

REPORT

Boston Alternative Energy Facility

Addendum to Without Prejudice Habitats Regulations
Assessment Derogation Case: Compensation Measures
(for The Wash SPA)

Client: Alternative Use Boston Projects Ltd.

Planning Inspectorate EN010095

Reference:

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Pursuant to: APFP Regulation: 5(2)(g)

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Date: 10 March 2022



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Date: 10 March 2023

Classification

Project related

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Table of Contents

1	Introduction	1
1.1	Reason for Addendum	1
2	Ornithology Compensation for The Wash SPA	2
2.1	Compensation Sites	2
2.2	Further Options Under Investigation for Providing Compensation	20
3	Summary of Measures against Generic Compensation Requirements	22
3.1	Analysis of Proposed Measures	22
4	References	26
	Appendix A Landscape Engineer's Report on Compensation Sites	27
4.1	Background Information	27
4.2	Site Descriptions and Discussion	28
	Appendix B Field Survey Maps and Summaries from Compensation Sites	34
4.3	Corporation Point (original smaller footprint)	34
4.4	Wyberton Roads (North)	38
4.5	Wyberton Roads (South) (original 7.3 ha footprint)	42
4.6	Scrane End (original 1.2 ha footprint)	46
	Appendix C – Landowner Letters of Support for Compensation Site Acquisition	49
	Appendix D Applicant's Response to Secretary of State's Letter of 14th October 2022	50

Table of Tables

Table 3-2 Analysis of the Proposed Without Prejudice Compensatory Measures for Birds within The Wash SPA and Ramsar site, against Defra (2021) guidance on 'Habitats regulations assessments: protecting a European site'	22
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1 Introduction

1.1 Reason for Addendum

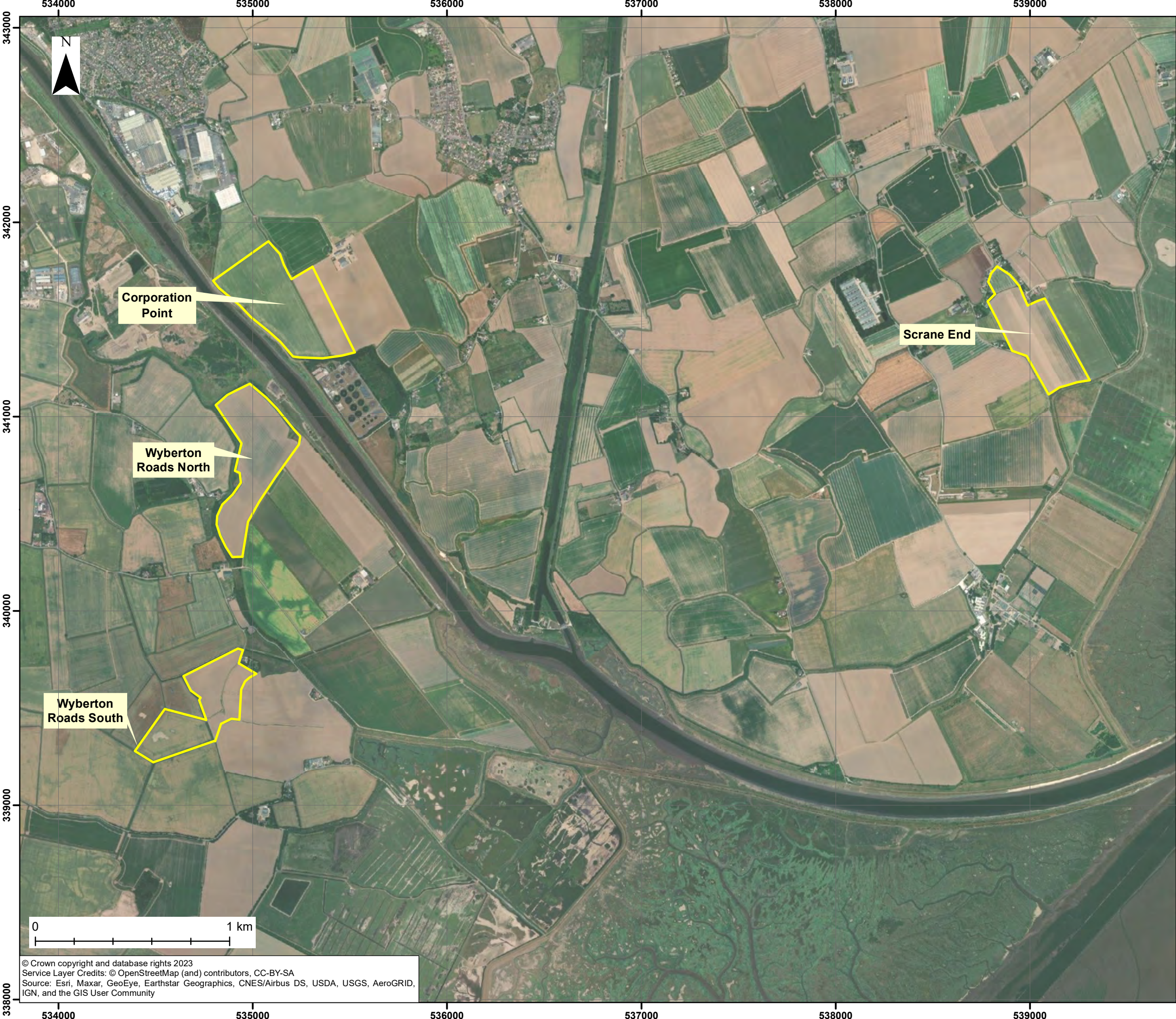
- 1.1.1 This 'Addendum to Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (for The Wash SPA)' (the 'Compensation Addendum') document is provided in support of the application for a Development Consent Order (DCO) made to the Planning Inspectorate under Section 37 of the Planning Act 2008 (the Act). It is submitted specifically to respond to the comments raised in the recent letter from BEIS on the 10th January 2023, which outlined requests from the Secretary of State for further information, and the latest submissions from Natural England and RSPB in connection with the compensation sites put forward 'without prejudice' for The Wash SPA/Ramsar site.
- 1.1.2 This addendum provides further detail on the sites put forward within the previous document relating to compensation measures relevant to The Wash SPA as set out in:
- the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(4)) (Compensation Measures Document); and
 - the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107 and appended to this document as **Appendix D**).
- 1.1.3 The addendum also includes an additional proposal to create a replicate wader roost site around the mouth of The Haven (for use by waterbirds associated with the existing mouth of the Haven roost site, in particular those which favour more marine intertidal habitat such as turnstone *Arenaria interpres* and oystercatcher *Haematopus ostralegus*). Previously, this additional site was thought to be unsuitable as it is located within The Wash and North Norfolk Coast Special Area of Conservation (SAC). However, in more recent correspondence with Natural England, it has suggested that this may be a possible option, dependent on the outcome of the Habitats Regulations Assessment (HRA) undertaken for this proposed roost site.
- 1.1.4 This Compensation Addendum should be read alongside the updated Without Prejudice HRA Derogation Case - Compensation Measures 'the Compensation Measures Document' (document reference 9.30(4)) submitted at the same time as this Addendum, as the Addendum updates and supersedes some of the

information presented in the Compensation Measures Document with regard to the compensation measures and potential compensation sites.

2 Ornithology Compensation for The Wash SPA

2.1 Compensation Sites

- 2.1.1 In its Updated Advice on Ornithology Impacts (document reference EN010095-001402), Natural England stated it is unable to advise further on compensation measures without inclusion of a map showing the proposed compensation sites. Aerial imagery showing the compensation site locations already discussed in the Compensation Measures Document is therefore provided in **Figure 2-1**. Discussion of the additional (roost) site at the mouth of The Haven is provided at **paragraph 2.1.32**, together with a figure showing the proposed location (subject to an assessment of Likely Significant Effect (and possibly Appropriate Assessment)).



Key

Proposed Compensation Sites

0	10/03/23	For Submission	GC	DB	PS
REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

CLIENT

**ALTERNATIVE USE
BOSTON PROJECTS LTD**

PROJECT

**BOSTON
ALTERNATIVE ENERGY FACILITY**

TITLE

**FIGURE 2-1: COMPENSATION
SITE FOOTPRINTS**



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Enhancing Society Together

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Email info.peterborough@rhdhv.com
Website www.royalhaskoningdhv.com

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DATE	10/03/2023	SCALE @A3	1:18,000	REF	PB6934
DRAWING NUMBER	PB6934-RHD-01-ZZ-DR-4040			STATUS	REVISION
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- 2.1.2 In its Response to the Examining Authority's Rule 17 Questions at Deadline 10 (document reference REP10-046), the RSPB highlighted the need for "*specific investigations for the location where the measures will be implemented to demonstrate that the locations would be ecologically effective.*" The proposed locations provide a network of sites that would provide habitats that would constitute sufficient and appropriate compensatory measures for waterbirds if they were to be displaced by the proposed operation of the Facility. Specific investigations have subsequently been conducted on the land parcels set out in **Figure 2-1** and information from investigations regarding landscape engineering (**Appendix A**) and ornithology survey data (**Appendix B**) is provided in this section.
- 2.1.3 Other RSPB remarks that were made within REP10-046 highlighted the following criteria that should be referenced with regard to the compensation sites:
- a) **Technical feasibility**, which "*closely relates to the feasibility of obtaining the necessary legal consents*" – a response regarding technical feasibility of landscape engineering is provided in this document (**paragraphs 2.1.9, 2.1.13, 2.1.22 and 2.1.29**) and correspondence relating to the ability of the Applicant to obtain the land parcels is provided in **Appendix C**.
 - b) **Extent**: concerns "*whether the proposed extent of the compensation locations is sufficient to deliver the required ecological functions,*" - a response is provided on this matter in this document (**paragraphs 2.1.10, 2.1.19, 2.1.25 and 2.1.30**),
 - c) **Location**: "*Compensation measures should be as close to the area of impact as possible, while minimising the external pressures that may reduce the likelihood of success*" - response is provided on this matter in this document (**paragraphs 2.1.11, 2.1.20, 2.1.26 and 2.1.31**),
 - d) **Timing**: "*compensation measures should be fully functional (that is, secured, designed and created and ecologically functional) before any damage occurs*" - In Appendix B7 of Natural England's Deadline 9 Submission 'Natural England's Comments on Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures' [REP8-006]) it is stated that, "*Natural England concurs with the view that two years should be allowed between site establishment and its need to provide compensation. Sites undergoing this type of restoration take time to establish and often require follow-up work after initial site establishment.*" The Applicant has updated section 4.8 of the Compensation Measures Document to include an updated programme for implementation of the ornithology compensation based on a DCO decision date of 6th July 2023. A tracked change

and clean copy of the Compensation Measures Document (document reference 9.30(4)) is provided as a separate submission alongside this addendum. The programme continues to show that more than two years is available for adaptive management of the sites before potential impacts from disturbance occur.

- 2.1.4 e) **Long-Term Implementation:** *“Expectation that they would be designed as part of the [national site network] NSN. Such sites must therefore be provided and maintained in perpetuity; a 30-year lease is simply not acceptable”* - It is agreed that where compensation sites are offsetting the permanent loss of habitat that they need to remain in perpetuity and as such are more likely to become part of the designated site. However as these sites (with the exception of the HMA) are for disturbance impacts, the Applicant is of the view that the measures can be secured and contribute to the overall coherence of the national site network without them becoming a formal component of those sites (as occurs in functionally connected habitat areas). The Applicant considers that it is appropriate to maintain the compensation sites for operational impacts up to the point the Facility is decommissioned as those impacts would cease to occur once the Facility is no longer operational. A 30 year lease with the ability to extend the term if required is therefore considered appropriate to cover the operational and decommissioning period of the Facility. Additionally, the without prejudice schedule included in the draft DCO (Schedule 11) provides that the compensation measures could not be decommissioned without the written approval of the Secretary of State.

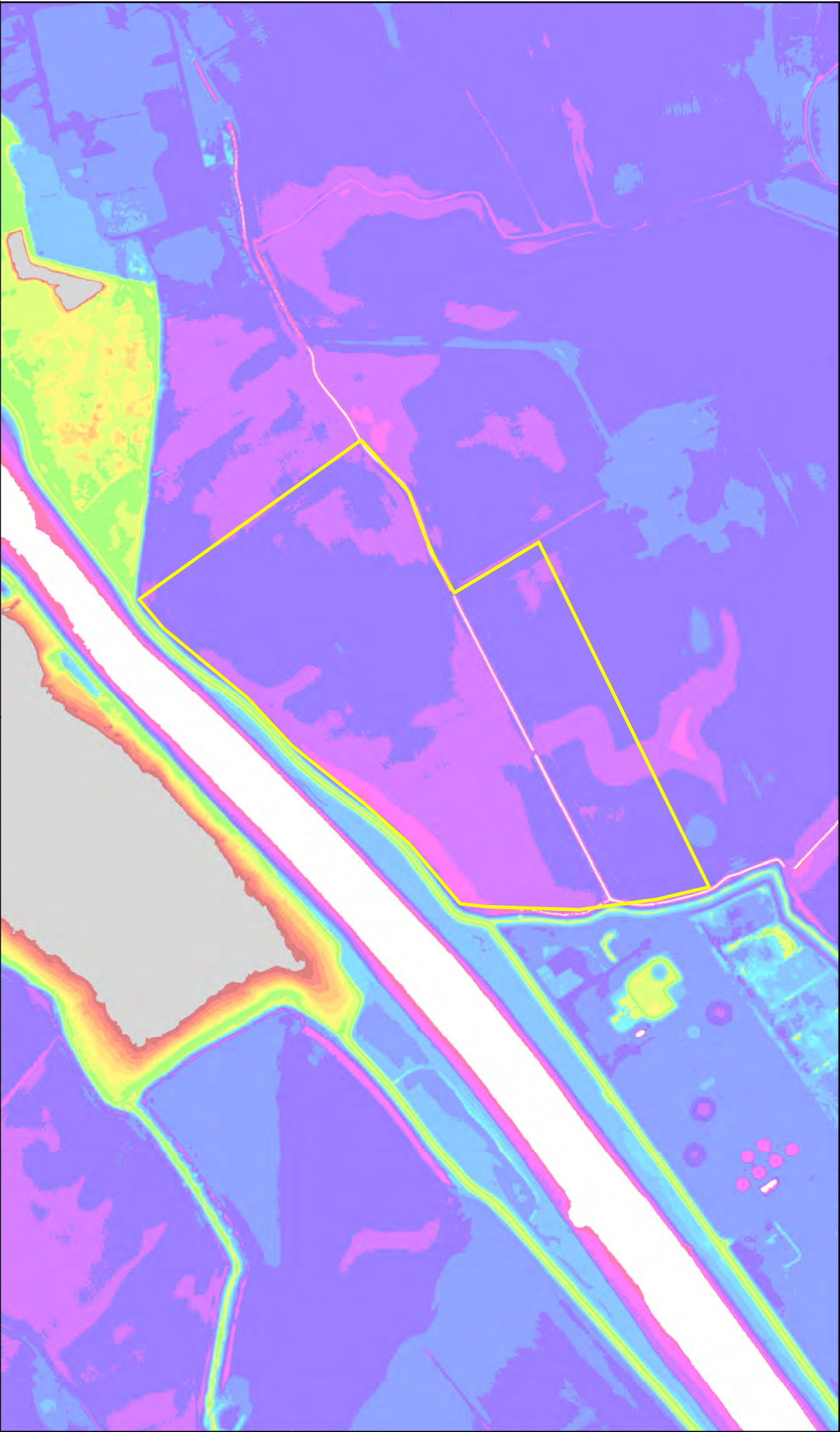
- 2.1.5 Further information that has been collated for the proposed compensation sites and the additional site is discussed further below.

