied Brent Goose <i>Branta bernicla hrota</i> , Great Crested Grebe <i>Podiceps cristatus</i> , Cormorant <i>Phalacrocorax carbo</i> , Greylag Goose <i>Anser anser</i> , Bewick's Swan <i>Cygnus columbianus bewickii</i> , Wigeon <i>Anas penelope</i> , Redshank <i>Tringa totanus</i> , Mallard <i>Anas platyrhynchos</i> ,	*c													*c

Eider <i>Somateria mollissima</i> , Red-breasted Merganser <i>Mergus serrator</i> , Oystercatcher <i>Haematopus ostralegus</i> , Lapwing <i>Vanellus vanellus</i> , Knot <i>Calidris canutus</i> , Dunlin <i>Calidris alpina alpina</i> , Curlew <i>Numenius arquata</i> , Shelduck <i>Tadorna tadorna</i> .						
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

- b In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Lough Foyle SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Lough Foyle SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Lough Foyle SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Lough Foyle SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.36: Medway Estuary and Marshes SPA (project alone and in-combination)

Site Code: UK0912031

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Avocet, <i>Recurvirostra avosetta</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Little Tern, <i>Sterna albigrons</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Ringed Plover <i>Charadrius hiaticula</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Black-tailed Godwit <i>Limosa limosa islandica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Dunlin <i>Calidris alpina alpina</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Grey Plover <i>Pluvialis squatarola</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Pintail <i>Anas acuta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Redshank, <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Ringed Plover <i>Charadrius hiaticula</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Shelduck <i>Tadorna tadorna</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A waterfowl assemblage including: Little Grebe <i>Tachybaptus ruficollis</i> , Dark-bellied Brent Goose <i>Branta bernicla bernicla</i> , Shelduck <i>Tadorna tadorna</i> , Pintail <i>Anas acuta</i> ,	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

<p>Ringed Plover <i>Charadrius hiaticula</i>, Grey Plover <i>Pluvialis squatarola</i>, Dunlin <i>Calidris alpina</i>, Avocet <i>Recurvirostra avosetta</i>, Redshank <i>Tringa totanus</i>, Curlew <i>Numenius arquata</i>, Great Crested Grebe <i>Podiceps cristatus</i>, Cormorant <i>Phalacrocorax carbo</i>, Wigeon <i>Anas penelope</i>, Teal <i>Anas crecca</i>, Oystercatcher <i>Haematopus ostralegus</i>, Lapwing <i>Vanellus vanellus</i>, Black-tailed Godwit <i>Limosa limosa islandica</i>, Whimbrel <i>Numenius phaeopus</i></p>												
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Medway Estuary and Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**,
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Lough Foyle SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**,
- In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Medway Estuary and Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Medway Estuary and Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.37: North Norfolk Coast SPA (project alone and in-combination)

Site Code: UK9009031

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark bellied brent goose <i>Branta bernicla bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Avocet, <i>Recurvirostra avosetta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Eurasian Bittern, <i>Botaurus stellaris</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Tern <i>Sterna hirundo</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Little Tern, <i>Sterna albifrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Marsh Harrier, <i>Circus aeruginosus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Mediterranean Gull <i>Larus melanocephalus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Roseate Tern <i>Sterna dougallii</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Sandwich Tern, <i>Sterna sandvicensis</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Bar-tailed Godwit <i>Limosa lapponica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Golden Plover <i>Pluvialis apricaria</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Hen Harrier <i>Circus cyaneus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Ruff, <i>Philomachus pugnax</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Redshank, <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Ringed Plover <i>Charadrius hiaticula</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Knot <i>Calidris canutus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Pink-footed Goose <i>Anser brachyrhynchus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Pintail <i>Anas acuta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Common Redshank, <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Wigeon <i>Anas penelope</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
A waterfowl assemblage including: Shelduck <i>Tadorna tadorna</i> , Avocet <i>Recurvirostra avosetta</i> , Golden Plover <i>Pluvialis apricaria</i> , Ruff <i>Philomachus pugnax</i> , Bar-tailed Godwit <i>Limosa lapponica</i> , Pink-	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	

Plover <i>squatarola</i> , Lapwing <i>Vanellus vanellus</i> , Sanderling <i>Calidris alba</i> , <i>Phalacrocorax carbo</i>									
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- a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the North Norfolk Coast SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant’s **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the North Norfolk Coast SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
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Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b).

An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the North Norfolk Coast SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.38: Outer Thames Estuary SPA (project alone)

Site Code: UK9020309

Distance to project: Approximately 7km to proposed wind farm array with the transmission cable crossing the designated site

European site features	Likely Effects of NSIP								
	Collision Risk		Disturbance / Displacement				Barrier Effect		
	C	O	D	C	O	D	C	O	
Red throated diver, <i>Gavia stellata</i>	n/a	*a	n/a	*b	*c	*b	n/a	*d	n/a

a The Applicant states that research and monitoring studies indicate that red-throated divers generally avoid windfarms (Garthe & Hüppop, 2004; Furness & Wade, 2012; Schwemmer et al 2011). Site-specific aerial survey data collected by the Applicant recorded only one individual red-throated diver in flight within the windfarm site and thus collision risk modelling could not be conducted on these data. Recent work carried out by SOSS reported only 2% of red-throated diver flights are at collision risk height at 98% avoidance rate (Cook et al 2012) further reducing the potential for impacts on this species. Collision risk from rotors is considered not to have a likely significant effect on this interest feature of the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 334**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

- b With respect to the installation of the export cables, the Applicant has stated that cable laying vessels are static for long periods of time and move short distances as cable laying progresses. The East Anglia One cable route area is in a busy shipping area and the Applicant considers it likely that a reduction in commercial vessel movements during construction activities would offset the potential temporary disturbance and displacement effects of cable installation. The Applicant considers that cable installation activities leading to disturbance and displacement will not result in a likely significant effect on this interest feature of the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 328**).

With respect to the East Anglia One site, construction activity is expected to be concentrated in small areas of the site and over a relatively short time period, with turbines installed in sequence. The density of red-throated divers within the East Anglia One site is low (0.5 birds / km²) and this supports an assumption that the habitat within the site is sub-optimal for foraging during the winter. Given the sequential nature of offshore turbine/foundation installation, the concentrated location for construction activity and the time frame for construction, the Applicant considers that potential disturbance and displacement will not have a likely significant effect on this interest feature of the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 329**).

Subsequent to the application submission, and at NE and JNCC 's request, the applicant has undertaken further consideration of potential displacement effects in relation to vessel presence during the export cable installation period (on the assumption that this takes place during the wintering period) (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement (Section J), September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). A 'worst case' circle of influence of 2km around the cable laying vessel during the wintering period, an area of 12.6km², was considered (7.4 birds). Assuming the cited SPA population of 6,466 birds during the peak wintering period across an area of 3,793km², the average density of birds has been calculated as 1.7 birds / km² within the SPA; the average density of birds in the East Anglia One offshore cable corridor and 2km buffer is 0.7 birds / km². If the 'worst case' area is not available to red-throated divers and the 7.4

birds displaced were re-distributed to other areas of the SPA, this would increase the density of the remaining SPA area by 0.01 birds / km². The Applicant considers that this level of displacement would not have a likely significant effect on the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 330**).

