



The Planning Inspectorate  
Yr Arolygiaeth Gynllunio

# **REPORT on the IMPLICATIONS for EUROPEAN SITES**

## **Proposed South Humber Bank Energy Centre**

An Examining Authority report prepared with the  
support of the Environmental Services Team

Planning Inspectorate Reference: EN010107

31 March 2021

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# 1 INTRODUCTION

## 1.1 Background

- 1.1.1 EP Waste Management Ltd (the Applicant) has applied to the Secretary of State (SoS) for a development consent order (DCO) under Section 37 of the Planning Act 2008 (PA2008) for the proposed South Humber Bank Energy Centre (the application). The SoS 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 SoS as to the decision to be made on the application.
- 1.1.2 The relevant SoS is the competent authority for the purposes of The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) for applications submitted under the PA2008 regime. The findings and conclusions on nature conservation issues reported by the ExA will assist the SoS in performing their duties under the Habitats Regulations.
- 1.1.3 This RIES compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the Examination by both the Applicant and Interested Parties (IPs), up to Deadline (DL) 5 of the Examination (19 March 2021) in relation to potential effects on European Sites<sup>1</sup>. It is not a standalone document and should be read in conjunction with the Examination documents referred to. Where document references are presented in square brackets [] in the text of this report, that reference can be found in the Examination Library published on the National Infrastructure Planning website at the following link:  
<http://infrastructure.planninginspectorate.gov.uk/document/EN010107-000285>
- 1.1.4 It is issued to ensure that IPs, including Natural England (NE), the statutory nature conservation body, are consulted formally on Habitats Regulations matters. This process may be relied on by the SoS for the purposes of Regulation 63(3) of the Habitats Regulations. Following consultation, the responses will be considered by the ExA in making its recommendation to the SoS and made available to the SoS along with this report. The RIES will not be revised following consultation.
- 1.1.5 The Applicant has not identified any potential impacts on European sites in any European Economic Area States in their Habitats Regulations Assessment Report (HRAR) [REP5-004]. Only European sites within the national site network and Ramsar sites are addressed in this report.

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<sup>1</sup> The term European Sites in this context includes sites within the UK's national site network as defined in the Habitats Regulations, and Ramsar sites, which are included as a matter of Government policy. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see the Planning Inspectorate's Advice Note 10.

## 1.2 Documents used to inform this RIES

- 1.2.1 The Applicant's DCO application concluded that there is the potential for Likely Significant Effects (LSE) on three European sites and therefore provided a HRAR entitled 'Habitats Regulations Assessment Signposting' [APP-027], together with screening and integrity matrices (HRAR Appendices 1 and 2, respectively) with the DCO application.

### **Examination**

- 1.2.2 The Examination began on 10 November 2020.
- 1.2.3 The Applicant, in their 'Comments on Relevant Representations' [REP1-008], received for DL1, addressed comments made by NE in relation to Habitats Regulations Assessment (HRA) in their Relevant Representation (RR) [RR-008]. The draft Statements of Common Ground (dSoCGs) with NE [REP1-010] and North East Lincolnshire Council (NELC) [REP1-011] and finalised SoCG with North Lincolnshire Council (NLC) [REP1-012] submitted by the Applicant for DL1, contained information relevant to HRA.
- 1.2.4 The ExA issued First Written Questions (ExQ1) on 17 November 2020 [PD-006], responses to which were due for DL2 (8 December 2020). Questions 10.0.1 – 10.0.36 related to HRA matters and the content of the HRAR. Responses to these questions were received at DL2 from the Applicant [REP2-008], NE [REP2-020] and NELC [REP2-017 and REP2-018].
- 1.2.5 In response to the ExA's questions and representations made by IPs during the Examination the Applicant provided an updated HRAR [REP2-001] at DL2 containing updated screening and integrity matrices.
- 1.2.6 A finalised SoCG with NE was submitted by the Applicant at DL2 [REP2-003], in which all HRA-related matters were shown as agreed.
- 1.2.7 The Applicant submitted their comments on the responses from IPs to ExQ1 at DL3 [REP3-011], which included HRA matters.
- 1.2.8 An updated dSoCG between the Applicant and NELC was submitted at DL3 [REP3-005] and a finalised version was submitted at DL4 [REP4-006]. Neither of these contained any changes to the HRA-related content of the dSoCG submitted at DL1 [REP1-011].
- 1.2.9 The ExA issued Further Written Questions, which included points in respect of HRA matters, on 5 March 2021 (ExQ2) [PD-010].
- 1.2.10 Relevant responses to the HRA-related questions contained in ExQ2 were received for DL5 from the Applicant [REP5-005], NE [REP5-010] and NELC [REP5-014], and an updated HRAR [REP5-004] was provided by the Applicant. All references to the HRAR in this report are to this version unless stated otherwise.

### **Application Documents**

- Habitats Regulations Assessment Signposting (the Applicant's HRAR dated April 2020) [APP-027]

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- Biodiversity Strategy [APP-030]
- Indicative Lighting Strategy [APP-031]
- Development Consent Obligation [APP-032]
- Environmental Statement (ES) Chapters 4, 5, 6, 7, 8, 10, 14 and 17 [APP-038, APP-039, APP-040, APP-041, APP-042, APP-044, APP-048 and APP-051, respectively]
- ES Vol II Figure 3.3: Environmental Receptors within 5km [APP-060]
- Outline Construction Environmental Management Plan [APP-107]
- Figure 10C.2: Statutory and Non-statutory Designations, ES Vol III Appendix 10C: Preliminary Ecological Appraisal Report [APP-123]

### **Relevant Representations**

- Natural England [RR-008]