Corporation Point

- 2.1.6 Land at Corporation Point, first raised in the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**), is an area of continuous open habitat currently in agricultural use totalling **20.3 ha** on the north side of The Haven (**Figure 2-2**).



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Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Key

Proposed Compensation Sites

LIDAR Composite 2022 1m DTM (mOD, metres Ordnance Datum)

	< 1
	1.01 - 1.5
	1.51 - 2
	2.01 - 2.5
	2.51 - 3
	3.01 - 3.5
	3.51 - 4
	4.01 - 4.5
	4.51 - 5
	5.01 - 5.5
	5.51 - 6
	6.01 - 6.5
	6.51 - 7
	7.01 - 7.5
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	9.01 - 9.5
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TITLE					
FIGURE 2-2: AERIAL PHOTOGRAPH AND LIDAR IMAGERY SHOWING LOCATION AND ALTITUDE VARIATION OF LAND AT CORPORATION POINT					
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- 2.1.7 RSPB asked for more detail on land at Corporation Point in its Response to Secretary of State's Letter 14th October 2022. Detail was requested *"to demonstrate [the land] can be secured and suitable measures able to be implemented to support the creation and maintenance of roosting habitat."*
- 2.1.8 With regard to securing the land for the identified compensation sites the reader is directed to **Appendix C** which provides letters from the current landowners of the proposed compensation sites Corporation Point, Wyberton Roads (North) and Wyberton Roads (South). Should the Secretary of State determine compensation is required, the Applicant would seek to enter into appropriate legal agreements with the relevant land owners. As part of the approval of the ornithology compensation implementation and monitoring plan "details of landowner agreements demonstrating how the land will be bought or leased and assurances that the land management will deliver the ecology objectives of the OCIMP" must be included. Please also refer to paragraphs 2.8.25 - 2.8.26 and 2.8.54 - 2.8.58 of the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**).
- 2.1.9 **Technical feasibility:** A substantial (2 - 5 hectares (ha)) main scrape or lagoon (as previously described for land at Wyberton Roads (North) in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-005)) is also achievable at Corporation Point, based on a) the overall area and openness of the site and b) the presence of over 100 x 100 m area of lower lying land in the east corner of the land parcel which aerial imagery suggests is already prone to holding ephemeral wetlands (**Figure 2-2**). Initial desk-based study of the landscape engineering required for the site is reported in **Appendix A**.
- 2.1.10 **Extent:** RSPB have previously commented in their Response to Secretary of State's Letter 14th October 2022 (document reference EN010095-001403) that the site is, *"a good size to enable habitat to be created."* The Applicant agrees and, furthermore, the Applicant highlights that following improvement works to the entirety of the site its total area would comfortably exceed 15 ha. This is the minimum area identified in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures document (9.30(2), REP8-005) for former agricultural fields to support the order of magnitude of waterbird assemblage size requiring compensation in principle.
- 2.1.11 **Location:** In its Response to Secretary of State's Letter 14th October 2022, the RSPB remarks that *"in principle having multiple locations along The Haven provides greater certainty that suitable habitat could be created."* The location of

this site, in particular in conjunction with the location of sites at Wyberton Roads, presents multiple available sites along The Haven in close proximity to each other and to other supporting sites such as Frampton Marsh, including two substantial areas on opposite sides of The Haven within ecologically relevant distance of The Wash SPA boundary and Principal Application Site. This pair of sites in particular would present a significant refuge area for waterbirds of The Haven by allowing movement of birds into and off The Haven in any direction, and the full complement of sites would be an effectively spaced network of additional waterbird habitat.

Wyberton Roads (North)

2.1.12 Wyberton Roads (North) was previously described and introduced as the 19 ha site at Wyberton Roads as part of the without prejudice compensation measures package at deadline 8 (document reference 9.30(2), REP8-006 Table 4-1); and further detail was provided in the Applicant's Response to Secretary of State's Letter 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**). The site is a relatively large extent of unpartitioned agricultural land (in context of the immediate area), east of the former tip or landfill site on the south side of The Haven. It is approximately in line with land at Corporation Point on the opposite side of The Haven, and is in close proximity to The Haven, with the England Coast Path running between the land parcel and The Haven foreshore (**Figure 2-3**).




Key

Proposed Compensation Sites

LIDAR Composite 2022 1m DTM (mOD, metres Ordnance Datum)

< 1
1.01 - 1.5
1.51 - 2
2.01 - 2.5
2.51 - 3
3.01 - 3.5
3.51 - 4
4.01 - 4.5
4.51 - 5
5.01 - 5.5
5.51 - 6
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BOSTON ALTERNATIVE ENERGY FACILITY					
TITLE FIGURE 2-3: AERIAL PHOTOGRAPH AND LIDAR IMAGERY SHOWING LOCATION AND ALTITUDE VARIATION OF LAND AT WYBERTON ROADS (NORTH)					
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DATE	07/03/2023	SCALE @A3	1:6,500	REF	PB6934
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- 2.1.13 **Technical feasibility:** Further to reports from land surveys by ornithologists that standing water was noted in existing ruts and hollows (paragraph 2.8.13 of the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**)), Natural England advised further survey work in order to provide greater certainty that there was potential for creation of shallow water areas. This site has since been the subject of further desk-based landscape and hydrological engineering study regarding potential for habitat improvement for waterbirds (**Appendix A, Wyberton Roads (North)**). The flightline between The Haven and the site could be made more attractive for waterbirds by removal (or lowering the crown height) of the limited trees which occur along the England Coast Path in line with the site.
- 2.1.14 A number of options or levels of potential intervention are cited within **Appendix A**, based on the findings of a desk study using the LiDAR data as shown in **Figure 2-3**, which would enable wetting of this site:
- 2.1.15 The desk-based study of Wyberton Roads (North) reports, *"at a basic level, further examination could be undertaken of the interaction between the back ditch and the main valley of the site. In particular, at Point "A" (shown in Figure A2.1a), there appears to be some separation of the back ditch, with the potential for diverting the northern length of the back ditch such that this section of ditch feeds into the "site valley" feeding water into the low-lying area behind the main flood embankment. The southern section of the back ditch would continue to flow to the south. Such works might be quite minor, merely encouraging accumulation of water within the site area.*
- 2.1.16 *"The above works could be further enhanced by excavation along the line of the main site valley...such that the area of permanent areas of open water was encouraged, potentially forming a series of ponds, interspersed with areas of slightly higher ground (using excavated material) with no increased flood risk to the adjacent land. Within the overall site area there is potential for around 8 ha of freshwater habitat areas.*
- 2.1.17 A summary of existing ornithological features of the site as was is provided in Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**) and surveyor documents are provided in **Appendix B**, 'Wyberton Roads (North)'.
- 2.1.18 Improvement of the site as a wildlife refuge would also likely include a blinds-style fence along the east side of the land parcel and a low boundary bank against this fence, made using spoil from forming scrapes.

- 2.1.19 **Extent:** Revised site boundaries record this site as **17.6 ha** in area. The Applicant highlights that following improvement works to the entirety of the site its total area would comfortably exceed 15 ha. This is the minimum area identified in Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(4)), for former agricultural fields to support the order of magnitude of waterbird assemblage size requiring compensation in principle.
- 2.1.20 **Location:** The site has been remarked by RSPB (in document REP10-046) to be unsuitably located to provide compensation for adverse impacts at the mouth of the Haven. This was cited primarily due to its distance from the key rock revetments roost site at the mouth of the Haven (approximately 5 km). The Applicant maintains that this site is of value to compensate impacts on The Wash SPA 'in principle', as it would provide a valuable site within a network of sites that would accommodate a diversity of habitat for the bird species that could be disturbed. It is also located immediately adjacent to The Haven but not within the intertidal area so is less likely to be subject to disturbance, and is located on the southern side of The Haven so less likely to be disturbed by people. This area of The Haven has also been cited by RSPB to be functionally linked to the SPA ; this site lies 1.3 km from the Principal Application Site, 1.3 km from foraging and roosting habitat at Frampton Marsh and 1.2 km from the boundary of The Wash SPA at Hobhole Drain.

Wyberton Roads (South)

- 2.1.21 Wyberton Roads (South) was previously introduced and described as the 7.5 ha site at Wyberton Roads at deadline 8 in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document 9.30 (2), REP8-006) in paragraph 4.7.3 (where its area was reported to be a minimum of 7.3 ha) and Table 4-1. Further detail was provided in the Applicant's Response to Secretary of State's Letter 14th October 2022 (document 9.107, and appended to this document as **Appendix D**). The site footprint available from the landowner for securement at the time of composing these documents was a relatively small and well-drained area with potential for dry habitat creation for waterbirds known to use pasture or short arable sward fields. However, over the course of discussions with the landowner the field to the west of this original footprint has also become available through the same landowner and the updated larger site footprint including both fields is considered (**Figure 2-4**).



Key

Proposed Compensation Sites

LIDAR Composite 2022 1m DTM (mOD, metres Ordnance Datum)

< 1
1.01 - 1.5
1.51 - 2
2.01 - 2.5
2.51 - 3
3.01 - 3.5
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FIGURE 2-4: AERIAL PHOTOGRAPH AND LIDAR IMAGERY SHOWING LOCATION AND ALTITUDE VARIATION OF LAND AT WYBERTON ROADS (SOUTH)					
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DRAWN	GC	CHECKED	DB	APPROVED	PS
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- 2.1.22 **Technical feasibility:** This site has been the subject of further desk-based landscape and hydrological engineering study regarding potential for habitat improvement for waterbirds (**Appendix A**, Wyberton Roads South). This study concludes that creation of wet areas is achievable in particular within the eastern field if this is made available by the same landowner. However, the Applicant considers the foremost potential of this site is improvement to a relatively dry grassland or fallow site for waterbirds such as lapwing and golden plover, to complement extant and proposed sites with wetland located elsewhere in the network of waterbird sites.
- 2.1.23 This site would now provide approximately 15 ha of continuous open habitat with potential for improvement for waterbirds. Plans for use of this area to provide the maximum quality habitat for waterbirds based on the requirements for lapwing and golden plover are:
- Improvement of the area as a dry grassland roosting and foraging site;
 - The dry areas would be re-seeded with regional wild flora and grasses and the sward height maintained low for roosting waterbirds;
 - Part-buried nest boxes for shelduck would be added in banks and edges; and
 - Improvement of the site as a wildlife refuge would also likely include measures to reduce vehicular and pedestrian disturbance to the site such as a blinds-style fence along the north-east side of the land parcel.
- 2.1.24 This land improvement plan would require maintenance of low vegetation height, mixed flowering varieties to encourage insects to the site and provide habitat suitable for foraging and roosting of lapwing and golden plover and potentially breeding habitat for shelduck and lapwing.
- 2.1.25 **Extent:** The site has been remarked by RSPB (in document reference REP10-046) to be of insufficient size for the target numbers of 3000 golden plover and 1100 lapwing, with recommendation that the area required would be at least two to three times the 7.3 ha quoted area to support these target numbers. With the addition of an adjacent area, the continuous area now available at the site is **14.8 ha** (i.e. **x2 times the original area**) as a result of the field to the west now being offered by the landowner.
- 2.1.26 **Location:** The site's proximity to The Haven and The Wash SPA and Ramsar are unchanged by the expanded footprint but the extent is now more favourable for

waterbird habitat creation. The RSPB also questioned or sought clarity at Deadline 10 (REP10-046) on Applicant remarks that the presence of drainage ditches indicated the site is likely to be naturally a wetter area. This remark was simply a statement that presence of (intensive) drainage infrastructure indicates that the land was formerly wetter than at present in order to warrant the drainage (and that isolation of the land from drainage could be a route to wetting this land parcel again).