NE, within **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC's Written Representation, 30 July 2013 (REP-155)** agree with the conclusions made by the Applicant within the ES and the further information presented within **EOAL – Diver Displacement Technical Note as part of the Applicant's response to the Examining Authority's first questions, 30 July 2013 (REP-216)**

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

c The extent of potential displacement of red-throated divers from operational windfarms and their surrounding buffer zones has been considered within the Applicant's ES. Monitoring studies at Kentish Flats offshore windfarm found an observable shift of birds away from the turbines particularly within 500m of the site. The assessment for East Anglia One has utilised displacement values for both the site footprint and within distance bands away from the site boundary, as agreed with Natural England for the Kentish Flats Extension Offshore Windfarm. Displacement effects of East Anglia One have been calculated based on estimated mean peak numbers of divers (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 332**).

Assuming an SPA area of 3,793km², a diver population of 6,466 birds and displacement values used in the Kentish Flats Extension assessment, the SPA bird density post-displacement would change from 1.7 birds / km² to 1.73 birds / km². This level of displacement is not considered by the Applicant to have a likely significant adverse effect on this interest feature of the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 333**).

NE, within **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC's Written Representation, 30 July 2013 (REP-155)** agree with the conclusions made by the Applicant

within the ES and the further information presented within **EOAL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-216)**

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

The Applicant has stated that the East Anglia One turbine array is approximately 7km from the SPA and that it is not likely that divers will undertake regular direct foraging trips within the East Anglia One site as the water depths at site are much deeper ($\geq 30\text{m}$) than that preferred by divers ($< 10\text{m}$, London Array I ES, 2005) during the winter period (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 336**).

NE, within **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC’s Written Representation, 30 July 2013 (REP-155)** agree with the conclusions made by the Applicant within the ES and the further information presented within **EOAL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-216)**

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

Stage 1 Matrix 3.39: Outer Thames Estuary SPA (in-combination)

Site Code: UK9020309

Distance to project: Approximately 7km to proposed wind farm array with the transmission cable crossing the designated site

European site features	Likely Effects of NSIP								
	Collision Risk			Disturbance / Displacement			Barrier Effect		
	C	O	D	C	O	D	C	O	
Red throated diver, <i>Gavia stellata</i>	n/a	*a	n/a	*b	*c	*b	n/a	*d	n/a

a The Applicant has advised that red-throated divers generally avoid windfarms (Garthe & Hüppop, 2004; Furness & Wade, 2012; Schwemmer et al 2011). Site-specific aerial survey data collected by the Applicant recorded only one individual red-throated diver in flight within the windfarm site and thus collision risk modelling could not be conducted on these data. The Applicant considers that collision risk from rotors from East Anglia One will not have a likely significant effect on this interest feature of the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 342**).

NE, within **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC's Written Representation, 30 July 2013 (REP-155)** agree with the conclusions made by the Applicant

within the ES and the further information presented within **EOAL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-216)**

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

b The Applicant considers that the levels of displacement predicted will not have a likely significant effect on the Outer Thames Estuary SPA (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 338**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

c The Applicant has stated that studies at other operational windfarm sites indicate that the most likely in-combination effect on wintering red-throated diver of the Outer Thames Estuary SPA would be through displacement from the windfarm and the buffer surrounding it. In general, previous assessments have considered that windfarms within the SPA (or pSPA as it was when some studies were conducted) boundary would have a greater contribution to in-combination impacts. As the East Anglia One Offshore Windfarm is outside the SPA boundary and is a sub-optimal habitat for red-throated divers in the main mid-winter period, it is considered that East Anglia One will not make a significant contribution to any effects of displacement to red-throated divers. The Applicant concludes that the East Anglia One will not have a likely significant effect on this interest feature of the SPA in-combination with other plans and projects (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 340**

NE, within **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC’s Written Representation, 30 July 2013 (REP-155)** agree with the conclusions made by the Applicant within the ES and the further information presented within **EOAL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-216)**

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

d The Applicant has stated that the East Anglia One turbine array is approximately 7km from the SPA and that it is not likely that divers will undertake regular direct foraging trips within the East Anglia One site as the water depths at site are much deeper ($\geq 30\text{m}$) than that preferred by divers ($< 10\text{m}$, London Array I ES, 2005) during the winter period (**Habitats Regulations Assessment Report Version 2 – September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**, paragraph 344).

NE, within **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC’s Written Representation, 30 July 2013 (REP-155)** agree with the conclusions made by the Applicant within the ES and the further information presented within **EOAL – Diver Displacement Technical Note as part of the Applicant’s response to the Examining Authority’s first questions, 30 July 2013 (REP-216)**

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Outer Thames Estuary SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6h**).

Stage 1 Matrix 3.40: Portsmouth Harbour SPA (project alone and in combination)

Site Code: UK9011051

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*c	n/a	*a
Dunlin <i>alpina alpina</i>	<i>Calidris alpina</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Black-tailed Godwit <i>limosa islandica</i>	Godwit <i>limosa islandica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Red-breasted Merganser	<i>Mergus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Medway Estuary and Marshes SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.41: Solent and Southampton Water SPA (project alone and in-combination)

Site Code: UK9011061

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Common Tern <i>Sterna hirundo</i>	Tern	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Little Tern, <i>Sterna albigrons</i>	<i>Sterna albigrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Mediterranean Gull <i>Larus melanocephalus</i>	Gull <i>Larus melanocephalus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Roseate Tern <i>Sterna dougallii</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Sandwich Tern, <i>Sterna sandvicensis</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Black-tailed Godwit <i>Limosa limosa islandica</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Ringed Plover <i>Charadrius hiaticula</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
Teal <i>Anas crecca</i>	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b	x b
A waterfowl assemblage including: Gadwall <i>Anas strepera</i> , Teal <i>Anas crecca</i> , Ringed Plover <i>Charadrius hiaticula</i> , Black-tailed Godwit <i>Limosa limosa islandica</i> , Little Grebe <i>Tachybaptus ruficollis</i> , Great Crested Grebe <i>Podiceps cristatus</i> , Cormorant <i>Phalacrocorax</i>	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c	x c

<p>carbo, Dark-bellied Brent Goose <i>Branta bernicla bernicla,</i> Wigeon <i>Anas penelope,</i> Redshank <i>Tringa totanus,</i> <i>Anas Shoveler acuta,</i> <i>Anas clypeata,</i> Red- breasted Merganser <i>Mergus serrator,</i> Grey Plover <i>Pluvialis squatarola,</i> Lapwing <i>Vanellus vanellus,</i> Dunlin <i>Calidris alpina</i> <i>alpina,</i> Curlew <i>Numenius arquata,</i> Shelduck <i>Tadorna tadorna</i></p>											
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a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Solent and Southampton Water SPA (**EAOL – Statement of**

Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b).

- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**,
- c In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Solent and Southampton Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**,
- d In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of Solent and Southampton Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.
- d An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Solent and Southampton Water SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.42: Stour and Orwell Estuaries SPA (project alone and in-combination)

Site Code: UK9009121

Distance to project: Not stated

European site features	Likely Effects of NSIP											
	Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
Hen Harrier <i>Circus cyaneus</i>	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Black-tailed Godwit <i>Limosa islandica</i>	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Dunlin <i>Calidris alpina alpina</i>	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Grey Plover <i>Pluvialis squatarola</i>	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

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Pintail <i>Anas acuta</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Common Redshank, <i>Tringa totanus</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Ringed Plover <i>Charadrius hiaticula</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Shelduck <i>Tadorna tadorna</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Turnstone, <i>Arenaria interpres</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
A waterfowl assemblage including: Cormorant <i>Phalacrocorax carbo</i> , Pintail <i>Anas acuta</i> , Ringed Plover <i>Charadrius hiaticula</i> , Grey Plover <i>Pluvialis squatarola</i> , Dunlin <i>Calidris alpina alpina</i> , Black-tailed Godwit <i>Limosa limosa islandica</i> , Redshank <i>Tringa</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

totanus, Shelduck <i>Tadorna tadorna</i> , Crested Grebe <i>Podiceps</i> <i>cristatus</i> , Curlew <i>Numenius arquata</i> , Dark-bellied Brent Goose <i>Branta</i> <i>bernicla bernicla</i> , Wigeon <i>Anas</i> <i>penelope</i> , Goldeneye <i>Bucephala clangula</i> , Oystercatcher <i>Haematopus</i> <i>ostralegus</i> , Lapwing <i>Vanellus vanellus</i> , Knot <i>Calidris</i> <i>canutus</i> , Turnstone <i>Arenaria interpres</i>										
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a The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of the Stour and Orwell Estuaries SPA (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).

With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Stour and Orwell Estuaries SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.43: The Swale SPA (project alone and in-combination)

Site Code: UK9012011

Distance to project: Not stated

European features	site	Likely Effects of NSIP															
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects						
		C	O	D	C	O	D	C	O	D	C	O	D				
Avocet, <i>Recurvirostra avosetta</i>		xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Marsh Harrier, <i>Circus aeruginosus</i>		xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Mediterranean Gull <i>Larus melanocephalus</i>		xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa
Bar-tailed Godwit <i>Limosa lapponica</i>		xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa	xa

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Report on the Implications for European Sites

Golden Plover <i>Pluvialis apricaria</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Hen Harrier <i>Circus cyaneus</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Ringed Plover <i>Charadrius hiaticula</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Black-tailed Godwit <i>Limosa limosa islandica</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Grey Plover <i>Pluvialis squatarola</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Knot <i>Calidris canutus</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Pintail <i>Anas acuta</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Common Redshank, <i>Tringa totanus</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
Shoveler <i>Anas clypeata</i>	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a	*a
A waterfowl assemblage including: White-fronted Goose <i>Anser albifrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

albifrons, Golden Plover <i>Pluvialis apricaria</i> , Bar-tailed Godwit <i>limosa lapponica</i> , Pintail Anas Shoveler <i>clypeata</i> , Grey Plover <i>Pluvialis squatarola</i> , Knot <i>Calidris canutus</i> , Black-tailed Godwit <i>Limosa islandica</i> , Redshank <i>Tringa totanus</i> , Avocet <i>Recurvirostra avosetta</i> , Cormorant <i>Phalacrocorax carbo</i> , Curlew <i>Numenius arquata</i> , Dark-bellied Brent Goose <i>Branta bernicla</i> , Shelduck <i>Tadorna tadorna</i> , Wigeon Anas Gadwall <i>penelope</i> , Anas <i>strepera</i> , Teal Anas										
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<p><i>crecca</i>, Oystercatcher <i>Haematopus</i> <i>ostralegus</i>, Lapwing <i>Vanellus vanellus</i>, Dunlin <i>Calidris</i> <i>alpina alpina</i>, Little Grebe <i>Tachybaptus</i> <i>ruficollis</i></p>									
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a The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of The Swale SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.

An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination

assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**, paragraph 354 **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**).

With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's HRA Report (30 September 2013).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on The Swale SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.44: The Wash SPA (project alone and in-combination)

Site Code: UK9008021

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Dark-bellied Goose <i>Branta bernicla</i>	Brent <i>Branta bernicla</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Common Tern <i>Sterna hirundo</i>	Tern	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Little Tern, <i>Sterna albifrons</i>	<i>Sterna albifrons</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Marsh Harrier, <i>Circus aeruginosus</i>	Harrier, <i>Circus aeruginosus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Avocet, <i>Recurvirostra</i>	<i>Recurvirostra</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

Oystercatcher <i>Haematopus ostralegus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Pink-footed Goose <i>Anser brachyrhynchus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Pintail <i>Anas acuta</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Redshank, <i>Tringa totanus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Shelduck <i>Tadorna tadorna</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Turnstone, <i>Arenaria interpres</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A waterfowl assemblage including: Black-tailed Godwit <i>Limosa limosa islandica</i> , Avocet <i>Recurvirostra avosetta</i> , Golden Plover <i>Pluvialis apricaria</i> , Bar-tailed Godwit <i>Limosa lapponica</i> , Pink-footed Goose <i>Anser</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

<i>albifrons</i> , Wigeon <i>Anas penelope</i> , Mallard <i>Anas</i> <i>platyrhynchos</i> , Ringed Plover <i>Charadrius</i> <i>hiaticula</i> , Lapwing <i>Vanellus vanellus</i> , Knot <i>Calidris</i> <i>canutus</i> , Whimbrel <i>Numenius</i> <i>phaeopus</i> .									
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a The Applicant carried out modelling of the collision risk posed to brent goose passing across the North Sea in the spring or autumn which would be moving to or from estuarine SPAs (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the modelling concluded that there was no potential for a likely significant effect.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on The Wash SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One would not have a likely significant effect on any designated feature of The Wash SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

- c With the exception of brent goose, the remaining features are identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- d In the Statement of Common Ground with NE and JNCC (July 2013) it was agreed that East Anglia One would not have a likely significant effect on any designated feature of The Wash SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**). An assessment of the potential barrier effects on brent goose as they pass through the East Anglia One site on spring and autumn migration is reported in **Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**. The results of the assessment of East Anglia One alone concluded that there was no potential for a likely significant effect.
- An in-combination assessment of barrier effects on brent goose was not carried out. The Applicant justifies that as the predicted effect for East Anglia One alone was so minimal as to make no material contribution to an in-combination assessment and this potential in-combination effect was screened out of further consideration (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 354**).
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on The Wash SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.45: Hermaness, Saxa Vord and Valla Field SPA (project alone and in-combination)