### **Procedural Decisions and Notifications from the Examining Authority**

- Examining Authority's First Written Questions (ExQ1) [PD-006]
- Examining Authority's Further Written Questions (ExQ2) [PD-010]

### **Examination Documents**

- The Applicant's Comments on Relevant Representations [REP1-008]
- North East Lincolnshire Council's Local Impact Report (LIR) [REP1-018]
- Habitats Regulations Assessment Signposting Revision 2.0 [REP2-001]
- The Applicant's Response to Examining Authority's First Written Questions Part 1 [REP2-008]
- The Applicant's Response to Examining Authority's First Written Questions Part 3 [REP2-010]
- Natural England's response to ExQ1 [REP2-020]
- The Examining Authority's Written Questions and Requests for Information (ExQ1) – North East Lincolnshire Council's Response [REP2-018]
- The Examining Authority's Written Questions and Requests for Information (ExQ1) – North East Lincolnshire Council's Response, Appendices G, H, I and J [REP2-017]
- The Applicant's Response to the First Written Questions Responses [REP3-011]

- Habitats Regulations Assessment Report Revision 3.0 [REP5-004]  
(*Note: this is an updated version of the Habitats Regulations Assessment Signposting Revision 2.0 [REP2-001]*)
- The Applicant's Response to the Examining Authority's Further Written Questions and Requests for Information [REP5-005]
- Natural England's response to ExQ2 [REP5-010]
- The Examining Authority's written questions and requests for information (ExQ2) – North East Lincolnshire Council's Response [REP5-014]

### **Statements of Common Ground**

- Draft Statement of Common Ground with Natural England [REP1-010]
- Draft Statement of Common Ground with North East Lincolnshire Council [REP1-011]
- Statement of Common Ground with North Lincolnshire Council [REP1-012]
- Statement of Common Ground with Natural England [REP2-003]
- Draft Statement of Common Ground with North East Lincolnshire Council [REP3-005]
- Statement of Common Ground with North East Lincolnshire Council [REP4-006]

## **1.3 Structure of this RIES**

### **1.3.1 The remainder of this report is as follows:**

- **Section 2** identifies the European sites that have been considered within the DCO application and during the Examination period, up to 19 March 2021. It provides an overview of the issues that have emerged during the Examination.
- **Section 3** identifies the European sites and qualifying features screened by the Applicant for potential LSEs, either alone or in combination with other projects and plans. The section also identifies where IPs have disputed the Applicant's conclusions, together with any additional European sites and qualifying features screened for potential LSEs during the Examination.
- **Section 4** identifies the European sites and qualifying features which have been considered in terms of adverse effects on site integrity, either alone or in combination with other projects and plans. The section identifies where IPs have disputed the Applicant's conclusions, together with any additional European sites



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and qualifying features considered for Adverse Effects on Integrity  
(AEoI) during the Examination.

## 2 OVERVIEW

### 2.1 European Sites Considered

- 2.1.1 The project is not connected with or necessary to the management for nature conservation of any of the European sites considered within the Applicant's assessment.
- 2.1.2 The Applicant's HRAR identified the following European sites (and features) for which the UK is responsible for inclusion within the assessment:

**Table 2.1: Sites Screened into the HRA by Applicant**

Name of European Site	Features
Humber Estuary Special Area of Conservation (SAC)	Estuaries
	Mudflats and sandflats not covered by seawater at low tide
	Sandbanks which are slightly covered by sea water all the time (subtidal sandbanks)
	Coastal lagoons
	Salicornia (Glasswort) and other annuals colonizing mud and sand
	Atlantic salt meadows
	Embryonic shifting dunes
	Shifting dunes along the shoreline with European marram grass (white dunes)
	Fixed coastal dunes with herbaceous vegetation (grey dunes)
	Dunes with common sea buckthorn
	River lamprey
	Sea lamprey
	Grey seal
Humber Estuary Special Protection Area (SPA)	Populations of European importance of breeding, passage and over-wintering birds: Great bittern (non-breeding); Great bittern (breeding);

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	<p>Common shelduck (non-breeding);  Eurasian marsh harrier (breeding);  Hen harrier (non-breeding);  Pied avocet (non-breeding);  Pied avocet (breeding);  European golden plover (non-breeding);  Red knot (non-breeding);  Dunlin (non-breeding);  Ruff (non-breeding);  Black-tailed godwit (non-breeding);  Bar-tailed godwit (non-breeding);  Common redshank (non-breeding); and  Little tern (breeding).</p>
	<p>Waterbird assemblage</p>
<p>Humber Estuary Ramsar site</p>	<p>Near-natural estuary with the following component habitats: dune systems; humid dune slacks; estuarine waters; intertidal mud and sand flats; saltmarshes; and coastal brackish/ saline lagoons.</p>
	<p>Grey seal</p>
	<p>Natterjack toad</p>
	<p>Internationally important assemblage of wintering waterfowl: 153,934 waterfowl, non-breeding season</p>
	<p>Species/ populations occurring at levels of international importance over winter:  Common shelduck;  Golden plover;  Red knot;  Dunlin;  Black-tailed godwit;</p>

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	Bar-tailed godwit; and Common redshank.
	Migrating river lamprey and sea lamprey

2.1.3 In response to ExQ2 QB.10.3 [PD-010] Version 3 of the HRAR [REP5-004] identified additional qualifying features of the European sites that had not been included in the previous iterations of the HRAR.

2.1.4 The Applicant did not explicitly identify the scope of the assessment in the application HRAR. It is stated that it is usual to consider a search radius of 10km to identify potential pathways for air quality impacts on European sites (paragraph 3.1.3), and no further information was provided. It is not explained whether this or any other study area was applied in respect of the other impacts considered in the HRAR, ie noise and vibration, visual disturbance, displacement, and surface water quality. ExQ10.0.3 and ExQ10.0.16, contained in ExQ1 [PD-006], asked the Applicant to provide information on the study areas, to which the Applicant responded for DL2 [REP2-008]. It confirmed that the 10km study area applied to all potential pathways, and that the scope of the ecological impacts assessment had been agreed with NELC and NE had not made any objection to the baseline data-gathering approach.