Scrane End

- 2.1.27 In consultation with the RSPB on 12 January 2022, regarding compensation and Biodiversity Net Gain for waterbird species, RSPB relayed personal observations (from Senior Site Manager J Badley) that dark-bellied brent geese *Branta bernicla* (a non-breeding qualifying feature of The Wash SPA) foraging in fields in this area of The Wash are noted to be distributed one field landward, at most; i.e., generally distributed within one field's length from The Wash foreshore. Therefore, as part of the in-principle compensation package, the Applicant has sought land parcel options in close proximity to The Wash, with the aim of locating fields to specifically support dark-bellied brent geese which, it is suggested by RSPB, will not occupy compensatory measure habitat located further inland.
- 2.1.28 A small parcel of land at Scrane End was previously explored by the Applicant as a component of the in-principle compensation package, with ornithological field surveys conducted on the land parcel in autumn 2022 (**Appendix B**, land at Scrane End). While this land area was itself of insufficient size and proximity to The Wash, the adjoining field to the east, i.e. in the direction of The Wash has since been made available and, therefore the total land parcel comprising the original and new field (**Figure 2-5**) is separated from The Wash foreshore by a single field (part of Freiston Shore RSPB reserve) and so is considered here as a potential site to support dark-bellied brent geese.



Key

Proposed Compensation Sites

LIDAR Composite 2022 1m DTM (mOD, metres Ordnance Datum)

	< 1
	1.01 - 1.5
	1.51 - 2
	2.01 - 2.5
	2.51 - 3
	3.01 - 3.5
	3.51 - 4
	4.01 - 4.5
	4.51 - 5
	5.01 - 5.5
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TITLE FIGURE 2-5: AERIAL PHOTOGRAPH AND LIDAR IMAGERY SHOWING LOCATION AND ALTITUDE VARIATION OF LAND AT SCRANE END					
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DRAWING NUMBER				STATUS	REVISION
PB6934-RHD-01-ZZ-DR-4044				S0	0

- 2.1.29 Technical Feasibility: In consultation regarding compensation and BNG for waterbird species, the RSPB indicated that, when the field is suitably located (close to the foreshore), improvement of agricultural fields for brent geese is relatively simple as a foraging resource can be created through re-sowing with winter wheat. The land at Scrane End is already in intensive agricultural use (see Appendix B) and is in close proximity to The Wash foreshore. The additional larger field now part of the land parcel is of sufficient size to allow geese to forage at distance from human activity and residences. Measures such as addition of screening or fences would be added at appropriate boundaries of the larger field to prevent public access and further reduce potential for visual and noise disturbance from human activity in the surrounding area. Preventing disturbance from pedestrians and dog-walkers will be higher priority than disturbance from road traffic to the east which carries lower potential to disturb brent geese.
- 2.1.30 Extent: The combined land parcel is approximately **15 ha**, comprising the earlier-surveyed 1.2 ha field to the north-west, and the approximately 14 ha added field closer to The Wash.
- 2.1.31 Location: the land parcel is a nearest distance of 600 m from The Wash foreshore and immediately adjacent to land at Freiston Shore RSPB reserve.

Additional Roost Site near the Mouth of The Haven

- 2.1.32 RSPB's response at REP10-046 agreed with Applicant's assessment at within the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-005), stating "*For compensation of the mouth of The Haven vessel disturbance, compensation roost sites should be close to the existing mouth of The Haven roost site, preferably within 1km and ideally within 500m.*" The RSPB's response at REP10-046 also remarked that the proposed compensatory package of field parcels alongside The Haven (improved for waterbirds) were unsatisfactory in this regard on account of their excessive distance from the mouth of the Haven roost site. However, the site at Wyberton Roads (North) is only 1.2km away, and it is argued that this would provide adequate compensation as it would be possible to create a wetland habitat suitable for any displaced waders, including redshank, due to its location close to The Haven but just set back from the intertidal area, therefore providing greater shelter from disturbance from vessels using The Haven, particularly as RSPB has argued that the disturbance of birds along The Haven affects birds in areas of land that are functionally linked to the SPA. However, the Applicant also proposes to re-investigate the additional option of placing roosting rocks within the mouth of The Haven to potentially provide an additional site. This option would require a separate approval from the Marine Management Organisation and a

Habitats Regulation Assessment would be required to demonstrate such measures would not have an adverse effect on integrity of the SAC. This option was put forward previously but it was thought that Natural England was not inclined to consider this option within the SAC.

- 2.1.33 In its **Updated Advice on Ornithology Impacts**, Natural England responded to the Applicant's consideration of alternative roosting rock placement close to the mouth of The Haven, stating *"proposed alternative roosts is likely to be optimal for at least some of the Wash SPA features"* and the Applicant welcomes Natural England's return to discussion of this measure.
- 2.1.34 The Applicant has therefore since returned to previous searches for potential site locations, carried out during the Examination, and consideration of the required scale and assessment for this measure.
- 2.1.35 The search area and three candidate locations for a second rock revetment roosting area, situated away from The Haven shipping route, are shown in **Figure 2-6**.

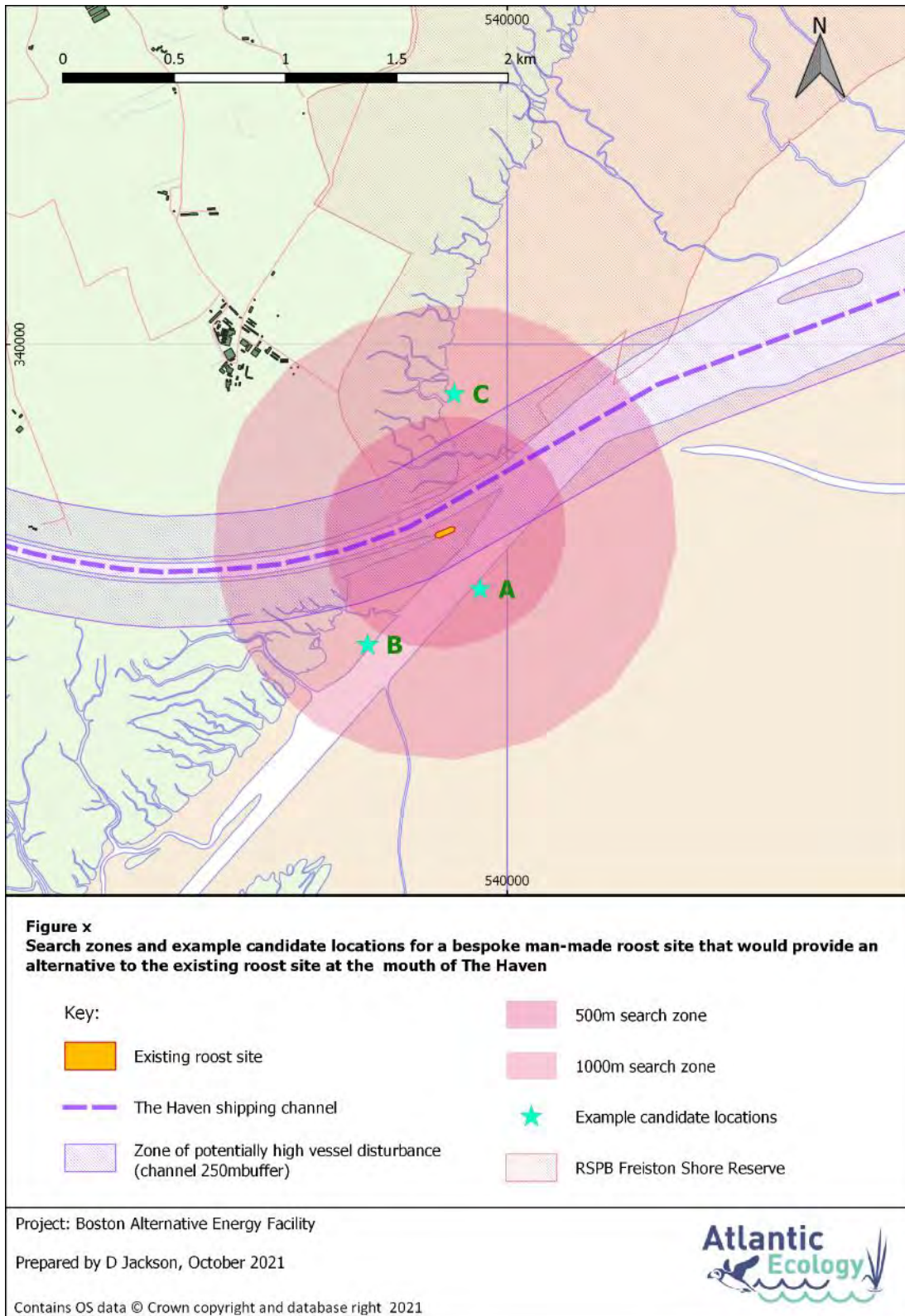


Figure 2-6 Search area and three candidate locations for additional rock revetments roosting area situated away from The Haven shipping route

2.1.36 The existing mouth of The Haven roost site (see **Figure 2-6**) comprises 0.35 ha

of rock revetment above water during high tide (an approximate triangle of length 200 m and base width 35 m, as measured from aerial imagery (Google, 2023) showing the high water mark on the revetments). This is assumed to be the minimum area of habitat above water during high tide (of equal quality) which would be required to compensate effective loss of this habitat due to disturbance and displacement by project vessels during high tide, the other key element being placement location to have similar proximity to foraging (and other roosting) habitat. The proposed compensatory roost revetment created close to the mouth of The Haven would be at least 0.35 ha in habitat area and of equivalent substrate type to the existing roost (as this itself features artificial substrate) but needs to be assessed in terms of any Likely Significant Effect on The Wash and North Norfolk Coast SAC.

- 2.1.37 In its Updated Advice on Ornithology Impacts (published 09/12/22), Natural England reiterated its advice during examination that “*the SAC/priority habitat impacts would need to be additionally dealt with*”, and recommended the Applicant provide “*consideration of compensation for SAC features*”. RSPB also highlights in paragraph 2.13 of their Response to Secretary of State Letter of 14th October 2022 “*the need to compensate for implementation of a compensation measure*” - although the RSPB would regard this situation as demonstrating the unsustainable nature of the proposed measure.
- 2.1.38 The Applicant recognises that compensation for features of The Wash and North Norfolk Coast SAC would only be required under specific outcome conclusions of the HRA for creation of the roosting structure (i.e. in the event that the placement of the rock would have an adverse effect on the integrity of the SAC, or such an effect could not be excluded). The rock placement would involve loss of intertidal habitat to the extent of a minimum 0.35 ha. The below water area of the existing rock revetments site is approximately 0.43 ha as measured from aerial imagery (Google, 2023) showing the extent of the rock substrate at during low water. The area of habitat is expected to be within the ‘mudflats and sandflats not covered by seawater at all times’ feature of the SAC, which covers an area of 18,312 ha within the SAC. The area affected should this measure be implemented would represent approximately 0.002% of the total area of this feature and is being proposed (without prejudice) to manage effects, including baseline effects, on features of interest within The Wash SPA. It is considered unlikely that this would have an adverse effect on integrity of the SAC, particularly as the placement could be sited to avoid any particularly sensitive areas of intertidal and would also be providing additional habitat for colonisation by species that are likely to already be in the area through colonisation of other artificial structures (i.e. rocks placed within the intertidal potentially for a coast protection function in the past). It is recognised

that further discussion would be necessary with Natural England to discuss this potential impact further but it has not been possible to arrange direct consultation with Natural England on this matter.

- 2.1.39 Should a decision be made that Adverse Effect on Integrity (AEoI) cannot be ruled out for the rock placement then the other compensation measures are also in place to provide compensation. If the Applicant considers it is still preferable to progress with this option (rather than the other compensation sites), then compensation measures for The Wash and North Norfolk Coast SAC as a result of construction of the roosting revetments could involve habitat clean-up or improvement elsewhere within the SAC, such as targeted removal of plastics and other damaging debris from qualifying feature habitats. This follows compensation measures being considered for impacts on seabirds from offshore wind projects, wherein conditions are improved elsewhere within the ecological system surrounding the impacted bird species, such as habitat improvement or creation for prey fish species; or reducing mortality due to other factors such as fisheries bycatch (Orsted 2022).

2.2 Further Options Under Investigation for Providing Compensation

Additional dock-level roost site in proximity to Principal Application Site and Port of Boston

- 2.2.1 An additional roosting site provision for waterbirds at a raised height in the upper part of The Haven was first introduced by the Applicant as a potential component of the in-principle compensation package, in the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**). Options for an additional roosting site in the immediate area were sought and put forward by the Applicant following RSPB statements of opinion that the effectiveness of the Habitat Mitigation Area component of the Applicant's mitigation for environmental impacts from vessel and operational noise, was uncertain. For example, within their Response to the Examining Authority's Rule 17 Questions (document reference REP10-046), the RSPB comment *"there remain significant uncertainties about [the Habitat Mitigation Area's] ability to be effective as mitigation given its location close to the Application site and the influence of vessel traffic on the site."* A site with different topography to the Habitat Mitigation Area was sought to provide an option with height and an improved vantage over The Haven, and possible greater perceived distance from vessel traffic in roosting waterbirds; based on examples on incidental dock-level roost sites outlined at Heysham and Seaham in the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107, and appended to this document as **Appendix D**). A raised area above sheet-pile walling in the south bank of The Haven in line with

the entrance to the Port of Boston on the north side of The Haven was identified, and introduced and described in this document.