Site Code: UK9002011

Distance to project: Not stated

European features	site	Likely Effects of NSIP													
		Collision Risk			Disturbance/Displacement			Barrier Effect			In-combination Effects				
		C	O	D	C	O	D	C	O	D	C	O	D		
Gannet <i>bassanus</i>	<i>Morus</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Great <i>Catharacta skua</i>	Skua	n/a	*b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*b
Red throated diver, <i>Gavia stellata</i>		*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c
Puffin <i>Fratercula arctica</i>		*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

<p>A seabird assemblage of international importance including: Guillemot <i>Uria aalge</i>, Kittiwake <i>Rissa tridactyla</i>, Shag <i>Phalacrocorax aristotelis</i>, Fulmar <i>Fulmarus glacialis</i>, Puffin <i>Fratercula arctica</i>, Great Skua <i>Catharacta skua</i>, Gannet <i>Morus bassanus</i></p>	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d
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a The Applicant carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on gannet from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 367**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Hermaness, Saxa Vord and Valla Field SPA where gannet is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

- b The Applicant in the ES carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on great skua from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 377**).
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the listed SPAs where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).
- c The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of the Hermaness, Saxa Vord and Valla Field SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).
- d With the exception of gannet and great skua, the remaining features identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of the Hermaness, Saxa Vord and Valla Field SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.46: Fair Isle SPA (project alone and in-combination)

Site Code: UK9002091

Distance to project: Not stated

European features	site	Likely Effects of NSIP										In-combination Effects		
		Collision Risk			Disturbance/ Displacement			Barrier Effect						
		C	O	D	C	O	D	C	O	D				
Arctic Tern <i>Sterna paradisaea</i>	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	
Fair Isle Wren <i>Troglodytes troglodytes fridariensis</i>	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	
Guillemot <i>aalge</i>	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	<i>x</i> a	
A seabird assemblage of international	n/a	<i>x</i> b,c,d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<i>x</i> b,c,d	n/a	<i>x</i> b,c,d

season, on spring and autumn migration and in winter (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 377**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Noss SPA where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

c With the exception of gannet and great skua, the remaining features identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**,

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of the Fair Isle SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

d The Applicant carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on gannet from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 367**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Fair Isle SPA where gannet is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.47: Firth of Forth Islands SPA (project alone and in-combination)

Site Code: UK9004171

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Gannet <i>bassanus</i>	<i>Morus</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a	n/a	*a
Arctic Tern <i>Sterna paradisaea</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Common Tern <i>Sterna hirundo</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Roseate Tern <i>Sterna dougallii</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Sandwich Tern, <i>Sterna sandvicensis</i>		*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

Arctic Tern <i>Sterna paradisaea</i> , Common Tern <i>Sterna hirundo</i> , Roseate Tern <i>Sterna dougallii</i> , Sandwich Tern <i>Sterna sandvicensis</i>										
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a The Applicant carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on gannet from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 367**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on the Fair Isle SPA where gannet is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of the Firth of Forth Islands SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

- c With the exception of gannet, the remaining features identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of the Firth of Forth Islands SPA (**EAOL - Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.48: Noss SPA (project alone and in-combination)

Site Code: UK9002081

Distance to project: Not stated

European features	site	Likely Effects of NSIP													
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects				
		C	O	D	C	O	D	C	O	D	C	O	D		
Gannet <i>bassanus</i>	<i>Morus</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a	n/a	n/a	*a
Great <i>Catharacta skua</i>	Skua	n/a	*b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*b	n/a	n/a	*b
Guillemot <i>aalge</i>	<i>Uria</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c
A assemblage of international importance including: <i>Fratercula arctica</i> ,	seabird of Puffin	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d	*d

Kittiwake <i>tridactyla</i> , <i>Fulmarus glacialis</i> , Guillemot <i>aalge</i> , Great Skua <i>Catharacta skua</i> , Gannet <i>bassanus</i>	<i>Rissa</i> Fulmar <i>glacialis</i> , <i>Uria</i>								
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a The Applicant carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on gannet from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 request (Doc Ref: REP-269)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 367**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Noss SPA where gannet is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

b The Applicant in the ES carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on great skua from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 377**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Noss SPA where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

c The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of Noss SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

d With the exception of gannet and great skua, the remaining features identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of Noss SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b**).

Stage 1 Matrix 3.49: Fetlar SPA (project alone and in-combination)

Site Code: UK9002031

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Great Skua <i>Catharacta skua</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Arctic Tern <i>Sterna paradisaea</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Red-necked Phalarope <i>Phalaropus lobatus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Dunlin <i>Calidris alpina alpina</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

Whimbrel <i>Numenius phaeopus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A assemblage of seabird of international importance: Arctic Skua <i>Stercorarius parasiticus</i> , Fulmar <i>Fulmarus glacialis</i> , Great Skua <i>Catharacta skua</i> , Arctic Tern <i>Sterna paradisaea</i> , Red-necked Phalarope <i>Phalaropus lobatus</i> .	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

a The Applicant in the ES carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on great skua from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 377**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Fetlar SPA where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

- b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of Fetlar SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).
- c With the exception of great skua, the remaining features identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.
- In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Fetlar SPA where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

Stage 1 Matrix 3.50: Foula SPA (project alone and in-combination)

Site Code: UK9002061

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Great Skua <i>Catharacta skua</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Arctic Tern <i>Sterna paradisaea</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Leach's petrel <i>Oceanodroma leucorhoa</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Red throated diver, <i>Gavia stellata</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b

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Guillemot <i>Uria aalge</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Puffin <i>Fratercula arctica</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
Shag <i>Phalacrocorax aristotelis</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	
A seabird assemblage of international importance: Leach's Storm-petrel <i>Oceanodroma leucorhoa</i> , Razorbill <i>Alca torda</i> , Kittiwake <i>Rissa tridactyla</i> , Arctic Skua <i>Stercorarius parasiticus</i> , Fulmar <i>Fulmarus glacialis</i> , Puffin <i>Fratercula arctica</i> , Guillemot <i>Uria aalge</i> , Great Skua <i>Catharacta skua</i> , Shag <i>Phalacrocorax aristotelis</i> , Arctic Tern <i>Sterna</i>	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	

Stage 1 Matrix 3.51: Hoy SPA (project alone and in-combination)

Site Code: UK9002141

Distance to project: Not stated

European features	site	Likely Effects of NSIP												
		Collision Risk			Disturbance/ Displacement			Barrier Effect			In-combination Effects			
		C	O	D	C	O	D	C	O	D	C	O	D	
Great Skua <i>Catharacta skua</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	*a
Peregrine <i>Falco peregrinus</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
Red throated diver, <i>Gavia stellata</i>	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b	*b
A seabird assemblage of international importance: Puffin <i>Fratercula arctica</i> ,	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c	*c

Guillemot <i>Uria aalge</i> , Kittiwake <i>Rissa tridactyla</i> , Great Black-backed Gull <i>Larus marinus</i> , Arctic Skua <i>Stercorarius parasiticus</i> , Fulmar <i>Fulmarus glacialis</i> , Great Skua <i>Catharacta skua</i>										
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a The Applicant in the ES carried out an assessment of potential barrier effects and collision risk modelling of the potential effects on great skua from these SPAs foraging and passing through the East Anglia One site in the breeding season, on spring and autumn migration and in winter (**Volume 2 Chapter 12 (Ornithology Marine and Coastal) of the ES (Doc Ref: APP-081)**). In all cases the results of the assessment concluded that there was no potential for a likely significant effect (**Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269), paragraph 377**).