## 2.2 HRA Matters Considered During the Examination

2.2.1 The Examination has focussed on NE’s concerns expressed in their RR [RR-008] that the Applicant had provided insufficient evidence to establish that there would be no adverse impacts on the Humber Estuary European sites and that further information was required to assess the following impact pathways:

- noise disturbance from piling during construction to SPA and Ramsar birds using the Humber Estuary foreshore (Pyewipe mudflats);
- noise and vibratory disturbance from piling during construction and during operation to SPA and Ramsar birds using neighbouring functionally-linked land (fields to the north and south of the application site); and
- air quality impacts on the SPA, Ramsar site and SAC arising from Nitrogen Oxides (NOx) concentrations and acid deposition resulting from the Proposed Development in combination with other plans and projects during operation.

2.2.1 The ExA asked a number of questions in ExQ1 (10.0.1 – 10.0.36) [PD-006] in respect of the information contained in the HRAR including in relation to decommissioning; the study area; methodology; site features; LSEs; proposed mitigation; and omissions, discrepancies and clarifications.

2.2.2 Further questions on the content of the HRAR were contained in ExQ2 [PD-010]. QB.10.1, QB.10.2, QB.10.4 and QB.10.5 were directed to the

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Applicant and requested updates to the HRAR and matrices to address requests made by the ExA in ExQ1 and to reflect information contained in the answers provided by the Applicant to ExQ1 in relation to in-combination effects. QB.1.8 asked the Applicant whether it considered that there were any implications for the application arising from the policy paper published by the Department for Environment, Food and Rural Affairs (DEFRA) on 1 January 2021 and the DEFRA guidance published on 24 February 2021 relating to changes to the Habitats Regulations following the departure of the United Kingdom from the European Union. The Applicant responded that neither document had any implications for the application as the changes were of a procedural nature and the guidance related to consenting a plan or project under a HRA derogation, which was not relevant to their application.

- 2.2.3 In addition, QB.1.2 asked the Applicant and NELC to provide an update on progress in respect of a proposed Deed of Variation that sought to vary the existing Section 106 (s106) agreement under the Town and Country Planning Act 1990 for 'the Consented Development' (a 49.9 MW energy from waste power station on the DCO application site granted planning permission by NELC in April 2019). The s106 agreement related to the South Humber Gateway (SHG) Mitigation Strategy, contained in the North East Lincolnshire Local Plan 2013-2032 (NELLP), designed to mitigate impacts associated with the loss of land functionally linked to the Humber Estuary SPA and Ramsar site (see Section 4 of this report).
- 2.2.4 QB.10.3 asked NE to confirm whether they considered that all of the correct site features were represented in the HRAR (Table 4.1).

### 3 LIKELY SIGNIFICANT EFFECTS

- 3.0.1 Within the HRAR the Applicant references European Commission (EC) guidance on HRA<sup>2</sup>. National guidance on HRA is provided on the GOV.UK website: 'Habitats regulations assessments: protecting a European site' (February 2021).
- 3.0.2 The Applicant has addressed potential in-combination effects within Sections 6, 7.4 and 7.5 of their HRAR. 13 schemes have been included in the in-combination assessment carried out by the Applicant. These are identified in HRAR Tables 6.1 (construction) and 6.2 (operation) and reflect the shortlist of plans and projects considered in the ES cumulative assessment. The following projects have been included in the in-combination assessment carried out by the Applicant:
- 1 - Stallingborough Link Road (DM/0094/18/FUL);
  - 2 - Sustainable Transport Fuels Facility (DM/0664/19/FUL);
  - 3 - Engineering Works – Paragon House (SM/0147/16/FUL);
  - 4 - Renewable Energy Power Facility – Kiln Lane (DM/0848/14/FUL);
  - 5 - Selvic Shipping CHP Boilers (DM/0449/17/FUL);
  - 6 - Waste Tyre Pyrolysis – Immingham Rail Freight (DM/0333/17/FUL);
  - 7 - VPI Immingham - Energy Park A (PA/2018/918);
  - 8 - Great Coates Renewable Energy Centre (DM/0329/18/FUL);
  - 9 - Waste to Energy – Immingham Rail Freight (DM/0628/18/FUL);
  - 10 - North Beck Energy Centre (DM/0026/18/FUL);
  - 11 - Stallingborough Interchange Business Park (DM/0105/18/FUL);
  - 12 - VPI Immingham OCGT (DCO EN010097); and
  - 13 - 525 Residential Development (DM/0728/18/OUT).
- 3.0.3 As a result of the screening assessment, the Applicant concluded that the project is **likely to give rise to significant effects**, either alone or in combination with other projects or plans, on the qualifying features of the European sites listed below:
- Humber Estuary SPA (during construction);
  - Humber Estuary SAC (during operation); and
  - Humber Estuary Ramsar (during construction and operation).

3.0.4 The Applicant identified the following significant effects:

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<sup>2</sup> EC 'Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC' (2007) and EC 'Assessment of plans and projects significantly affecting Natura 2000 sites' (2001).