- 2.2.2 In its Updated Advice on Ornithology Impacts (document reference EN010095-001402), Natural England requested further detail on the proposed dock-level roosting site: *“we are not clear how [substantial] the standoff distance is for the proposed Boston site. We require critical information on the boat/recreational disturbance at the Boston site”*
- 2.2.3 The Applicant’s site plan includes palisade fencing along the landward sides of the dock-level roosting site not simply the water-facing edge. This will leave a consistent distance of more than 20 m between the landward border with the Right of Way and the waterward edge of the site, for the birds to set back from pedestrians, and from the water during high tides.
- 2.2.4 Boat and recreational disturbance is also subject to a standoff distance due to presence of saltmarsh directly below the raised dock, extending 14 m from the sheet pile wall at typical high tide. At lower tides the mudflat extends this standoff distance.
- 2.2.5 In their Comments on Responses to the 14th October 2022 Additional Information Request, paragraph 2.13, RSPB remarked that this raised roost site *“could in principle provide a suitable habitat for waders displaced from the Application Site”*, and also requested more details *“to determine that this site could be secured and the habitat delivered”*.
- 2.2.6 Further discussions with the Environment Agency and the Port of Boston would be required including any implications to flood defence and whether planning permission or other approvals would be required. However, the Applicant stresses that the current site plan does not include modification of the site below the top of the sheet-pile wall or any other works certain to require planning permission such as change in overall land use. The plans as above include maintaining the site as flat and dry but merely more sparsely vegetated and securely isolated from all pedestrians and rights of way.
- 2.2.7 The Applicant stresses that this specific measure and site is categorised as a further option being investigated which could be brought forward as net gain if necessary but is a lower priority measure than those updated above, as it primarily offers an alternative to existing roosting and foraging provision secured and confirmed within the mitigation measures of the Project.

3 Summary of Measures against Generic Compensation Requirements

3.1 Analysis of Proposed Measures

3.1.1 **Table 3-1** provides a summary of the proposed compensation measures analysed against generic compensation requirements.

Table 3-1 Analysis of the Proposed Without Prejudice Compensatory Measures for Birds within The Wash SPA and Ramsar site, against Defra (2021) guidance on ‘Habitats regulations assessments: protecting a European site’

Compensation Requirement	Conclusion
These measures will need to fully offset the damage which will or could be caused to the site	<p>The compensation habitat is considered appropriate in that it would replace roosting and foraging resource predicted to be lost to waterbirds of The Wash SPA should the vessel disturbance cause birds to leave their current roosting and foraging sites.</p> <p>A number of options have been put forward for habitat enhancement. The proposals adopt a tiered approach as currently, under the baseline scenario, when birds are disturbed at the main roost in the mouth of The Haven they fly to extant alternative roosting and foraging sites and this is expected to continue. The Applicant considers that provision of the compensatory package would provide additional roosting and foraging sites over and above the existing situation and therefore result in a net gain for the site overall.</p> <p>The mouth of The Haven roost site comprises 0.35 ha of rock revetment above water during high tide (an approximate triangle of length 200 m and base width 35 m, as measured from aerial imagery (Google, 2023) showing the high water mark on the revetments) in a wider mixed habitat roosting area of approximately 1.4 ha (Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4)), Table 3-1). The total assemblage size of birds requiring compensation under (a worst case scenario) assumption of 100% disturbance and displacement from the mouth of The Haven roost is 7,000 individuals (Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4)), paragraph 3.5.7) which it is estimated from assemblage data from RSPB reserves would require about 15 ha of suitable habitat in terms of type, quality and location to be accommodated at a created site. In addition, disturbance along The Haven and around the proposed Facility could reduce the effectiveness of the roosting sites in these areas which comprise 0.25 ha of roosting habitat. Vessel-based disturbance and displacement causing temporarily loss of 800 m length of The Haven from foraging birds at a given stage of a vessel transition at high tide (and assuming a 1 m belt of intertidal habitat is exposed on each side of The Haven) represents a maximum (temporary) loss of 0.16 ha of foraging habitat, or 1.4 ha of foraging habitat if (as a worst case scenario) the whole Haven Bank was removed from use by foraging birds for any period of a high tide. The habitat lost (temporarily) by birds through disturbance and displacement would equate to approximately 2.8 ha as a worst-case scenario. The area of habitat</p>

Compensation Requirement	Conclusion
	that would be procured for habitat creation is a minimum of 14.8 ha (Wyberton Roads (South) and is within a maximum distance of 1.67 km from the edge of The Haven (measured to the most distant field boundary of the most distant land parcel). Each of Wyberton Roads (North), Wyberton Roads (South), and Corporation Point is approximately 15 ha or more in area and, therefore, once converted to habitat for waterbirds any one of these sites would be of suitable scale to exceed the affected area at the mouth of The Haven and exposed shore above the Mean High Water Spring along The Haven at high water, and support the full assemblage and number of waterbirds potentially displaced (see the Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4))). The presence of multiple sites provides additional resilience to the compensation measures. As discussed in Table 4-1 of the Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4)), these habitats would comprise open fields and scrapes to provide habitat for all birds that could be displaced in this area. In this way, the sites put forward are expected to provide a substantial area of habitat that would be appropriate providing a much larger area of habitat than would be lost due to disturbance. The habitats to be created are planned to provide appropriate habitat type for the birds that would be displaced.
The compensatory measures themselves must not have a negative effect on the national network of sites as a whole, despite the negative effects of the proposal on an individual European site	The compensation habitat for waterbirds created through improvement of fields beside The Haven is not located within a European site and given the nature of the habitat improvement and management required to provide the compensatory habitat there is no potential for a negative effect on habitats within the boundaries of the SAC, SPA or Ramsar site. The compensation measures are considered to have no negative effect on productivity or survival of qualifying feature bird species. The proposal for placing rocks in the SAC would have some effect on the intertidal habitats but this is not expected to result in an AEoI, although this needs to be discussed with Natural England. Should it result in an AEoI and the Applicant wishes to take this measure forward it is expected that compensation could be provided in relation to habitat improvement relating to debris removal. In conclusion the coherence of the National Sites Network would be protected with the proposed compensation measures in place.
Compensatory measures can include creating or restoring the same or very similar habitat on areas of little or no conservation value: <ul style="list-style-type: none"> - within the same site – if it exists - at a suitable location outside the site 	<p>The compensation measures for the farmland sites are to be implemented on land that formerly had little or no conservation value as it was intensively drained and farmed. The land is outside the boundary of the designated sites but is in close proximity to the SPA and Ramsar site and existing roosting and foraging habitat for waterbird species which are also qualifying features of these designated sites. The compensation measures are likewise in the same biogeographical region in the UK.</p> <p>The placement of rocks in the mouth of The Haven would affect a very small proportion of the intertidal habitats in The Wash and, if necessary, would be compensated for by clearing debris from areas of similar habitat affected by debris. Intertidal areas are commonly subject to debris collecting within them due to their tidal nature.</p>

Compensation Requirement	Conclusion
How technically feasible and effective the measures will be – based on scientific evidence and previous examples	<p>The compensatory habitat measures are feasible as they are to be implemented on land suitable for creation of wetland as evidenced from a desk-based study informed by LiDAR data in Appendix A Landscape Engineer's Report on Compensation Sites. This study shows that within compensation areas, creation of a wetland component is technically feasible to create by excavating material from the lowest-lying parts of the site and, where necessary, forming shallow banks to isolate the excavation from potential run-off land in all relevant directions. Targeted flooding is practically and financially feasible by water diversion or abstraction. The compensation measures do not require the adoption of innovative or untested measures.</p> <p>The additional rock revetments site can feasibly imitate the existing revetment roost site at the mouth of The Haven as this original roost features artificially-placed substrate which can be matched in material, block size and total extent. The habitats to be created have also been created successfully before in the surrounding area both through placement of rocks along the edge of the intertidal zone to provide roosting areas and also for the creation and maintenance of bird habitat for the RSPB reserves at Frampton Marsh and Freiston Shore through water abstraction or diversion and the landscaping of scrapes. The placement of rocks is demonstrated to provide successful roosting habitat as the birds are roosting on such habitat already within this area. This demonstrates that the measures are clearly capable of implementation.</p>
How the compensation would be carried out, including how it will be managed and monitored over the time that is needed, and how it has been secured	The compensatory measures for the fields are defined within Table 4-1 of the Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4)), with relevant habitat targets for the various sites. The rock would be carefully placed in position to minimise any damage to surrounding habitat. The work would be carried out outside of the overwintering period for birds. The final designs and methods of implementation would be agreed with NE and RSPB prior to implementation to ensure that they are acceptable. The habitats can be managed over the long-term to ensure that they continue to achieve their objectives and maintain the overall coherence of the National Sites Network.
Distance from the affected site – compensation closer to the site is generally preferred, unless measures further away will benefit the network of sites as a whole	The area of habitat that would be procured for habitat creation is situated along The Haven and within a maximum distance of 1.33 km from the edge of The Haven (measured to the most distant field boundary of the most distant land parcel). A basic distance and (in particular visual) isolation from The Haven and The Wash SPA is the preferred scenario to remove potential visual disturbance and displacement effects of Project vessel movements on birds present in compensation sites. The rock placement would be within approximately 600m of the site.
How long the compensatory measures will take to reach the required quality and amount of habitat	The compensatory measures would have been developing over a period of approximately 2 years prior to the start of operation of the Facility. It is expected that birds of multiple species for which The Wash SPA and Ramsar is designated, would start to roost and forage in the habitats before the operational phase. Discussions with NE have confirmed that 2 years prior to potential impact phase (operational) would be a suitable period to ensure

Compensation Requirement	Conclusion
	usage of the habitat. The proposed programme for implementation of the Facility and the various measures is provided in the updated Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4)) submitted alongside this document, which uses a DCO decision date of 6 July 2023 as the basis for the programme.
Be directed in measurable proportions to the habitats and species negatively affected	The analysis of the area of compensatory measures considered necessary, and the number and assemblage of birds which would need to be accommodated, concludes that the compensation areas would provide a greater area than the area affected and are likely to attract the same species as would be affected. Some of the areas affected are outside of the SAC, SPA and Ramsar site but may provide functionally linked land. The proximity of the compensation land to the species affected area should enable them to deliver the necessary functionality. Each of Wyberton Roads (North), Wyberton Roads (South), and Corporation Point is approximately 15 ha in area and, therefore, once converted to habitat for waterbirds any one of these sites would be of suitable scale to exceed the affected area at the mouth of The Haven and exposed shore above the Mean High Water Spring along The Haven at high water, and support the full assemblage and number of waterbirds potentially displaced (see the Without Prejudice HRA Derogation Case - Compensation Measures (document reference 9.30(4))). The presence of multiple sites provides additional resilience to the compensation measures.
Serve functions that are comparable to those that motivated the original area's submission for designation	The SPA and Ramsar site are (in part) classified for non-breeding and overwintering birds, respectively. Land within the SAC provides habitats for these species (plus breeding terns and redshank). The habitats to be created provide a network of sites that would provide the same functionality in terms of the foraging and roosting resources, and survival, of overwintering birds. In addition, the habitats to be created are likely to provide an area for breeding redshank and shelduck, both species of conservation concern whose breeding populations have connectivity with the non-breeding qualifying feature populations of the designated site. The compensatory measures do, therefore, serve a function that is comparable to that which motivated the designation of the SPA and Ramsar site.

3.1.2 In summary, the analysis presented in **Table 3-1** demonstrates that the proposed compensatory measures would meet the requirements to compensate for the disturbance to birds caused by increased numbers of vessels using The Haven should the Secretary of State determine compensation is required.

4 References

Defra (2021) Guidance: Habitats regulations assessments: protecting a European site. Department for Environment, Food & Rural Affairs. Published 24 February 2021.

Orsted (2022) Hornsea Project Four: Derogation Information FFC SPA: Kittiwake Compensation Plan. Planning Inspectorate document reference B2.7

Appendix A Landscape Engineer's Report on Compensation Sites

4.1.1 The Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(4)) identifies the need to consider opportunities for creation of new or improved wetland habitat. Two potential sites have been identified and this Appendix provides a brief description of these areas discussing in concept how wetland habitat might be developed.

4.1.2 The sites under consideration are shown in **Figure 2-1**:

- Wyberton Roads (North) is situated to the western side of the Haven Channel to the south of Boston.
- Wyberton Roads (South) is situated slightly back from the main Haven Channel, on its western side, to the rear of the old sea bank.

4.1 Background Information

Topographic surveys

4.1.1 Lidar data has been obtained from the data.gov.uk web site, using both DSM and DTM 2020 data to obtain full coverage all sites.

Tidal and extreme water level data

4.1.2 Tidal data has been taken for the Standard Port of Boston from the Admiralty Tide Tables, with extreme water levels taken from the Environment Agency's Boundary Data set 2018. Water levels for the area are shown in **Table A1**.

Table A1. Tidal and extreme water level data for the Boston area

Variable		Level (m, Ordnance Datum)
Tidal	Mean Low Water Spring (MLWS)	-1.57
	Mean Low Water Neap (MLWN)	-0.97
	Mean Sea Level (MSL)	0.43
	Mean High Water Neap (MHWN)	1.73
	Mean High Water Spring (MHWS)	3.73
Extreme Wave Height	T10 (10% Annual Exceedance Probability (AEP))	5.44
	T50 (2% AEP)	5.76
	T200 (0.5% AEP)	6.04

4.2 Site Descriptions and Discussion

Wyberton Roads (North)

Description

- 4.2.1 Figure A2.1a shows the land levels for Wyberton Roads (North) (note the colour shading for each site varies to highlight the variation of ground levels within each site). Figure A2.1b shows an air photograph of the area and Figure A2.1b shows the general land levels for the wider area.
- 4.2.2 The site is adjacent to the main Haven Channel, behind the main flood defence embankment. The site extends back to the southwest as a shallow valley and is bounded on its landward side by the Old Sea Bank.
- 4.2.3 The main defence embankment has a crest level of around 6.6m OD (Ordnance Datum) providing a current defence level of around 1 in 200 years. Seaward of the embankment is an area of marsh to the edge of the main channel at a level of around 3.6m OD.
- 4.2.4 Within the site, the land levels behind the main flood embankment drop to around 2.4m OD to 2.5m OD (shown by pink shading in Figure A2.1a). More generally the main area of the site is around 2.7m OD to 3m OD (shown by green shading in Figure A2.1a), with the land rising slightly to both the north and south to a level in excess of 3m OD (shown by yellow shading in Figure A2.1a).
- 4.2.5 At its southern end the lower lying valley narrows, with a more distinct channel at the head of the valley, squeezed up against the seaward toe of the Old Sea Bank.

Interpretation of Drainage.