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Hoy SPA where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

b The feature is identified within the site JNCC SAC description but has not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on any designated feature of Hoy SPA (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

c With the exception of great skua, the remaining features identified within the site JNCC SAC description have not been considered within the Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request (Doc Ref: REP-269)**.

In the Statement of Common Ground with NE/JNCC it was agreed that East Anglia One alone and in combination would not have a likely significant effect on Hoy SPA where great skua is an interest feature (**EAOL – Statement of Common Ground with JNCC and Natural England (offshore), July 2013 (Doc Ref: REP-184), Section 3.3, 6b and 6c**).

4.0 STAGE 2: EFFECTS ON INTEGRITY

Background

The screening exercise has identified the potential for a likely significant effect on one or more features of the European sites considered. This section summarises the anticipated effects on the integrity of the European sites, in the context of their conservation objectives.

Stage 2 Matrices Key

✓ = Adverse effect on integrity cannot be excluded

× = Adverse effect on integrity can be excluded

C= construction

O = operation

D = decommissioning

Evidence supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European site, the cell in the matrix is formatted as follows:

n/a

Integrity Matrices

Integrity Matrix 3.1: Alde-Ore Estuary SPA (project alone)

Site Code: UK9009112

Distance to NSIP: Approximately 54km to proposed wind farm array and less than 2km from the cable landfall

Conservation objectives: With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features listed below);

Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.

Subject to natural change, to maintain or restore:

The extent and distribution of the habitats of the qualifying features;

The structure and function of the habitats of the qualifying features;

The supporting processes on which the habitats of the qualifying features rely;

The populations of the qualifying features;

The distribution of the qualifying features within the site.

Qualifying Features:

- A081 Circus aeruginosus; Eurasian marsh harrier (Breeding)
- A132 Recurvirostra avosetta; Pied avocet (Non-breeding)
- A132 Recurvirostra avosetta; Pied avocet (Breeding)
- A151 Philomachus pugnax; Ruff (Non-breeding)
- A162 Tringa totanus; Common redshank (Non-breeding)
- A183 Larus fuscus; Lesser black-backed gull (Breeding)
- A191 Sterna sandvicensis; Sandwich tern (Breeding)
- A195 Sterna albifrons; Little tern (Breeding)

Additional Qualifying Features Identified by the 2001 UK SPA Review:

Seabird assemblage
Waterbird assemblage

European site features	Adverse effect on integrity										
	Collision Risk			Disturbance / Displacement			Barrier Effect				
	C	O	D	C	O	D	C	O	D	D	
Herring Gull <i>Larus argentatus</i> , as part of a seabird assemblage of international importance	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

a) As a result of no agreement with Natural England at Interested Parties Deadline I stage over the absence of likely significant effects as a result of collision risk from East Anglia One alone, the Applicant has carried out further technical work on the risk posed to herring gull and has provided this information to the Examining Authority at Interested Party Deadline II (APEM 2013a) this information has subsequently been consolidated into **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Appendix D Submitted in response to Rule 17 request (Doc Ref: REP-269)**.

The Applicant has concluded from this further technical work that the predicted impact of East Anglia One alone on the herring gull population of the Alde-Ore Estuary SPA, for all three of the CRM Types that were applied, was a maximum of a predicted mortality of 0.35 birds per annum that can be attributed to the Alde-Ore Estuary SPA. This level of predicted mortality would result in a relative change in the number of birds subject to mortality each year of 0.17%. The Applicant has concluded that this level of mortality predicted to occur as a result of East Anglia One alone will not have an adverse effect on the integrity of the Alde-Ore Estuary SPA.

The Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraph 385 (Doc Ref: REP-269)** states that this conclusion was agreed in a teleconference call with Natural England on 11th September 2013.

At the issue specific hearing the Applicant stated that it had concluded that there was no likely significant effect alone, however there was some debate with Natural England regarding the numbers of herring gull potentially affected by the development and therefore how to carry out an in-combination assessment. The Applicant stated that a further note had been submitted with regards herring gull see **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Appendix D Submitted in response to Rule 17 request (Doc Ref: REP-269)**. Following the submission of that note Natural England and the Applicant had agreed that the East Anglia One development will not have a significant effect in-combination.

Dr Caldwell (Natural England) confirmed at the hearing that Natural England had received a further note on herring gull and had considered this internally. Natural England agreed with the Applicant that the East Anglia One development would not have a likely significant effect on the Alde-Ore Estuary SPA alone and that the level of predicted mortality due to East Anglia One alone (less than 1 bird per annum) is so small as not to alter materially any overall in-combination figure (in effect a de minimis contribution).

Accordingly, Natural England agrees with the Applicant that it is not necessary to undertake an in-combination assessment.

Integrity Matrix 3.2: Alde-Ore Estuary SPA (in-combination)

Site Code: UK9009112

Distance to NSIP: Approximately 54km to proposed wind farm array and less than 2km from the cable landfall

Conservation objectives: See Matrix 3.1

European site features	Adverse effect on integrity												
	Collision Risk		Disturbance / Displacement				Barrier Effect						
	C	O	D	C	O	D	C	O	D	D			
Lesser Black Backed Gull, <i>Larus fuscus</i>	n/a	*a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Herring Gull <i>Larus argentatus</i> , as part of a seabird assemblage of international importance	n/a	*b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

a) As a result of no agreement with Natural England at Interested Parties Deadline I stage over the absence of likely significant effects as a result of collision risk from East Anglia One in combination with other plans and projects, the Applicant has reconsidered the information that is available on lesser black-backed gull and the advice provided by Natural England and

JNCC in their joint Written Representation on the assessment of potential adverse impacts on the integrity of the SPA. An updated assessment of the likely significant effects has been provided **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Appendices E, F & G Submitted in response to Rule 17 request (Doc Ref: REP-269)**. As a precautionary measure, instead of using the 91km foraging distance obtained from the Alde-Ore gulls, this report has included in its in-combination impact assessment all UK offshore wind farms that lie within the generic mean maximum range of 141km from the SPA, where flight lines are from the SPA over water around the north Norfolk coast. By taking this precautionary approach the projects that are known to be within foraging range include:

- Greater Gabbard;
- Galloper;
- London Array I & II;
- Gunfleet Sands I, II & III;
- Scroby Sands;
- Kentish Flats and Extension;
- Thanet;
- Sheringham Shoal; and
- Dudgeon.