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- on the Humber Estuary SPA during construction (project alone) - loss of functionally linked habitat within the Proposed Development boundary; noise impacts to birds using the Pyewipe mudflats; noise/ vibration impacts to birds using the arable field to the south of the Proposed Development (Field 37); noise/ vibration impacts to birds using arable fields to the north (Fields 30 and 31); and visual impacts to birds using the arable field to the south (Field 37)
- on the Humber Estuary Ramsar site during construction (project alone) - noise impacts during construction to birds using the Pyewipe mudflats; noise/ vibration impacts during construction to birds using the arable field to the south (Field 37); noise/ vibration impacts during construction to birds using arable fields to the north (Fields 30 and 31); and visual impacts during construction to birds using the arable field to the south (Field 37);
- on the Humber Estuary SAC during operation (project alone): changes in air quality from NO<sub>x</sub> emissions; and changes in air quality from nutrient nitrogen deposition;
- on the Humber Estuary Ramsar site during operation (project alone): changes in air quality from NO<sub>x</sub> emissions; and changes in air quality from nutrient nitrogen deposition;
- on the Humber Estuary SPA during construction (in combination): noise disturbance to functionally linked habitat (in combination with Project Nos 1 & 2 identified above); and loss of functionally linked habitat (in combination with Project Nos 1 & 2 identified above)
- on the Humber Estuary Ramsar site during construction (in combination): noise disturbance to functionally linked habitat (in combination with Project Nos 1 & 2); and loss of functionally linked habitat (in combination with Project Nos 1 & 2 identified above);
- on the Humber Estuary SAC during operation (in combination): air quality effects;
- on the Humber Estuary SPA during operation (in combination): noise disturbance to functionally linked habitat (in combination with Project Nos 1 & 2); and air quality (in combination with Project Nos 2, 6, 7, 8, 10 & 12 identified above); and
- on the Humber Estuary Ramsar site during operation: (in combination): noise disturbance to functionally linked habitat (in combination with Scheme Nos 1 & 2); and air quality (in combination with Project Nos 2, 6, 7, 8, 10 & 12 identified above).

3.0.5 The Applicant's conclusion of potential LSEs on those European sites and their qualifying features **were not disputed** by any IPs during the Examination.

### 3.1 Summary of HRA Screening outcomes during the Examination

- 3.1.1 A total of three European sites were screened by the Applicant prior to Examination (see Table 2.1).
- 3.1.2 The Applicant concluded that there would be LSEs on all of the three European sites. The IPs did not dispute the Applicant's screening conclusion for these European sites and qualifying features. These sites are discussed further in Section 4 of this report.



## 4 ADVERSE EFFECTS ON INTEGRITY

### 4.1 Conservation Objectives

4.1.1 The conservation objectives for the European sites taken forward for consideration of effects on their integrity, and discussed in this section of the report, are summarised in Section 4, Table 4.2 of the HRAR. In the absence of objectives for Ramsar sites, the same objectives have been assumed in the HRAR for the Humber Estuary Ramsar site as those of the Humber Estuary SAC and SPA.

### 4.2 The Integrity Test

#### **No Adverse Effects on Site Integrity**

4.2.1 The Applicant concluded in the HRAR that the Proposed Development would not adversely affect the integrity of the European sites listed below and their features:

- Humber Estuary SAC;
- Humber Estuary SPA; or
- Humber Estuary Ramsar.

4.2.2 NE, in their RR [RR-008], stated in relation to all of the three European sites that, on the basis that the relevant proposed mitigation was secured in the DCO, they were satisfied that the Proposed Development was not likely to result in significant/ adverse effects:

- on water quality, arising from foul water drainage during construction and operation on the Humber Estuary SAC, SPA or Ramsar site. This was on the basis that an on-site package treatment plant was the Applicant's preferred drainage option. NE were of the view that further consideration would be needed as part of the HRA if the Applicant decided to implement an alternative drainage option;
- on air quality, arising from the project alone during construction and operation on the Humber Estuary SAC or Ramsar site;
- arising from the direct loss of functionally linked land during construction and operation on the Humber Estuary SPA or Ramsar site;
- arising from visual disturbance to SPA/ Ramsar site birds using the neighbouring functionally linked land during construction and operation on the Humber Estuary SPA or Ramsar site; and
- arising from lighting disturbance to SPA/ Ramsar site birds using the neighbouring functionally linked land during construction and operation on the Humber Estuary SPA or Ramsar site.

- 4.2.3 NE considered that relevant mitigation was contained in draft DCO (dDCO) Requirements 9 (Lighting scheme), 11 (Biodiversity protection), 12 (Biodiversity mitigation and enhancement), and 15 (Construction environmental management plan). Surface water and foul water drainage are addressed in dDCO Requirements 13 and 14, respectively, and provide that the surface and foul water drainage systems must be in accordance with the principles set out in the outline drainage strategy.
- 4.2.4 In relation to the direct loss of functionally linked land NE made reference to the SHG Mitigation Strategy, contained in the NELLP Policy 9, designed to mitigate impacts associated with the loss of land functionally linked to the Humber Estuary SPA and Ramsar site. NE were satisfied that the Applicant's commitment to a financial contribution towards the SHG strategic mitigation land, to be secured by a Deed of Variation to the Consented Development s106 agreement for the same between the Applicant and NELC, was an acceptable approach to mitigate for the loss of waterbird-supporting habitat.
- 4.2.5 In their response [REP2-008] to ExQ1 0.0.13 the Applicant explained that it had adhered to NELLP Policy 9 by committing to a financial contribution to the SHG Mitigation Strategy through their Development Consent Obligation [APP-032], which would be used to pay (retrospectively) towards the costs of constructing the Cress Marsh wetland habitat (SHG mitigation site). (An updated version, Revision 2.0, of the Development Consent Obligation was provided at DL2 [REP2-011].) It stated that construction of this habitat was completed by NELC in winter 2018/ 19, and NELC had advised the Applicant that it had been demonstrated by survey data to be successfully providing functional habitat for waterbirds. The Applicant did not indicate when it anticipated that the Deed of Variation would be completed and the s106 variation take effect. However, in their responses to ExQ1 5.0.2 and ExQ1 5.0.3 they stated that they would ensure that the obligation in the s106 agreement was secured and considered that the existing s106 agreement would constitute a development consent obligation and as such could be taken into account by the SoS in determining the DCO application.
- 4.2.6 In their LIR [REP1-018] NELC referred to the need for a contribution to the SHG Mitigation Strategy from the Applicant totalling £105,378 (based on site area). They described the Strategy as a strategic approach to promoting economic development on the South Humber Bank whilst maintaining the area's functional relationship with the estuary through the creation of a network of smaller sites of wetland/ grass habitat creation to mitigate the impact on overwintering birds from the estuary. They stated that the contribution secured by the existing s106 agreement and proposed variation related to the Cress Marsh wetland site should be secured prior to the granting of the DCO, noting that this was the Applicant's intention. They confirmed that the proposed ecological mitigation measures, including measures in the SHG Mitigation Strategy, were identical to those agreed for the NELC Consented Development and deemed to accord with Policies 6, 9 and 41 of the NELLP.
- 4.2.7 It was shown as agreed in the dSoCG with NELC [REP1-011] submitted for DL1 that appropriate mitigation had been secured in the DCO so that there would be no significant adverse effects on waterbirds associated with the