- 4.2.6 From the Lidar, the site appears to be a relatively separate unit. To the back of the site there is a narrow drainage ditch running along the seaward toe of the Old Sea Bank, with the Old Sea bank effectively separating the site from lower lying land further to the west. This narrow ditch appears to drain to the south, eventually feeding into the main cut, which drains to the Haven Channel through the Wyberton Marsh some 600m south of the site.
- 4.2.7 While the rear ditch may act to drain the site to a degree, the main slope of the shallow valley of the site is to the north towards the lower lying land to the back of the main flood defence embankment.

Opportunity Assessment

- 4.2.8 As described above, the site provides a natural valley running towards the north.

As such there are various opportunities at different scales of intervention which might be developed to enhance or create wetland habitat.

- At a basic level, further examination could be undertaken of the interaction between the back ditch and the main valley of the site. In particular, at Point “A” (shown in Figure A2.1a), there appears to be some separation of the back ditch, with the potential for diverting the northern length of the back ditch such that this section of ditch feeds into the “site valley” feeding water into the low lying area behind the main flood embankment. The southern section of the back ditch would continue to flow to the south. Such works might be quite minor, merely encouraging accumulation of water within the site area.





Figure A2.1. Details of Wyberton Roads (North) – a) local levels across site, b) air photograph, c) general land levels.

4.2.9 The above works could be further enhanced by excavation along the line of the main site valley (indicated by the pink shading in Figure A2.1a) such that the area of permanent areas of open water was encouraged, potentially forming a series of ponds, interspersed with areas of slightly higher ground (using excavated material). These areas would still be surrounded by the slight increase in land levels surrounding the site, with no increased flood risk to the adjacent land. Within the overall site area there is the potential for improvement of around 8 ha. Typically, and depending on potential existing seepage beneath the main flood embankment, the potential would be for freshwater habitat areas.

Wyberton Roads (South)

Description

4.2.10 Figure A2.2a shows the land levels for Wyberton Roads (South) (note the colour shading for each site varies to highlight the variation of ground levels within each site). Figure A2.3b shows an air photograph of the area and Figure A2.3c shows the general land levels for the wider area.

4.2.11 The site lies inland of the Old Sea Bank, as a wedge of farmland flanked on its northern side by the main cut, which runs out to the Haven Channel through the Wyberton Marsh, and by a secondary tributary cut along its western flank. There

is a more minor ditch running through the southern portion of site draining land to the east of the site. There is no evidence of an edge bank to the various cuts and ditches and as such flooding would occur as the water level in the cuts reach ground levels.

- 4.2.12 The area is flat, at a general level of around 2.5m OD, with little variation compared to the more general land levels in the surrounding the area.
- 4.2.13 Within the site there are quite local areas dropping below 2.4m OD, particularly to the southern area of the site and very locally along the northern line of the main cut. Over the centre of the site, land is marginally above 2.4m OD with only a very local area above 3m OD. The property to the north eastern corner of the site has ground levels typically in the order of 2.6m OD. There is a track that runs through the area. This track is generally at the level of the land.

Interpretation of drainage.

- 4.2.14 Drainage of the wider area feeds down from the north and west towards the main cut, with the smaller ditch running from the land to the east of the site feeding down to the secondary cut on the western side of the site.
- 4.2.15 The drainage and water levels throughout the area will be determined principally by the drainage regime applied to management of the main cut outfall. Any change in this management regime would influence water levels throughout the wider area.

Opportunity Assessment

- 4.2.16 There seems little opportunity for changing the more general water level management to the wider area. Increasing water level within the main cut would risk wider scale flooding.
- 4.2.17 Potentially, there might be some opportunity to partially dam the smaller ditch to the south of the site, locally maintaining higher water levels within the ditch. However, without raising the edges of the ditch and introducing some form of cut-off banks around areas of the site, any change in water level in the ditch, causing increased flooding to areas of the site would give rise to flooding extending beyond the site boundaries. Consideration could be given to extending (or re-shaping) the site, focussing on the area to the south and east of the present area defined in Figure A2.2a (i.e. area "A") such that advantage is taken of the naturally lower lying areas (shaded red in Figure A2.2a). This might still require construction of low banks to the north and west of this area.

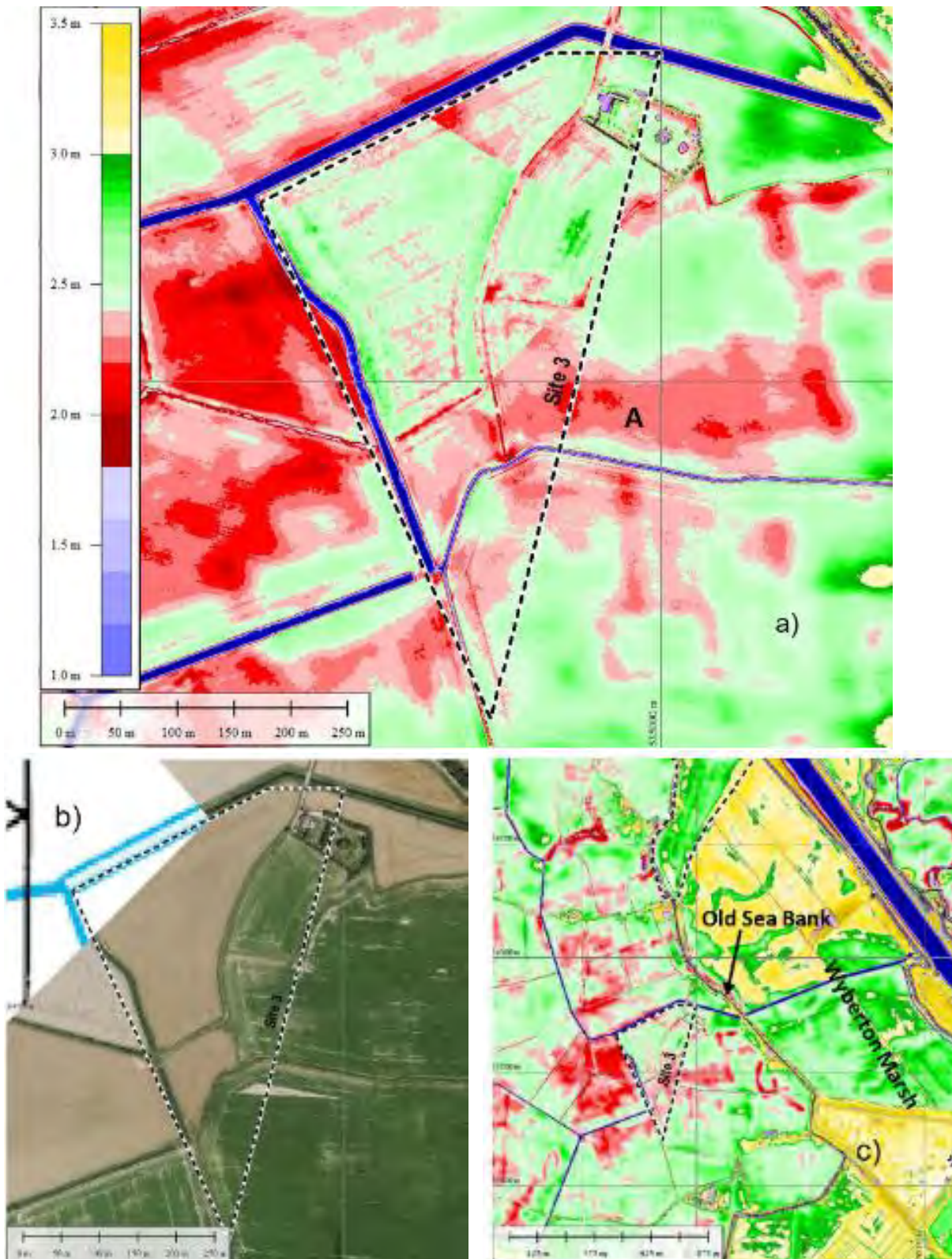


Figure A2.2. Details of Wyberton Roads (South) – a) local levels across site, b) air photograph, c) general land levels.

- 4.2.18 Notwithstanding this possible opportunity for water level management over the southern area, in general there seems less opportunity for wetland habitat creation purely through water level management.
- 4.2.19 There is, however, more scope associated with local land level management. This might include excavation over the southern area of natural low-lying land, including creation of local drainage channels into the areas excavated, linking these through from the ditch to the excavated areas. Consideration could also be given to a similar approach along the northern flank of the site.
- 4.2.20 Given the general low-lying nature of the land, any excavation might be relatively shallow to achieve permeant wet marsh and areas of open water. With respect to this it is anticipated that there would be a relatively high ground water level, although this would require further examination.
- 4.2.21 Through excavation there is then the potential for creating a mosaic of areas of freshwater ponds and marsh, without increasing flood risk to the property or adjacent land.

Appendix B Field Survey Maps and Summaries from Compensation Sites

4.3 Corporation Point (original smaller footprint)

Approximate central NGR: TF 34972 41786

Site Description:

- 4.3.1 There is a public footpath along the eastern and south boundary (along the Haven Bank) which is regularly used by the general public, in particular while exercising dogs and riding bikes. The site consisted of a recently ploughed field, with surrounding ditches largely dry, small and vegetated.



Figure B1-1 Representative image showing Corporation Point site from the northern end looking south.



Figure B1-2 Representative image showing 22 Curlew recorded at Corporation Point on the western side of the site.

Species (not including flyovers)	Survey visit	
	29/10/2022	30/10/2022
Carrion Crow		1
Curlew	22 (roosting)	
Meadow Pipit	1	
Pheasant	1	
Pied Wagtail	1	1
Reed Bunting		1
Skylark		1
Woodpigeon	2	

Notable flyover species	Survey visit	
	29/10/2022	30/10/2022
Brent Goose	40	
Redshank		5

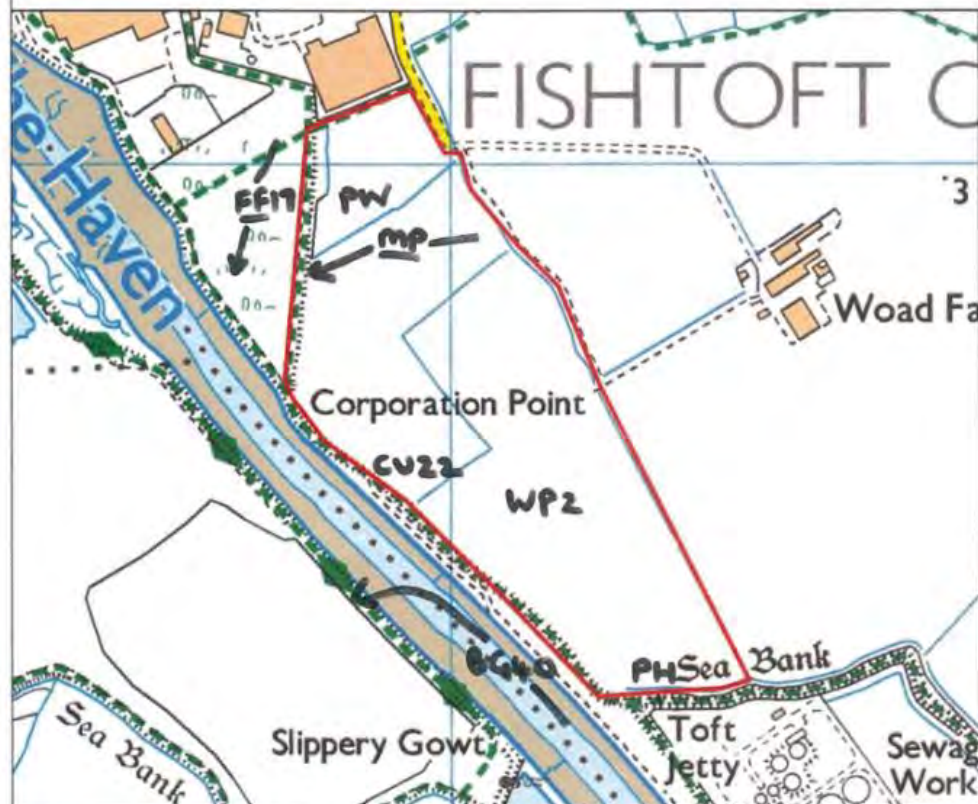
Notes:

Brent Geese (40) at Corporation Point on 29th was a local movement up the Haven

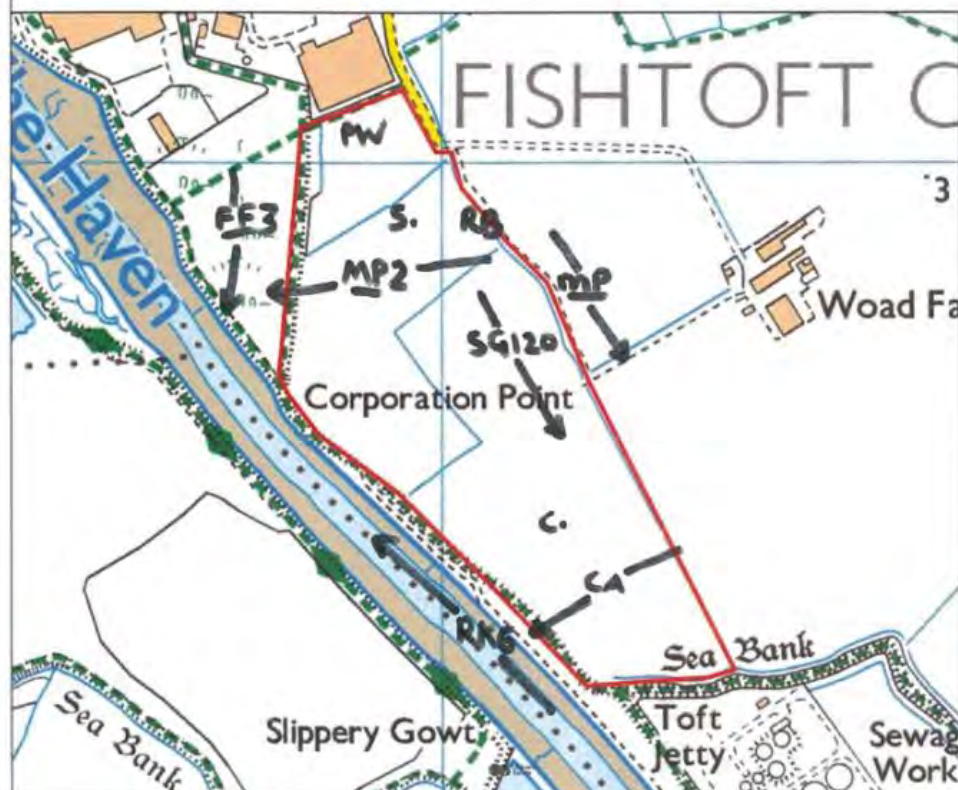
Redshank (5) at Corporation Point on 30th was a local movement up the Haven

Cormorant (1) at Corporation Point on 30th was a local movement to the Haven (they often sit on wires over river)

Date: 29/10/22	Start Time: 11:20	Finish Time: 11:50
Temp: 14°C	Weather: overcast, light rain. wind F 3 SE.	
High Tide: 09:20	Tide Height: 6.81m	
<p>Survey Notes (Disturbance levels etc.):</p> <p>Field - recently ploughed. Disturbance - dog walker (with dog off-lead) walking on adjacent bank (footpath).</p>		



Date: 30/10/22	Start Time: 08:20	Finish Time: 08:50
Temp: 15°C	Weather: Overcast, dry. Wind F3 S.	
High Tide: 09:07	Tide Height: 6.38m	
Survey Notes (Disturbance levels etc.): Disturbance – dog walker and cyclist along footpath on SW side prior to survey. Field – ploughed, margins thin and short grass. Overhead phone line E-W through field.		