The list of projects considered by the Applicant in their in-combination assessment excludes projects such as East Anglia Three and Four. However, the Applicant notes [add ref] the conclusion drawn by Natural England:

'Natural England considers that the element of the East Anglia One contribution to the in combination mortality total to which some degree of confidence can be attached, i.e. that during the breeding season (3-7) is so small as to not materially alter the overall in combination mortality figure or the likelihood of an adverse effect currently arising from such an in combination level of mortality'.

On this basis the Applicant confirms its own conclusion that there is no adverse effect on integrity of the interest feature lesser black backed gull of the Alde-Ore Estuary SPA as a result of collision risk from East Anglia One in combination with other plans and projects see **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraph 386 (Doc Ref: REP-269)**.

Natural England, in their Written Representation **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC's Written Representation, 30 July 2013 (REP-155)**, has stated that on the basis of the Natural England derived collision mortality totals for East Anglia One alone (i.e. 13-40), and the mortality predicted to arise from the other windfarms considered in the in-combination assessment i.e. 246, an overall in-combination total of between 259 and 286 can be derived of which East Anglia One contributes between 5% and 14%. Natural England considers that this level of in-combination mortality is such that an adverse effect on the integrity of the Alde-Ore SPA cannot be ruled out. Natural England notes that in the light of the range of alternative apportionment approaches it has explored, that the bulk of the predicted collisions of Alde-Ore SPA LBBG at East Anglia One is predicted to occur outwith the breeding season. Natural England notes that the collision mortality that it has estimated might occur at East Anglia One outwith the breeding season (10-33), in comparison with that in the breeding season (3-7), is consistent with an assumption that the seasonal occurrence of Alde-Ore birds at the East Anglia One site is the same as that of LBBG in general (as indicated by the seasonal breakdown of overall collision figures (i.e. c 20% breeding season and 80% outwith that period). Given that the Alde-Ore SPA colony is relatively near East Anglia One in comparison to other colonies, Natural England considers it more likely that Alde-Ore birds would, if anything, be represented disproportionately at the East Anglia One site in the breeding season, and make a smaller contribution to flight activity and hence collision mortality at the site at other times of year. Furthermore, in this instance, the estimates on non-breeding season mortality derived by Natural England are "derived" from the breeding season figures. Thus, any uncertainty in deriving those numbers is compounded in arriving at the year round figures. Accordingly Natural England considers the figures for non-breeding season collision risk mortality that it has derived to be no more than speculative, and does not place much weight on them. In contrast, Natural England considers its estimates of collision risk mortality that might occur at East Anglia One during the breeding season (3-7) to be more reliable. Natural England considers that the element of the East Anglia One contribution to the in-combination mortality total to which some degree of confidence can be attached, i.e. that during the breeding season (3-7) while not de minimis, is so small as to not materially alter the overall in-combination mortality figure or the likelihood of an adverse effect on integrity of the Alde-Ore Estuary SPA arising from such an in-combination level of mortality. Natural England advises that on that basis, and due to a similar lack of certainty around the effectiveness of mitigation to deliver small reductions in mortality, it appears that there is little benefit to be gained from exploring further into mitigation options for this small number of additional mortalities.

- b) As a result of no agreement with Natural England at Interested Parties Deadline I stage over the absence of likely significant effects as a result of collision risk from East Anglia One alone, the Applicant has carried out further technical work on the risk posed to herring gull and has provided this information to the Examining Authority at Interested Party Deadline II (APEM 2013a) this information has subsequently been consolidated into the **Addendum to the Ornithology (Marine and**

Coastal) Chapter of the Environmental Statement, September 2013 Appendix D Submitted in response to Rule 17 request (Doc Ref: REP-269).

The Applicant has concluded from this further technical work that the predicted impact of East Anglia One alone on the herring gull population of the Alde-Ore Estuary SPA, for all three of the CRM Types that were applied, was a maximum of a predicted mortality of 0.35 birds per annum that can be attributed to the Alde-Ore Estuary SPA. This level of predicted mortality would result in a relative change in the number of birds subject to mortality each year of 0.17%. The Applicant has concluded that this level of mortality predicted to occur as a result of East Anglia One alone will not have an adverse effect on the integrity of the Alde-Ore Estuary SPA.

The Applicant's **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraph 385 (Doc Ref: REP-269)** states that this conclusion was agreed in a teleconference call with Natural England on 11th September 2013.

At the issue specific hearing [add date] the Applicant stated that it had concluded that there was no likely significant effect alone, however there was some debate with Natural England regarding the numbers of herring gull potentially affected by the development and therefore how to carry out an in-combination assessment. The Applicant stated that a further note had been submitted with regards herring gull **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Appendix D Submitted in response to Rule 17 request (Doc Ref: REP-269)**. Following the submission of that note Natural England and the Applicant had agreed that the East Anglia One development will not have a significant effect in-combination.

Dr Caldwell (Natural England) confirmed at the hearing that Natural England had received a further note on herring gull and had considered this internally. Natural England agreed with the Applicant that the East Anglia One development would not have a likely significant effect on the Alde-Ore Estuary SPA alone and that the level of predicted mortality due to East Anglia One alone (less than 1 bird per annum) is so small as not to alter materially any overall in-combination figure (in effect a de minimis contribution).

Accordingly, Natural England agrees with the Applicant that it is not necessary to undertake an in-combination assessment.

Integrity Matrix 3.3: Alde-Ore Estuary Ramsar (in-combination)

Site Code: UK11002

Distance to NSIP: Approximately 54km to proposed wind farm array and less than 2km from the cable landfill

European site features	Adverse effect on integrity											
	Collision Risk		Disturbance / Displacement				Barrier Effect					
	C	O	D	C	O	D	C	O	D	C	O	D
Ramsar criterion 6 – Species/populations occurring at levels of international importance – species regularly supported during the breeding season (lesser black-backed gull)	n/a	x a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

a) As a result of no agreement with Natural England at Interested Parties Deadline I stage over the absence of likely significant effects as a result of collision risk from East Anglia One in-combination with other plans and projects, the Applicant has reconsidered the information that is available on lesser black-backed gull and the advice provided by Natural England and JNCC in their joint Written Representation on the assessment of potential adverse impacts on the integrity of the SPA. An updated assessment of the likely significant effects has been provided **Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Appendices E, F & G Submitted in response to Rule 17 request (Doc Ref: REP-269)**. As a precautionary measure instead of using the more logical 91 km foraging distance obtained from the Alde-Ore gulls, this report has included in its in-combination impact assessment all UK offshore wind farms that lie within the generic mean maximum range of 141 km from the SPA, where flight lines are from the SPA over water around the north Norfolk coast. By taking this precautionary approach the projects that are known to be within foraging range include:

- Greater Gabbard;
- Galloper;
- London Array I & II;
- Gunfleet Sands I, II & III;
- Scroby Sands;
- Kentish Flats and Extension;
- Thanet;
- Sheringham Shoal; and
- Dudgeon.