Humber Estuary SPA and Ramsar site. This included the proposed financial contribution from the Applicant to the SHG Strategic Mitigation Scheme. There were no changes to this in subsequent iterations of the SoCG and a finalised SoCG with NELC [REP4-006] was submitted by the Applicant at DL4 which showed that all matters were agreed.

- 4.2.8 In the finalised SoCG with NLC [REP1-012], all matters are shown as agreed. It is confirmed that NLC supported the proposal for the Applicant to provide a contribution towards strategic mitigation for (effects on) SPA/ Ramsar waterbirds and agreed that it would be adequately secured according to the Applicant's statement that it would be secured in the DCO.
- 4.2.9 In response to the ExA's request in ExQ10.0.13 and ExQ10.0.14 for additional information on the SHG Mitigation Strategy the Applicant provided, within their response to ExQ1 [REP2-010], copies of the SHG Ecological Mitigation North East Lincolnshire Delivery Plan (Appendix 10), and Policy 9 (Habitat Mitigation: South Humber Bank) of the NELLP (Appendix 12). They commented that they understood that NELC would also be submitting a number of documents containing information on the strategy for DL2.
- 4.2.10 In their response to ExQ1 10.0.13 and 10.0.14 [REP2-017] NELC provided information on the strategy as requested and also provided related Appendices G (Memorandum of Understanding), H (RTPI Excellence Award SHG Submission and Certificate), I (South Humber Gateway Ecological Mitigation North East Lincolnshire Delivery Plan) and J (Local Plan Policy 9) [REP2-018]. NELC explained that the SHG Mitigation Strategy is a long-term strategy which has been agreed between NELC, NLC, NE, the Environment Agency, Lincolnshire Wildlife Trust and the Royal Society for the Protection of Birds to address impacts of new development on the overwintering birds on the South Humber. They described it as providing a strategic approach whereby the appropriate mitigation was effectively provided up front by the partnership (including mitigation land assembly, habitat creation and monitoring) and developers paid an appropriate contribution based on land area to recover the cost of the work pro rata. A 48ha site has been established at Cress Marsh; NELC stated that this attracts large numbers of birds and provides more than sufficient mitigation land than is required through current consents/ submissions to adequately mitigate the impact on overwintering birds.
- 4.2.11 In their response to ExQ2 QB.1.2 [PD-010], which requested an update on the proposed variation to the s106 agreement, the Applicant stated that it was intending to submit the completed (signed and dated) Deed of Variation by DL6, or earlier if it was available [REP5-005]. NELC confirmed in their response to the question that they were content with the Deed of Variation and were not aware of any further updates but would work with the Applicant to execute it when the document was available to seal.
- 4.2.12 A number of the Applicant's conclusions in relation to the European sites and their features listed in Table 2.1 above were disputed by NE in their RR [RR-008]. NE stated their view that there was no fundamental reason of principle why the Proposed Development should not be permitted however the Applicant had provided insufficient evidence to establish that

there would be no adverse impacts on the European sites and further information was required to assess the following impact pathways:

- noise disturbance to SPA and Ramsar birds using the Humber Estuary foreshore (Pyewipe mudflats) from piling during construction;
- noise and vibratory disturbance to SPA and Ramsar birds using neighbouring functionally-linked land (fields to the north and south of the application site) from piling during construction, and operation;
- and air quality impacts on the SPA, Ramsar site and SAC arising from NO<sub>x</sub> concentrations and acid deposition in combination with other plans and projects during operation.