4.4 Wyberton Roads (North)

Approximate central NGR: TF 35013 40738

- 4.4.1 **Site Description:** The whole site is surrounded by public footpaths, but generally the site is quiet, with no public seen during the surveys. The western boundary is largely screened from members of the general public by mature hedgerows (mostly hawthorn). The field is of both arable and non-arable use, with a crop of broccoli having been taken and now an aftermath grazing with sheep. As such, the site was bordered by an electric fence and a mud vehicle track formed the field margin. Numerous ruts and hollows across the site supported standing water.



Figure B2-1 Representative image showing Wyberton Roads (North) site from the northern end looking south.



Figure B2-2 Representative image showing Wyberton Roads (North) site from the eastern side looking west.

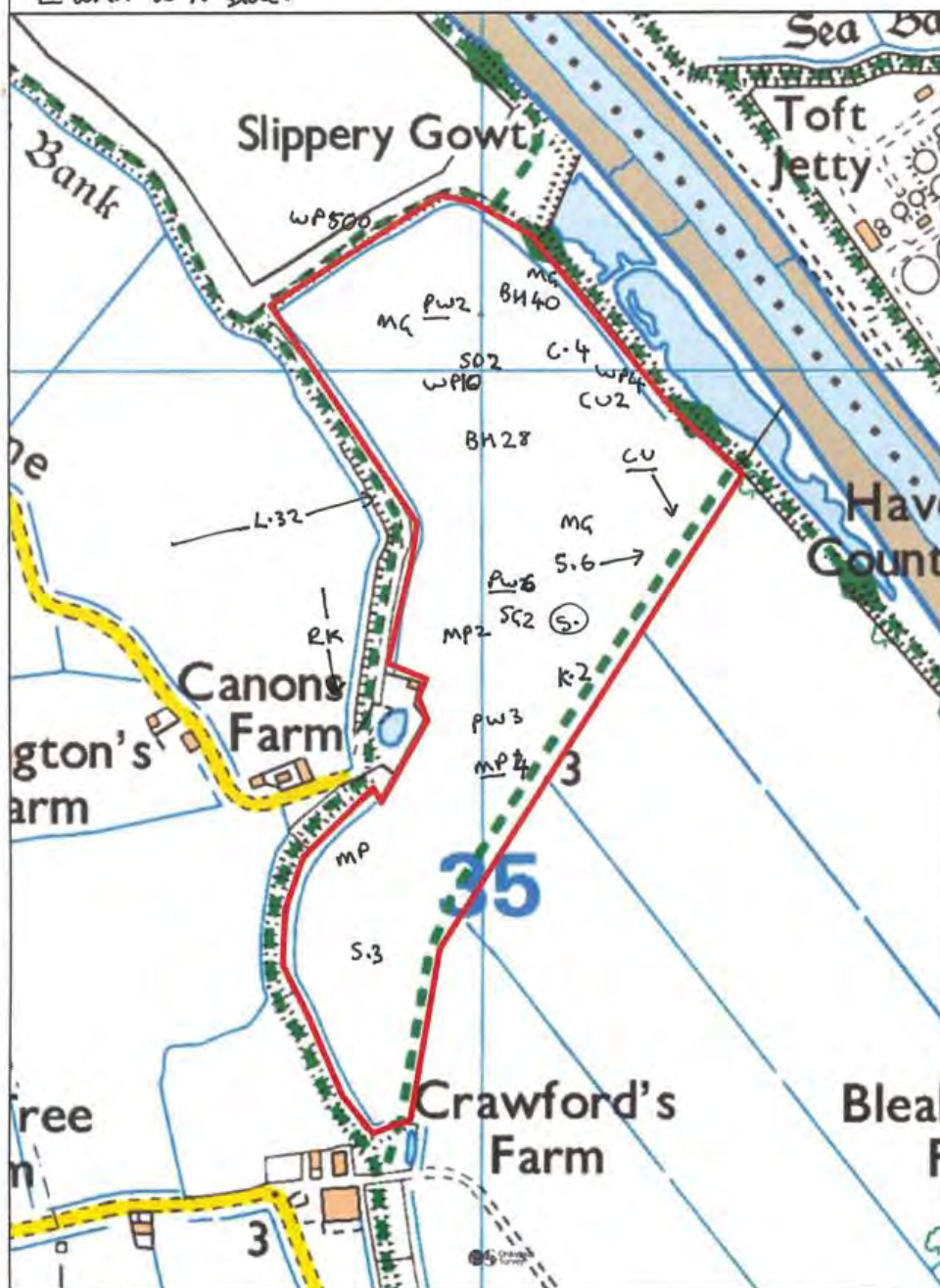
Species (not including flyovers)	Survey visit	
	29/10/2022	30/10/2022
Black-headed Gull	68	28
Carrion Crow	4	
Curlew	3	4
Goldfinch		57
Herring Gull		3
Jackdaw		14
Kestrel	2	1
Linnet		50
Magpie	3	2
Meadow pipit	7	16
Pied Wagtail	11	50
Reed Bunting		1
Skylark	10	14
Starling	2	1
Stock Dove	2	
Woodpigeon	14	18

Notable flyover species	Survey visit	
	29/10/2022	30/10/2022
Lapwing	32	
Red Kite	1	

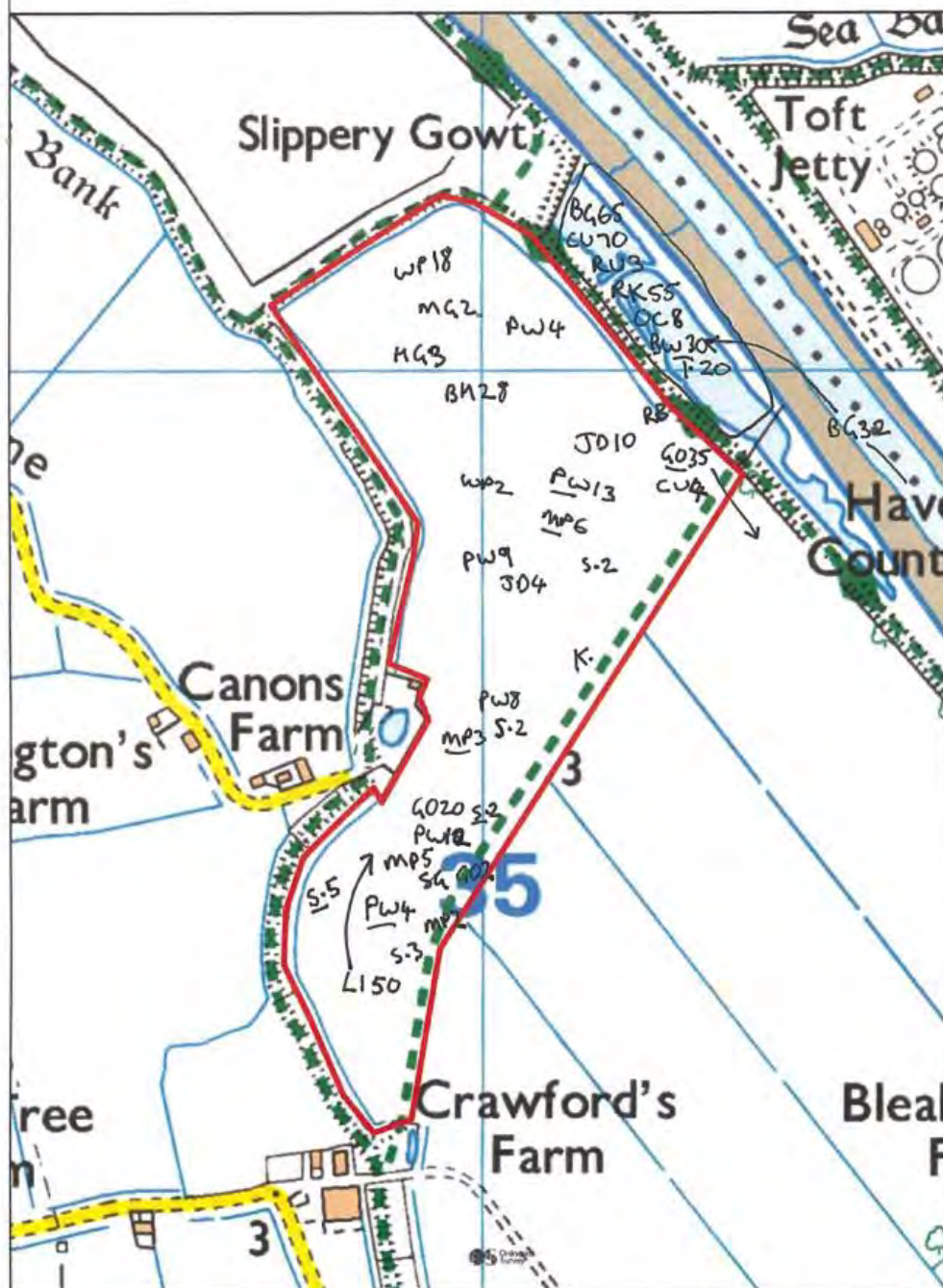
Notes:

Lapwing (32) on 29th was a local movement but didn't land on the field.

Date: 29/10/22	Start Time: 09:15	Finish Time: 09:45
Temp: 13°C	Weather: Largely overcast, dry	
High Tide: 09:20	Tide Height: 6.81m	
Survey Notes (Disturbance levels, field type, crop(?) etc.): Sheep grazing. Field - harvested broccoli, aftermath grazing. Red Kite flew over adjacent field, disturbing most birds (which promptly returned). No ditches around but mature hedgerows (mostly hawthorn) on footpath banks along E and N side.		



Date: 30/10/22	Start Time: 09:50	Finish Time: 10:30
Temp: 15°C	Weather: Overcast, dry. wind F4 S.	
High Tide:	09:07	Tide Height: 6.83m
Survey Notes (Disturbance levels, field type, crop(?) etc..):		



4.5 Wyberton Roads (South) (original 7.3 ha footprint)

Approx. central NGR: TF 34770 39625

- 4.5.1 **Site Description:** The site is an arable field, with winter wheat being grown. Surrounding ditches are largely dry, small and vegetated, but one larger drain on the north side was larger and had open water. Two residential properties are located next to the site, with activity from people, dogs and vehicles causing disturbances.



Figure B3-1 Representative image showing Wyberton Roads (South) site from the eastern side looking west.



Figure B3-2 Representative image showing Wyberton Roads (South) site from the southern end looking north.