The list of projects considered by the Applicant in their in-combination assessment excludes projects such as East Anglia Three and Four. However, the Applicant notes [add ref] the conclusion drawn by Natural England:

'Natural England considers that the element of the East Anglia One contribution to the in combination mortality total to which some degree of confidence can be attached, i.e. that during the breeding season (3-7) is so small as to not materially alter the overall in combination mortality figure or the likelihood of an adverse effect currently arising from such an in combination level of mortality.'

On this basis the Applicant confirms its own conclusion that there is no adverse effect on integrity of the interest feature lesser black backed gull of the Alde-Ore Estuary SPA as a result of collision risk from East Anglia One in-combination with other plans and projects **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraph 386 (Doc Ref: REP-269)**.

Natural England, in their Written Representation **Annex D Dr Richard Caldwell expert report on Coastal and Offshore Ornithology HRA of NE and JNCC's Written Representation, 30 July 2013 (REP-155)**, has stated that on the basis of the Natural England derived collision mortality totals for East Anglia One alone (i.e. 13-40), and the mortality predicted to arise from the other windfarms considered in the in-combination assessment i.e. 246, an overall in-combination total of between 259 and 286 can be derived of which East Anglia One contributes between 5% and 14%. Natural England considers that this level of in-combination mortality is such that an adverse effect on the integrity of the Alde-Ore SPA cannot be ruled out. Natural England notes that in the light of the range of alternative apportionment approaches it has explored, that the bulk of the predicted collisions of Alde-Ore SPA LBBG at East Anglia One is predicted to occur outwith the breeding season. Natural England notes that the collision mortality that it has estimated might occur at East Anglia One outwith the breeding

season (10-33), in comparison with that in the breeding season (3-7), is consistent with an assumption that the seasonal occurrence of Alde-Ore birds at the East Anglia One site is the same as that of LBBG in general (as indicated by the seasonal breakdown of overall collision figures (i.e. c 20% breeding season and 80% outwith that period). Given that the Alde-Ore SPA colony is relatively near East Anglia One in comparison with other colonies, Natural England considers it more likely that Alde-Ore birds would, if anything, be represented disproportionately at the East Anglia One site in the breeding season, and make a smaller contribution to flight activity and hence collision mortality at the site at other times of year. Furthermore, in this instance, the estimates on non-breeding season mortality derived by Natural England are “derived” from the breeding season figures. Thus, any uncertainty in deriving those numbers is compounded in arriving at the year round figures. Accordingly Natural England considers the figures for non-breeding season collision risk mortality that it has derived to be no more than speculative, and does not place much weight on them. In contrast, Natural England considers its estimates of collision risk mortality that might occur at East Anglia One during the breeding season (3-7) to be more reliable. Natural England considers that the element of the East Anglia One contribution to the in-combination mortality total to which some degree of confidence can be attached, i.e. that during the breeding season (3-7) while not de minimis, is so small as to not materially alter the overall in-combination mortality figure or the likelihood of an adverse effect on integrity of the Alde-Ore Estuary SPA arising from such an in-combination level of mortality. Natural England advises that on that basis, and due to a similar lack of certainty around the effectiveness of mitigation to deliver small reductions in mortality, it appears that there is little benefit to be gained from exploring further into mitigation options for this small number of additional mortalities.

Integrity Matrix 3.4: Flamborough Head and Bempton Cliffs (in-combination)

Site Code: UK9006101

Distance to NSIP: Approximately 254km

Conservation objectives: With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features listed below);

Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.

Subject to natural change, to maintain or restore:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of the qualifying features;
- The distribution of the qualifying features within the site.

Qualifying Features:

A188 *Rissa tridactyla*; Black-legged kittiwake (Breeding)

Additional Qualifying Features Identified by the 2001 UK SPA Review:

Seabird assemblage

European site features	Adverse effect on integrity										
	Collision Risk			Disturbance / Displacement			Barrier Effect				
	C	O	D	C	O	D	C	O	C	D	
Kittiwake <i>Rissa tridactyla</i>	n/a	x ^a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Kittiwake <i>Rissa tridactyla</i> as part of a seabird assemblage of international importance	n/a	x ^a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Gannet <i>Morus bassanus</i> as part of a seabird assemblage of international importance	n/a	x ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

a) As a result of no agreement with Natural England at Interested Parties Deadline I stage over the absence of likely significant effects as a result of collision risk from East Anglia One in-combination with other plans and projects, the Applicant has reconsidered the information that is available on kittiwake and the advice provided by Natural England and JNCC in their joint Written Representation on the assessment of potential adverse impacts on the integrity of the SPA this information is consolidated in **Section C of the Addendum to the Ornithology (Marine and Coastal) Chapter of the Environmental Statement, September 2013 Submitted in response to Rule 17 requested (Doc Ref: REP-269)**. In **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraph 393 (Doc Ref: REP-269)** the Applicant notes the conclusion drawn by Natural England which stated:

'The PBR conducted by Natural England has predicted a precautionary value of between 250-350 Kittiwakes could sustainably be removed from the SPA without compromising the population trajectory quantitatively or temporally. As the East Anglia One offshore wind farm in combination with those other consented/operational windfarms in the North Sea considered in table 3.7 of the Applicant's technical report is predicted to remove no more than 78% of that total and perhaps only 56%, Natural England is of the view that there is sufficient margin for error to safely conclude that no reasonable scientific doubt remains as to the absence of an adverse effect on the integrity of the Flamborough Head and Bempton Cliffs SPA due to collision risk mortality of kittiwake at East Anglia One in combination with the other windfarms within the North Sea as set out in table 3.7 of the Applicant's technical report'.

In the **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraph 394 (Doc Ref: REP-269)** the Applicant notes, but does not agree with, the conclusion drawn by Natural England which stated:

'Natural England considers that this revised assessment (that of 274 fatalities) may be something of an underestimate due to: i) exclusion of windfarms outside the North Sea with which FHBC kittiwakes may interact outwith the breeding season, ii) uncertainty regarding the headline mortality figure at Hornsea (project 1), iii) use of a very low apportionment % for Hornsea OWF given that FHBC is the closest large kittiwake colony, iv) uncertainty over the headline collision figure given for Moray Firth OWF, v) uncertainty over the headline collision figure given for Beatrice OWF vi) no figures being presented for other pre-consent windfarms within the Firths of Forth & Tay e.g. Inch Cape (on the verge of submission) and Firth of Forth Zone 3 (Seagreen submitted Oct 2012)'.