- 4.2.13 The Applicant responded to NE's RR in their 'Comments on Relevant Representations' (Section 12) [REP1-008], Appendix 8 of which contained a copy of a technical memo from the Applicant to NE (dated 5 October 2020) entitled 'Clarifications provided to Natural England'. It is stated in Appendix 8 that it addresses NE's points only in relation to air quality and that noise disturbance was addressed in a separate memo, which was not provided for DL1. It was subsequently provided for DL2 in Appendix 9 of Part 3 of the Applicant's response to ExQ1 [REP2-010]. The Applicant stated that some matters had been agreed (as set out in the dSoCG with NE submitted for DL1 [REP1-010]) and that they expected to conclude ongoing discussion with NE on the outstanding matters in 'the near future'. NE did not make any submissions for DL1.
- 4.2.14 The Applicant explained that Appendix 8 included further explanation to demonstrate there would be no AEOI for the European sites with regard to NO<sub>x</sub> and acid deposition.
- 4.2.15 In respect of noise disturbance, noise contour maps and evidence of undisturbed habitat availability were provided in Appendix 9 of Part 3 of the Applicant's response to ExQ1 [REP2-010].
- 4.2.16 The Applicant noted that following review of the information provided in the memos NE sought further clarification from the Applicant but the Applicant did not provide any details relating to these clarifications; NE provided the details in their response to ExQ1 [REP2-020] (see below).
- 4.2.17 In relation to mitigation the Applicant pointed to dDCO Requirements 9 (Lighting scheme), 11 (Biodiversity protection), 12 (Biodiversity mitigation and enhancement), 15 (Construction environmental management plan) and 17 (Piling) as securing the relevant measures.
- 4.2.18 The Applicant stated that it was reflected in the dSoCG with NE submitted for DL1 that NE had agreed (subsequent to the comments in their RR) that operational noise would not result in significant effects.
- 4.2.19 In relation to construction noise from piling disturbing SPA/ Ramsar birds using the Humber Estuary foreshore, NE noted in their RR [RR-008] that the noise assessment demonstrated that there would be a potential increase of up to 4dB, compared with the ambient noise levels, from the

proposed drop hammer piling activity, and that the peak noise could potentially be even greater than the ambient noise levels. They noted that the Applicant had used significance criteria for disturbance to birds based on peak noise levels of 75dB LA<sub>max</sub> being classified as a minor adverse impact and therefore not determined to be a LSE on bird behaviour. NE considered that such an increase in noise levels could disturb bird species using the Pyewipe mudflats and requested further information to demonstrate that a LSE could be ruled out.

- 4.2.20 NE noted that para 7.2.8 of the HRAR stated that the elevated noise levels would only reach the portion of Pyewipe mudflats closest to the main development area but that no evidence was provided to illustrate how big an area this might be. NE noted that the HRAR subsequently stated that the piling works would take place over a relatively short period of time but highlighted that passage species, particularly black-tailed godwit, are only present in these areas for very limited periods of time before moving to their wintering/ breeding grounds. As a result, disturbance impacts on foraging efficiency and energy expenditure could have a significant effect on these species. NE further noted that the use of Continuous Flight Augering (CFA) piling was considered in paragraph 10.6.15 of ES Chapter 10 (Ecology) [APP-044] and were of the view that if CFA piling were to be used it could be concluded that "likely significant impacts" could be ruled out for bird species using the foreshore.
- 4.2.21 In relation to noise and vibratory disturbance to SPA/ Ramsar birds using neighbouring functionally linked land to the north of the application site during construction, NE considered that the proposal to use CFA piling rather than drop hammer piling could adequately mitigate these impacts, but that it was not clear if the figures set out in paragraph 10.6.23 of ES Chapter 10 (Ecology) [APP-044] related to the location of the noise receptor (LT3) or a central location within the field. NE were of the view that seasonal piling restrictions could also adequately mitigate these impacts but considered that further evidence was required to demonstrate there would be adequate alternative undisturbed habitat available, as the noise assessment indicated that there could also be increased noise levels on the nearby mudflats.
- 4.2.22 In respect of noise and vibratory disturbance to SPA/ Ramsar birds using neighbouring functionally linked land to the south of the application site during construction, NE noted that the noise assessment concluded that there would be a slightly higher predicted noise level in the centre of the fields compared with the ambient noise level, but that it was concluded according to the applied significance criteria that the predicted peak noise levels of 72dB LA<sub>max</sub> would have a minor adverse impact and LSEs could be ruled out. NE considered that such an increase in noise levels could disturb bird species using those fields.
- 4.2.23 In relation to noise and vibratory disturbance to SPA/ Ramsar birds using neighbouring functionally linked land to the north and south of the application site during operation, NE noted that it was predicted by the Applicant that there would be some increase in noise levels above the ambient level. NE acknowledged that Figure 8.2 (Predicted Noise Levels at Ecological Receptors) [APP-069] demonstrated how the predicted noise levels would attenuate from the levels at the edge of the fields to the levels

in the centre of the fields, but considered that further information was required to demonstrate that there would be an adequate area of the field that would remain undisturbed and justification provided that this could still provide functional supporting habitat for SPA/ Ramsar site species.

- 4.2.24 NE requested that noise contour maps were provided to illustrate how the proposed piling noise levels and operational noise levels would attenuate across the Humber estuary foreshore and associated functionally linked land.
- 4.2.25 The Applicant provided their response (Part 1) [REP2-008]) to ExQ1 [PD-006] for DL2. Part 3 of their response [REP2-010] contained associated appendices relevant to HRA.
- 4.2.26 The Applicant confirmed, in their response [REP2-008] to ExQ1.10.18, that they would implement CFA piling or seasonal constraints on drop hammer (percussive) piling, or a combination of both, and that no other piling options would be proposed. They stated that they would revise the wording of dDCO Requirement 17 to describe only these two mitigation options.
- 4.2.27 Appendix 9 [REP2-010] of the Applicant's response to ExQ1 provided a more detailed response to NE's concerns in relation to noise and their request for evidence of the availability of undisturbed habitat to support the Applicant's argument that there were plenty of alternative foraging/ roosting areas if birds were displaced by noise and vibration impacts during construction and operation. Figures A to L of the Appendix contain  $LA_{eq}$  and  $LA_{max}$  noise contour maps for drop hammer and CFA piling, as requested by the ExA in ExQ1 0.0.35.
- 4.2.28 The Appendix explained that drop hammer piling gives rise to frequent noise peaks for the duration of the piling activity whereas CFA piling does not as it does not include the regular bangs associated with drop hammer piling, and that CFA piling would be much less likely to disturb birds, which are more sensitive to loud peak noise events. It was predicted that the use of CFA piling would result in a decrease of around 10 dB  $LA_{max}$  from that predicted using drop hammer piling, which would result in a significant decrease in the peak noise modelled across the fields to the north (30 and 31) and south (37) and across the Pyewipe mudflats.
- 4.2.29 The Appendix also cross-referenced the ES Ecology chapter, in which it was concluded, based on a 2012 Xodus Group study on bird behaviour in response to piling activity prepared on behalf of Associated British Ports ('Grimsby River Terminal Construction Pile Noise Monitoring and Bird Behaviour Observations'), that there would be a minor adverse effect on waterbirds feeding/ loafing/ roosting on the Pyewipe mudflats where peak noise levels were between 65 - 75 dB  $LA_{max}$ . It explained that less than 1% of the mudflats would be affected by construction noise levels in excess of 65 dB  $LA_{max}$ , and considered that it would be reasonable to assume that the birds that favoured this area would move further away to the south rather than completely abandon their favoured feeding/ roosting/ loafing grounds. It also highlighted that the Pyewipe mudflats are fronted by industrial areas and are therefore subject to industrial noise and activity currently, meaning that it could reasonably be assumed that the birds are habituated to noise given that they are present in large numbers at this location in the winter months.