Species (not including flyovers)	Survey visit	
	29/10/2022	30/10/2022
Carrion Crow		1
Pheasant	2	1
Skylark	1	3
Woodpigeon		4

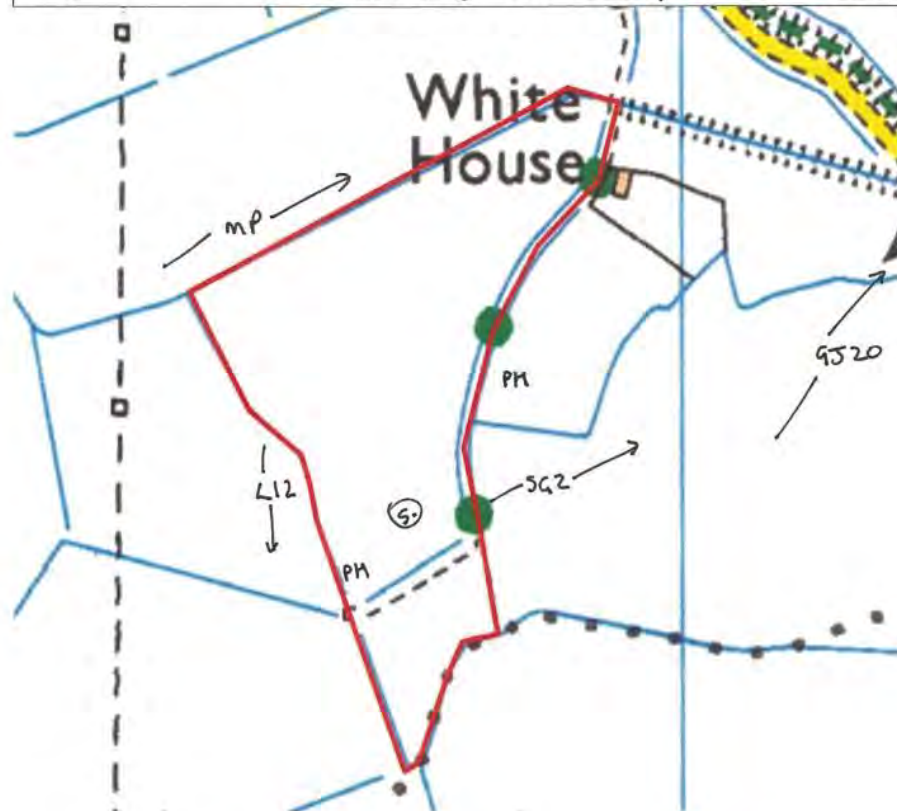
Notable flyover species	Survey visit	
	29/10/2022	30/10/2022
Greylag Goose	20	
Lapwing	12	

Notes:

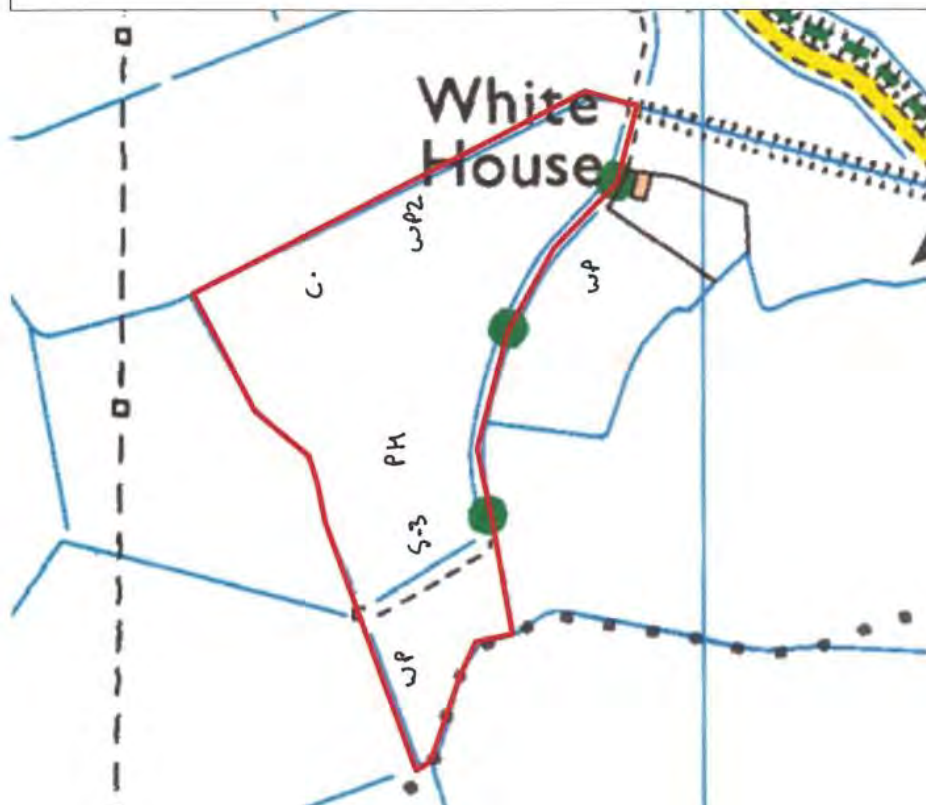
Greylag Geese (20) on 29th was a local movement.

Lapwing (6) on 29th was a local movement

Date: 29/10/22	Start Time: 09:50	Finish Time: 10:20
Temp: 13°C	Weather: Largely overcast, occasional sunny spell, dry. Wind F4 ESE.	
High Tide: 09:20	Tide Height: 6.81m	
<p>Survey Notes (Disturbance levels etc.):</p> <p>Tractor ploughing field to W. Field - arable (winter wheat). Surrounding ditches largely dry, small and heavily vegetated. Possible disturbance from neighbouring property - dogs, vehicles, people outside. Despite smaller ditches, one large drain on N side was large and had open water - but no wildfowl recorded.</p>		



Date: 30/10/22	Start Time: 10:45	Finish Time: 11:15
Temp: 16°C	Weather: Largely overcast, dry, sunny spells. Wind F3 S.	
High Tide: 09:07	Tide Height: 6-38m	
Survey Notes (Disturbance levels etc.): No disturbance noted.		



4.6 Scrane End (original 1.2 ha footprint)

Approx. central NGR: TF 38850 41704

Approx. size: 1.23 Ha

- 4.6.1 **Site Description:** Small field bordered by road on three sides and bordered by residential properties on three sides. No ditches of note on three sides, with one ditch on the southern edge being small, dry and vegetated. Field use is arable, with a cabbage crop being grown currently, with thin margins of short grass. No disturbance noted, but human disturbance likely due to location.



Figure B4-1 Representative image showing Scrane End site from the western side looking east.



Figure B4-2 Representative image showing Scrane End site from the southern end looking north.

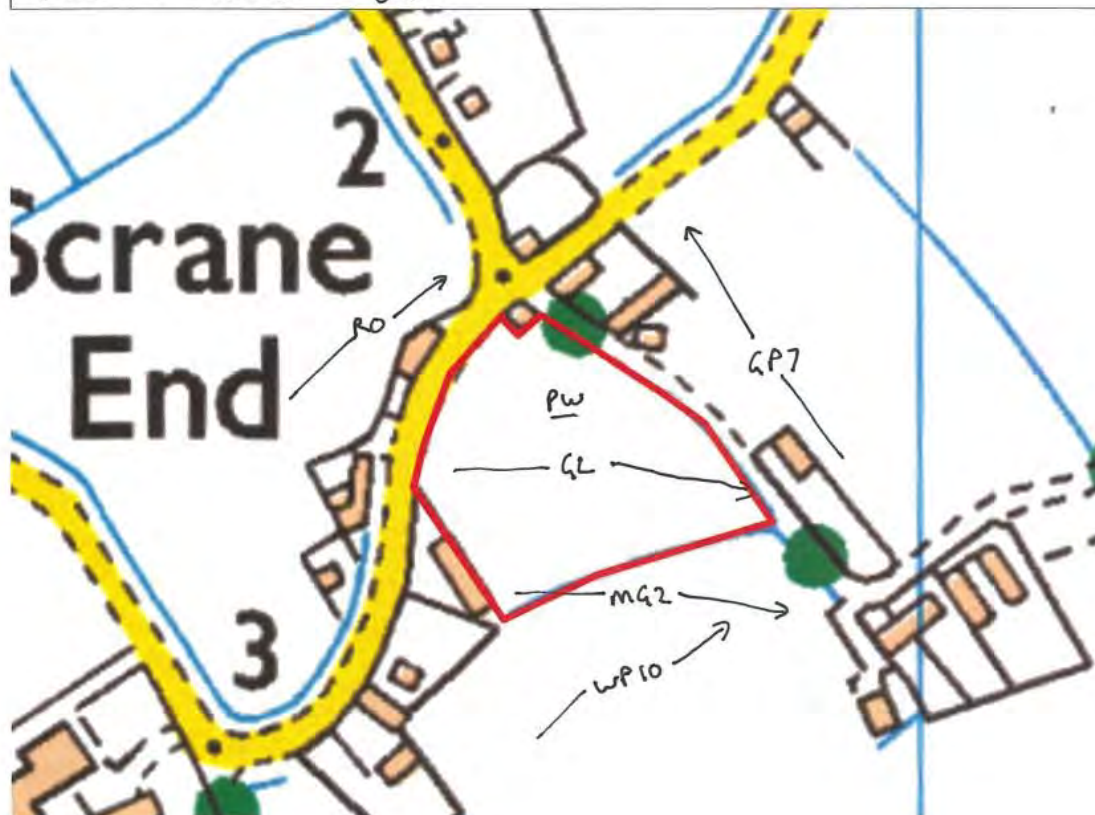
Species (not including flyovers)	Survey visit
	30/10/2022
Pied Wagtail	1

Notable flyover species	Survey visit
	30/10/2022
Golden Plover	7
Grey Wagtail	1

Notes:

Golden Plover (7) at Scrane End on 30th were very high

Date: 30/10/22	Start Time: 07:30	Finish Time: 08:00
Temp: 13°C	Weather: Overcast, dry. Wind F3 S.	
High Tide: 09:07	Tide Height: 6.38m	
<p>Survey Notes (Disturbance levels etc.):</p> <p>Field bordered by roads on 3 sides and bordered by residential properties on 3 sides. No ditches on 3 sides, only thin margins of short grass. Ditch on 1 side (southern edge) but small, dry and vegetated. Field-arable (cabbage).</p>		



Appendix C – Landowner Letters of Support for Compensation Site Acquisition

Letters of support from the landowners of the following land are provided in this Appendix:

- Wyberton Road North – letter from AE Lenton of 10th March 2023
- Wyberton Roads South – letter from Bush and Son - undated
- Corporation Point – letter from Alec Coney Farms of 28th February 2023
- Scrane End - The Applicant remains in positive discussions with the relevant landowner to obtain a letter of intent. The Applicant will forward a copy of the letter of support to the Secretary of State once available.

A E LENTON LTD

Church End, Friskney,
Boston, Lincs. PE22 8NE
Telephone: 01754 820203
Fax: 01754 820724



Mr Woosnam
Alternative Use Boston Projects Limited
1 Pond Lane
Bentfield Road
Stansted
CM24 8JG

10/3/2023

Proposed Boston Alternative Energy Facility (the Project) In principle ornithology compensation land

We understand, from our recent discussions with you, on behalf of Alternative Use Boston Projects Limited (AUBP), that AUBP as the applicant of the Project has provided a 'without prejudice' compensation measures in relation to the potential impacts on various species of birds.

You have provided us with an outline of the habitat creation measures that could be developed on our land (copy attached), which we understand would be developed further during the detailed design stage should the Project be required to provide ornithology compensatory measures.

We are writing to confirm that, in accordance with our recent and continuing discussions with you, should the Project be required to provide ornithology compensatory measures, we would be willing, in principal, to work with you in delivering such measures on our land (shown on the attached document).

Yours sincerely

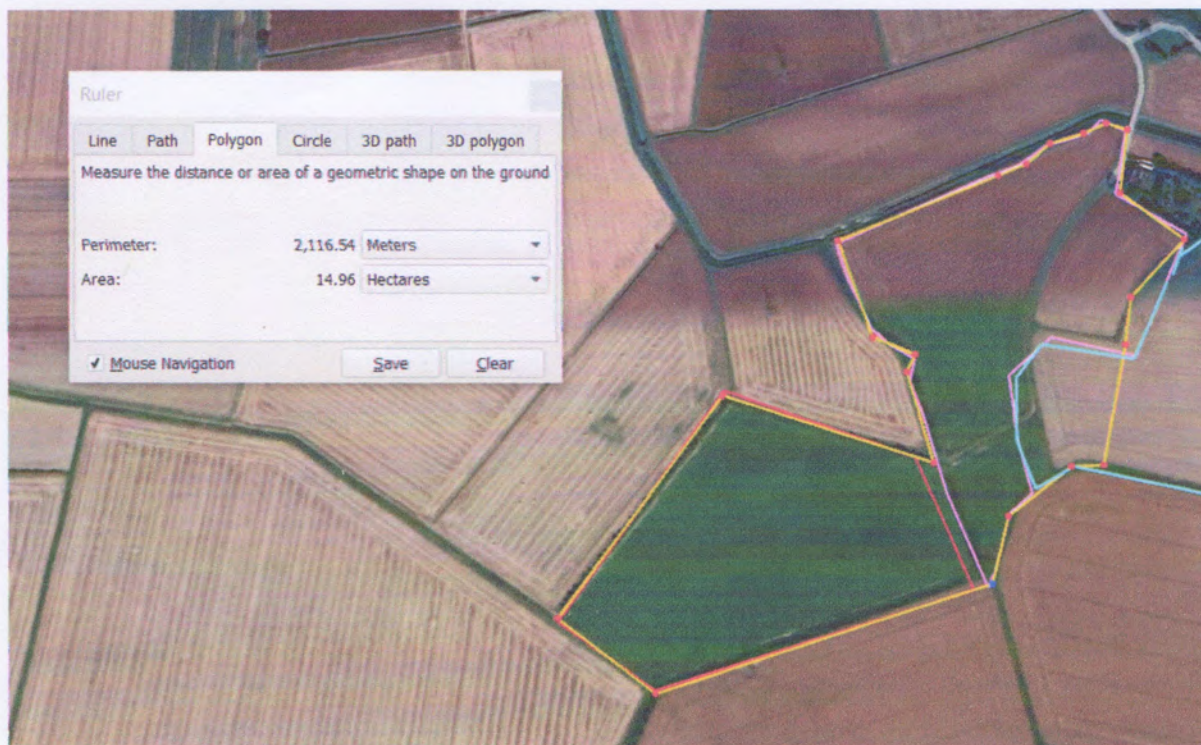
Director of AE Lenton (Landowner)

B BUSH & SONS LTD

HOME FARM, REVESBY, BOSTON, LINCOLNSHIRE, PE22 7NU

VAT Reg No.: 319 1095 12

Company No.: 07281214



Following discussions, we have agreed to support Alternative Use and their project known as the 'Boston Alternative Energy Facility' (BAEF) in case following a favourable Determination, the Secretary of State further determines additional mitigation land is required. We will be able to conclude the final details following favourable Determination prior to any Works commencing needing Mitigation land being required. This is a long term lease for at least 30 years initial lease and can be extended under further mutually agreed Terms and Conditions, should operation of the BAEF be extended.