The Applicant considers that its clear and practical approach to in-combination assessments of the incorporation of information only where there is a reasonable degree of certainty reflects the approach, in the case of English projects, taken in the in-combination assessment for Triton Knoll OWF which was accepted in the determination of the development consent order application by the Secretary of State. This is that projects have not been included by the Applicant in its in-combination assessment that are either pre-application or post-application (but the decision on consent is likely to be made after East Anglia One), or, in the case of the Scottish sites, are post application but without any statutory consenting timeline,

Further details of the Applicant's approach to in-combination assessments and a rationale for the inclusion, or not, of particular projects is given in its Written Representation at Interested Parties Deadline II.

On the basis on the approach to in-combination assessment described above, the Applicant concludes that there is no adverse effect on integrity of the interest feature kittiwake of the FHBC SPA as a result of collision risk from East Anglia One in-combination with other plans and projects.

Dr Caldwell (Natural England) noted that since the submission of Natural England's Written Representations the Applicant has provided a further technical note on kittiwake, but that this did not change the figures, which are discussed at length in his Expert Report. Dr Caldwell (Natural England) confirmed that it remains Natural England's advice that if the competent authority is minded to consider that only those offshore wind farms which are listed in Table 3.7 of the Applicant's technical report need be included in the in-combination assessment, there is sufficient margin of error relative to PBR thresholds of sustainable mortality to safely conclude that collision mortality of kittiwakes at East Anglia One either alone or in-combination will not adversely affect the integrity of the Flamborough Head and Bempton Cliffs SPA. However, as stated in respect of Agenda Item 2.1.3 (Issue Specific Hearing 17 September 2013), Natural England has doubts regarding the figures used in the Applicant's in-combination assessment. There remains a difference of opinion with the Applicant as to which projects to include in the in-combination assessment, see **Natural England Representation received on 18 October 2013 for Deadline III (Doc Ref: REP-276)**.

It is Natural England's submission that, as stated in its Written Representations, reasonable scientific doubt remains as to the absence of adverse effects on the integrity of the European sites until consideration is given to the full range of impacts from other plans and projects in-combination with the East Anglia One development. Natural England will be in a position to advise the Secretary of State on site integrity once this in-combination assessment has been carried out. Until that in-combination assessment is carried out scientific doubt remains as to the absence of adverse effects. Natural England confirmed that the first step is to determine whether East Anglia One is capable of having an adverse effect on site integrity in-combination with other plans or projects. Once a view is formed on this, one can go on to consider whether mitigation is required see **Natural England Representation received on 18 October 2013 for Deadline III (Doc Ref: REP-276)**.

East Anglia One has submitted their response to the tiered approach to inform cumulative and in-combination assessment, see **EAOL - Response to the Tiered Approach (October 2013) (Doc Ref: REP-312)**. Section 2 of the response to the tiered approach document details EAOL's approach to project inclusion within the cumulative and in-combination assessments for the East Anglia One project and provides a written response to the suggested Tiered Approach. Section 3 comprises Tiered Approach Tables for gannet and kittiwake (for both cumulative assessment and in-combination assessment in relation to the Flamborough Head and Bempton Cliffs (FHBC) SPA) and for great black-backed gull (for cumulative

assessment only). All other species have been scoped out of further consideration. The Applicants' response to the tiered approach does not provide an assessment of the impacts taking into account the tiered approach.

- b) As a result of no agreement between the Applicant and Natural England at Interested Parties Deadline I stage over the absence of likely significant effects as a result of collision risk from East Anglia One in-combination with other plans and projects, the Applicant has carried out further technical work on the risk posed to gannet and has provided this information to the Examining Authority at Interested Party Deadline II (APEM 2013b).

As part of that further technical work the Applicant reconsidered the in-combination assessment and, using the approach to the inclusion, or not, of projects as described in footnote (a) above on kittiwake concluded that the level of additional mortality (based on the published PVA model for gannet) did not exceed the point at which there is a 5% probability of the FHBC SPA population going in to decline. The PVA predictions indicate that the collision mortality by the proposed East Anglia One wind farm in-combination with other North Sea wind farms will not have an adverse impact on the integrity of the FHBC SPA population of gannets see **Habitats Regulations Assessment Report Version 2 - September 2013 Submitted in Response to Rule 17 Request paragraphs 398-399 (Doc Ref: REP-269)**.

At the hearing Dr Caldwell (Natural England) explained that, while Natural England cannot exclude a significant effect arising from the proposed development in combination, on balance, he was able to conclude that no reasonable scientific doubt remains as to the absence of an adverse effect on the integrity of the Flamborough Head and Bempton Cliffs SPA due to collision mortality of gannets at East Anglia One acting either alone or in-combination with those other plans and projects considered in Table 3.8 of the Applicant's technical note on gannet. However, as discussed in connection with Agenda Item 2.1.3 (Issue Specific Hearing 17 September 2013), the issue is whether the list of other wind farms provided in Table 3.8 of the Applicant's technical note on gannet is a complete one. It is Natural England's advice that the omission of potential collision mortality at a number of other offshore wind farms from the Applicant's assessment means that the information provided is not sufficiently broad to encompass all of the in-combination effects which should be assessed. Therefore it is Natural England's advice that scientific doubt remains as to the absence of adverse effects on the integrity of the Flamborough Head and Bempton Cliffs SPA in-combination see **Natural England Representation received on 18 October 2013 for Deadline III (Doc Ref: REP-276)**

East Anglia One has submitted their response to the tiered approach to inform cumulative and in-combination assessment, see **EAOL - Response to the Tiered Approach (October 2013) (Doc Ref: REP-312)**. Section 2 of the response to the tiered approach document details EAOL's approach to project inclusion within the cumulative and in-combination

assessments for the East Anglia One project and provides a written response to the suggested Tiered Approach. Section 3 comprises Tiered Approach Tables for gannet and kittiwake (for both cumulative assessment and in-combination assessment in relation to the Flamborough Head and Bempton Cliffs (FHBC) SPA) and for great black-backed gull (for cumulative assessment only). All other species have been scoped out of further consideration. The Applicants' response to the tiered approach does not provide an assessment of the impacts taking into account the tiered approach.

The ExA asked (Issue Specific Hearing 17 September 2013) Dr Caldwell (Natural England) whether, if Natural England could not conclude that there would not be an adverse effect on integrity in combination with those other wind farms, what mitigation, if any, it would suggest. Dr Caldwell (Natural England) said in response that to date Natural England has not proposed mitigation with regards to gannets. In his opinion there was very little the Applicant could do to mitigate for impacts on gannet at the colony (in terms of greater management) because access to enable management was near impossible, and the colony was in any case growing very rapidly suggesting little scope to improve the current situation. In Dr Caldwell (Natural England's) view the only viable mitigation option would be some form of mitigation at the array.

In connection with this issue, Natural England also queried whether a full in-combination assessment, taking into account all of the impacts associated with the various proposed offshore wind farm developments, would provide a clearer indication as to which projects were predicted to have a greater impact per turbine. It may be possible then to take a strategic approach and to focus on reducing impacts at those sites where impacts were greatest and in so doing allow for more capacity at arrays elsewhere, which, by virtue of their location, would have a smaller impact on bird species. This information has not been provided by East Anglia One.