- 4.2.30 It was considered that given the small proportion of the Pyewipe mudflats that could potentially experience higher  $LA_{max}$  noise levels during drop hammer piling it could reasonably be concluded that there was sufficient undisturbed area on the mudflats to the south-east (which are significantly wider than the mudflats adjacent to the Proposed Development) to accommodate any birds displaced from areas within the zone of influence of the Proposed Development.
- 4.2.31 Table 2 and Table 3 of Appendix 9 present the modelled  $LA_{max}$  levels during construction at Field 37 to the south and Fields 30 and 31 to the north, respectively, for drop hammer piling in five locations within the application site. These indicated that a large proportion of the fields were predicted to be subject to noise levels up to 75 dB  $LA_{max}$  during drop hammer piling.
- 4.2.32 The Appendix confirmed that the proposed mitigation was to apply seasonal and timing constraints on drop hammer piling (two hours either side of high tide during September to March, when waterbirds are most likely to be present in the fields) and/ or to use CFA piling, as secured in the dDCO.
- 4.2.33 In relation to  $LA_{eq}$  levels the modelled drop hammer piling scenario indicated that only a very small proportion of Fields 30 and 31 (0.2%) and 37 (0.6%) would be subject to construction noise levels in excess of 65 dB  $LA_{eq}$  (the threshold above which a significant effect is more likely) at the closest point to the Proposed Development, along the field boundaries. It was considered that it could reasonably be concluded that aggregations of waterbirds would not be present in close proximity to these boundaries as they are known to prefer open vistas with sufficient scanning distance to observe ground predators.
- 4.2.34 In relation to operational effects, it was stated that the modelling for Fields 30 and 31 indicated that 2.5% of the total combined area would be subject to noise levels in excess of 65 dB  $LA_{eq}$ , and that as this was along the field boundaries it was considered unlikely that waterbirds would favour those areas regardless of the ambient noise level on the basis that they generally avoid boundary features. It was also noted that if the operational noise did reach a level above which a disturbance response may be elicited from the waterbirds, about 97.5% of the field would remain undisturbed for feeding/ roosting/ loafing waterbirds. It was considered that it could be reasonably concluded that as the majority of the area of Fields 30 and 31 was not predicted to experience operational noise levels above which disturbance may be expected, it would continue to provide functional supporting habitat for SPA and Ramsar species.
- 4.2.35 NE in their response to ExQ1 [REP2-020] stated that they had clarified with the Applicant that in line with the mitigation hierarchy noisy works should be avoided during sensitive time periods for overwintering SPA and Ramsar bird species, where possible but acknowledged that the Applicant wished to provide the contractors with as much flexibility as possible to work during the winter.
- 4.2.36 They noted that the Applicant had proposed two mitigation options and were of the view that the use of CFA piling would be the more effective mitigation measure as it does not produce impulsive, discontinuous noise, which is more disturbing to bird species. NE agreed that the alternative

option of the avoidance of impact piling two hours either side of high tide during the wintering period (September to March inclusive) and any residual short-term disturbance impacts on overwintering birds would not result in adverse effects on the integrity of the Humber Estuary SPA and Ramsar site. This was provided that the piling works would not take longer than one month to complete, as suggested in the HRAR and other documents, and the mitigation measures were appropriately secured.

- 4.2.37 In relation to air quality impacts, NE noted in their RR [RR-008] that the background NO<sub>x</sub> concentrations already exceeded the critical levels and that the Applicant's air quality assessment reported that the annual mean NO<sub>x</sub> environmental thresholds for a saltmarsh habitat receptor near the application site would be exceeded in combination with other plans or projects. In respect of acid deposition NE noted that acid deposition environmental thresholds would be exceeded in-combination with other plans/ projects for fixed dune habitat receptors. NE considered that further information and justification was required to demonstrate why it was concluded that there would be no AEOI on the European sites due to in-combination air quality effects.
- 4.2.38 It is stated in Appendix 8 of the Applicant's comments on the RRs [REP1-008] that in response to NE's request for explanation, the Applicant had reviewed both the NO<sub>x</sub> and acid deposition Process Contributions (PCs) and Predicted Environmental Concentrations to assist the competent authority in undertaking its appropriate assessment.
- 4.2.39 In relation to in-combination effects of NO<sub>x</sub> the Applicant stated that the air quality modelling had identified several locations within the Humber Estuary SPA, SAC and Ramsar site where the PC for mean NO<sub>x</sub> was between 1.2 and 1.3% of the Critical Load (CL), and referred to the reference within NE's air quality impact assessment guidance to Institute of Air Quality Management (IAQM) guidance that advises that the 1% and 10% screening criteria should not be used rigidly and provides an example of 1.1% effectively being 1%. The Applicant was of the view that it was therefore correct for their assessment to take the values as whole percentages using rounding of the first decimal place, which resulted in them all being rounded down to 1%, in which case the PC threshold for screening out in-combination effects was not exceeded.
- 4.2.40 The Applicant also made reference to a statement on the UK Air Pollution Information System (APIS) database that "...there is substantial evidence to suggest that the effects of NO<sub>2</sub> are much more likely to be negative in the presence of equivalent levels of SO<sub>2</sub>" and that as SO<sub>2</sub> levels are generally low (i.e. well below 10 µg/m<sup>3</sup> and well below the CL) locally to the application site no synergistic effect with NO<sub>x</sub> was expected. Additionally, the Applicant referred to NE guidance that states that "...1% of critical load/ level are considered by NE's air quality specialists (and by industry, regulators and other statutory nature conservation bodies) to be suitably precautionary, as any emissions below this level are widely considered to be imperceptible...". On this basis the Applicant considered that the conclusion of no likely significant in-combination effects as a result of changes in NO<sub>x</sub> emissions was therefore valid.



- 4.2.41 In relation to in-combination effects of acid deposition the Applicant pointed out that the detailed assessment was contained in ES Chapter 17, as signposted from the HRAR. They stated that the cumulative PC would be between 1.1 and 1.2% of the CL at six locations within the Humber Estuary SPA, SAC and Ramsar site (sand dune habitats) and that, as for NO<sub>x</sub>, the application of the IAQM guidance resulted in no exceedance of the 1% screening thresholds for acid deposition at the designated site receptors modelled for the in combination assessment. On this basis the Applicant considered the conclusion of no likely significant in-combination effects as a result of changes in acid deposition was therefore valid.
- 4.2.42 NE noted, in their response [REP2-020] to ExQ1, in relation to the in-combination effects of NO<sub>x</sub>, that additional ecological reasoning had been provided in the ES Chapter 17, paragraph 17.8.12 [APP-051]. Based on this information, NE concurred with the assessment conclusions that the Proposed Development would not result in adverse effects on the integrity of the European sites due to the predicted NO<sub>x</sub> contributions in combination with other plans or projects.
- 4.2.43 In relation to the in-combination effects of acid deposition, NE noted that given that the sand dunes are likely to be calcareous based on the soil type and the plant communities in the area, the APIS description of acid deposition was relevant, which highlights that "soil acidification as a result of acid deposition has relatively little impact in UK dunes because sand dune soils are generally well-buffered, with the exception of the few acidic dune systems (UKREATE, 2000)". NE stated that based on this information they concurred with the assessment conclusions that the Proposed Development would not result in AEOI for any of the European sites due to predicted acid deposition contributions in combination with other plans or projects.
- 4.2.44 The Applicant submitted an updated signed SoCG with NE for DL2 [REP2-003] with all matters agreed.
- 4.2.45 NE confirmed that the Applicant had provided them with further information in response to their RR and that as set out in the updated SoCG [REP2-003] they had no outstanding queries and all relevant matters had been agreed.
- 4.2.46 In the 'Applicant's Response to the First Written Questions Responses' [REP3-011] the Applicant noted NE's comments contained in their response to ExQ6.0.5 [REP2-020] in respect of the timing and methods of piling. The Applicant confirmed that drop hammer piling would not be required for more than four weeks and that piling mitigation was secured by dDCO Requirement 17, the wording of which was refined at DL2 [REP2-014]. They also confirmed that all matters had been agreed with NE, as recorded in the finalised SoCG submitted for DL2 [REP2-003]. NE did not make any submissions for DL3.
- 4.2.47 In response to ExQ2 [PD-010] the Applicant provided an updated HRAR [REP5-004] that incorporated additional information required to inform an appropriate assessment and contained updated screening and integrity matrices in Appendices 1 and 2 as requested by the ExA. Table 6.1 had been amended to include consideration of in-combination visual effects as requested by QB.10.2. In response to QB.10.3, Table 4.1 (Designated sites

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scoped into HRA screening) had been amended to include each of the qualifying features of the European sites considered in the assessment rather than a summary as per the previous versions. The Applicant stated that this had been shared with NE and that they had shared their response with the Applicant prior to DL5. The integrity matrices in Appendix 2 had been updated in response to QB.10.4 to accurately reflect the LSEs identified in the screening assessment. QB.10.5 asked the Applicant to revise the screening and integrity matrices so that the European site features listed were consistent with those identified on NE's website. The Applicant responded that the matrices had been updated to include all the individual bird species that comprise the population assemblages of the European sites according to information obtained from Joint Nature Conservation Committee's website.

- 4.2.48 In response to QB.10.3 NE confirmed that they had received an updated version of Table 4.1 from the Applicant on 16 March 2021 and that the previously omitted features of the three European sites had been added (as set out in HRAR Version 3). They also highlighted that it was indicated in Table 1A.2 (Screening Matrix for Humber Estuary SAC) of HRAR Version 2 that Atlantic salt meadows were either not susceptible to potential effects or were outside the zone of influence for potential impacts from deterioration in air quality during operation both alone and in-combination with other plans and projects, and that this appeared to be contradictory to Table 5.2 (Likely Significant Effects during Operation) of the HRAR. NE noted that they had advised in their RR [RR-008] that a LSE could not be ruled out either alone or in-combination for this habitat type, but confirmed that overall they remained satisfied that there would be no AEoI for the reasons listed in their RR and their response to ExQ1 [REP2-020]. In their response to QB.10.3 the Applicant confirmed that they had amended Table 1A.2 to address NE's comment.