Signed

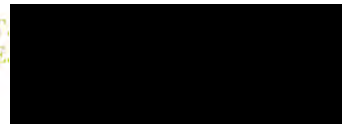
B Bush and Sons Limited (Landowner)



ALEC CONEY (FARMS) LTD

Woad Farm
Fishtoft Road
Fishtoft
Boston
Lincolnshire
PE21 0QP

T
E



Mr Woosnam
Alternative Use Boston Projects Limited
1 Pond Lane
Bentfield Road
Stansted
CM24 8JG

28th February 2023

**Proposed Boston Alternative Energy Facility (the Project)
In principle ornithology compensation land**

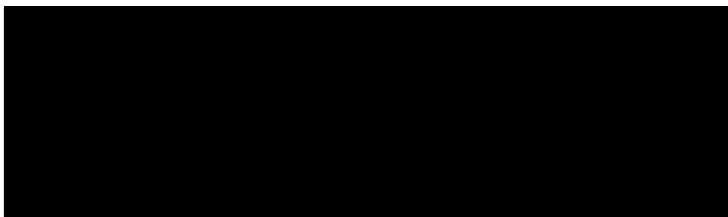
Dear Richard,

I am writing a brief letter to confirm that we have met and discussed the principle of using some of our land at Woad Farm, Fishtoft as ornithological compensation for the Alternative Use Boston Projects Limited (AUBP) scheme. Following the meeting, I supplied you with a map showing the possible maximum extents of any such area .

You have kindly provided me with an initial description of habitat creation measures targeted to attract wetland birds, which could involve the creation of a mosaic of wetland and grassland habitats on currently arable land.

I understand that the need for compensation land is the subject of an ongoing planning application. Should the requirement for compensation land be established, then I would be willing to undertake further discussions regarding the principle of using some land at the Woad Farm for this purpose. It is my understanding that any such plans would be developed during the detailed design stages.

Yours sincerely,



William Brown
Director, Alec Coney (Farms) Ltd

Appendix D Applicant's Response to Secretary of State's Letter of 14th October 2022

REPORT

Boston Alternative Energy Facility

Applicant's Response to Secretary of State's Letter of
14th October 2022

Client: Alternative Use Boston Projects Ltd.

Planning Inspectorate EN010095

Reference:

Document Reference: 9.107

Reference: PB6934-RHD-ZZ-XX-RP-Z-4126

Status: Final/0.0

Date: 11/11/2022



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Document title: Boston Alternative Energy Facility

Document short title: Applicant's Response to SoS Letter of 14th October 2022

Reference: PB6934-ZZ-XX-RP-Z-4030

Status: 0.0/Final

Date: 11/11/2022

Project name: Boston Alternative Energy Facility

Project number: PB6934

Author(s): Paul Salmon, Abbie Garry, Lowell Mills-Frater, Chris Adnitt, Gemma Starmore,
Sophie Rees, Richard Woosnam

Drafted by: Royal HaskoningDHV, PDB Pitmans,
Alternative Use Boston Ltd.

Checked by: Paul Salmon

Date: 11th November 2022

Approved by: Matt Hunt

Date: 11th November 2022

Classification

Project related

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Table of Contents

Acronyms	1
1 Purpose of this Report	3
2 The Applicant's Responses	3
2.2 Response to Question 3.1 - Without Prejudice Additional Mitigation / Enhancement to Reduce Bird Disturbance	3
2.3 Response to Question 3.2 - Clarification on the Harbour Seal Assessment and Requirement for an Updated Assessment	17
2.4 Response to Question 3.2 - Without-Prejudice Additional Mitigation Measures and / or Enhancements	19
2.5 Response to Question 3.3 - Effectiveness of Marine Mammal Observers	23
2.6 Response to Question 3.4 - Further Information to Assist in the Determination of the Without Prejudice Imperative Reasons of Overriding Public Interest Case	24
2.7 Response to Question 3.5 - Without-Prejudice Compensation Measures with Regard to Harbour Seals	24
2.8 Response to Question 3.6 - Further Information regarding the without-prejudice proposed compensation sites for The Wash SPA	27
2.9 Response to Question 3.7 - Crown Estate Evidence	47
2.10 Response to Question 3.8 - Natural England's Suggested Alternative Diversion Route	48
3 Additional Comments	49
3.1 Response to Question 4.1 to Natural England	49
3.2 Response to Question 4.2 to Natural England	50
3.3 Response to Question 4.3 to Natural England	51
3.4 Response to Question 5.1 to the Environment Agency	51
4 References	53

Table of Tables

Table 2-1 Comparison of Changes to the Indicative Construction Programme	41
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Table of Figures

Figure 1 High tide (redshank) roost locations on The Haven.	8
Figure 2 Ground view of securable land behind sheet-pile wall in south bank of The Haven (credit: Andrew Chick Ecology)	35

Figure 3 Annotated aerial view showing the indicative outline of raised land (within white polygon) behind sheet-pile wall in the bank, opposite Port of Boston lock on north side of The Haven. Principal Application Site lies within red line. (Imagery copyright 2022 Google, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map data copyright 2022)

35

Figure 4 Ground view west along the sloping seawall and across the fenced area containing the former helipad site with short vegetation at Heysham. Oystercatcher are roosting on the slope. The palisade fencing at the near end extends onto the decline, preventing works and third party access at this location. (Credit: Heysham Bird Observatory)

37

Figure 5 Aerial view showing the seawall used by roosting waders close to the former helipad (green marker) at Heysham (Imagery copyright 2022 Google, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group, Map data copyright 2022)

38

Figure 6 Elevated view showing roost site (behind gateway) used by redshank and other waders and gulls in the Port of Seaham (copyright: The Lookout/Meta)

39

Figure 7 Annotated aerial view showing roost site used by redshank and other waders and gulls in the Port of Seaham (Imagery copyright 2022 Google, Bluesky, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map data copyright 2022)

39

Figure 8 Indicative Construction Programme (using DCO determination date of 10th January 2023)

44

Figure 9 Indicative (worst-case) Habitat Implementation Programme

45

Figure 9 Natural England's Alternative PRow Alignment

49

Appendices

Appendix A Responses with particular regard to concerns raised by Natural England in [REP10-036] and [REP10-038]

Appendix B - Further information, beyond that already provided to the Examination, which may assist the Secretary of State in considering its without prejudice case with regards to Imperative Reasons of Overriding Public Interest ("IROPI").

Appendix C The Crown Estate Letter of 6th April 2022

Acronyms

AEoI	Adverse Effect on Integrity
APCr	Air Pollution Control Residues
AQMAs	Air Quality Management Areas
AUBP	Alternative Use Boston Projects Limited
BEIS	Business, Energy & Industrial Strategy
CCU	Carbon Capture and Utilisation
CCUS	Carbon Capture, Usage and Storage
CEP	Circular Economy Package
COLREGS	Convention on the International Regulations for Preventing Collisions at Sea
CO ₂	Carbon Dioxide
CSIP	Cetacean Stranding's Investigation Programme
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DML	Deemed Marine Licence
EA	Environment Agency
ECP	England Coast Path
EW	Energy from Waste
ES	Environmental Statement
GHG	Greenhouse Gas
GLLEP	Greater Lincolnshire Local Enterprise Partnership
HRA	Habitats Regulations Assessment
IROPI	Imperative Reasons of Overriding Public Interest
LMWLP	Lincolnshire Mineral and Waste Local Plan
LWA	Lightweight Aggregate
MMO	Marine Management Organisation
MOTH	Mouth of The Haven
NMP	Navigation Management Plan
NPS	National Policy Statement
OCIMP	Ornithology Compensation Implementation and Monitoring Plan
OEG	Ornithology Engagement Group
OMMP	Outline Marine Mammal Mitigation Plan

PRoW	Public Right of Way
RDF	Refuse Derived Fuel
RIES	Report on the Implications for European Sites
SAC	Special Area of Conservation
SELLP	South-East Lincolnshire Local Plan
SEP	Strategic Economic Plan
SMASS	Scottish Marine Animal Stranding Scheme
SoS	Secretary of State
SPA	Special Protection Area

1 Purpose of this Report

- 1.1.1 This document is provided in response to the letter issued by the Department for Business, Energy & Industrial Strategy (BEIS) on behalf of the Secretary of State (SoS) dated 14th October 2022 with regards to the Boston Alternative Energy Facility (the Facility). The SoS's letter requests responses from the Applicant (Alternative Use Boston Projects Limited), as well as other parties, to a number of questions.
- 1.1.2 Each of the questions to the Applicant is set out below in a blue box, with the response from the Applicant immediately following. Additionally, the Applicant has also taken the opportunity to offer brief responses where pertinent to the questions asked of the Environment Agency and Natural England.

2 The Applicant's Responses

- 2.1.1 The Applicant's responses to each of the paragraphs directed to them in the SoS's letter are set out and responded to below.

2.2 Response to Question 3.1 - Without Prejudice Additional Mitigation / Enhancement to Reduce Bird Disturbance

Question 3.1

Is requested to provide without-prejudice additional mitigation measures and / or enhancements to the existing proposed mitigation measures to reduce disturbance effects to bird species of The Wash SPA, specifically mitigation of impacts as a result of:

- construction noise and vessel disturbance at the Application site;
- disturbance along The Haven; and
- associated updates to documents such as the template Navigation Management Plan [REP8-011]. This should include, but not be limited to consideration of concerns raised by Natural England [REP8-024], regarding the Technical Note for Navigation Management and Ornithology [REP6-033] and evidence that adaptation of vessel movement parameters would mitigate impacts and/or can be secured [REP9-063].

Construction Noise at the Application Site

- 2.2.1 Construction noise disturbance to birds at the Application site was subject to detailed modelling study and discussion by the Applicant at Deadline 4 (Noise Modelling and Mapping Relating to Bird Disturbance at the Principal Application Site, document reference 9.50, REP4-015).
- 2.2.2 Guideline noise levels associated with likely disturbance are provided by Cutts et al. (2013) for a range of waterbirds following field data collection and review of other published studies. Additional, lower guideline noise levels under which the

authors recommend caution is employed, are also provided for the waterbird species (Cutts et al. 2013). The 'Caution' level is below the threshold for disturbance but approaching it, and it was considered appropriate within the Deadline 4 submission (document reference 9.50, REP4-015) that caution should be applied as each site is different and the disturbance threshold at this site could be lower. For redshank, in an already noise-disturbed area, Cutts et al. (2013) estimate this caution level as 60dB. The tasks within the construction phase at the Application Site that involve piling, will emit noise at or above the level where caution is advised (58-60 dB noise contour), within approximately 300m from the site (Figures 2-2 and 2-3 within document reference 9.50, REP4-015). However, these activities for the Project are seasonally limited to the months of June, July, August and September during which many non-breeding waterbirds associated with the nearby Special Protection Area (SPA) are recorded as absent or infrequent within The Haven or in vicinity of the Principal Application Site. Other not seasonally-limited construction phase activities are modelled to exceed such levels only within approximately 75m from the site (Figure 2-1, within document reference 9.50, REP4-015); therefore, disturbance is expected to occur only to a very small number of individual foraging waterbirds likely to feed within this range only during lower tides. No established high tide roosts of waterbirds occur within the area where caution should be applied.

- 2.2.3 Mitigation for disturbance to birds due to construction is outlined by the Applicant in the technical note at Deadline 4 (document reference 9.50, REP4-015), and consists of monitoring the distribution and number of waterbirds within the proposed zone of influence of construction noise with measures taken such as pausing work until low tide on The Haven (when mudflat availability has increased) should disturbance occur to a significant number of birds (by virtue of exceeding 1% of their BTO WeBS populations for The Wash). This method of mitigation was also successfully applied for geotechnical investigation works undertaken by the Environment Agency within The Haven who concluded in their report (Boston Haven Ground Investigations - Bird Disturbance Monitoring 2019, June 2019) that there was localised disturbance and displacement of waders and wildfowl but the numbers involved were very small and tended to only occur at short range - up to 100 m but generally at less than 50 m. Their overall conclusion with regards to disturbance distances was that the observations of the monitoring suggested that 250 m is a more reasonable distance to consider potential disturbance effects of ground investigation activities on non-breeding waterbirds. There was no evidence of any visual or noise disturbance affecting birds over this distance. These measures are therefore considered to be effective at reducing the potential impact to an acceptable level. Natural England has previously provided comments on the proposed mitigation within their Relevant

Representations (dated 18th June 2021) to state that: “*Natural England acknowledges that monitoring by an ornithologist was undertaken for the EA Boston Haven embankment works for activities carried out during the autumn/spring passage and overwinter. Monitoring considered noise and visual disturbance and recorded species, numbers, and bird behaviour. A stop trigger (based on 1% of the cited SPA numbers) was used when works were noted to show disturbance. At that time a 500m monitoring zone was required. For this project a 250m zone has been suggested based on the data collected. We advise that this appears to be appropriate for BAEF considering the distance from the SPA and the reduced numbers of birds using the upper stretches of The Haven; but note data has shown numbers of Ruff and Redshank in Area A and B have exceeded the 1% threshold during monitoring so assurances that the buffer remain correct for these species is required.*” The monitoring is proposed to be adaptive to take account of any changes required to the methodology of monitoring or the response action, this will include if the distances for monitoring are not considered to be appropriate. Given the above findings from the Environment Agency and the proposed adaptive monitoring and management it is not expected that further measures would be necessary.

Vessel Disturbance at the Application Site, along The Haven and at the mouth of The Haven

2.2.4 Vessel disturbance of birds between the Application Site and the mouth of The Haven occurs in periods of the highest tide height when vessel movements are able to take place. During these periods, waterbirds constituting designated features of The Wash SPA and Ramsar site and present within The Haven include i) wading birds (particularly sandpipers including redshank and ruff) undertaking high tide roosting with a small proportion feeding on the limited exposed intertidal ground; ii) heron species and cormorant feeding in the water column of The Haven; iii) gulls on the water or on shoreline and iv) waterfowl including ducks and geese including dark-bellied brent geese which may occur in bathing flocks on the water at any tide level (although this species undertakes resting and feeding mainly on saltmarsh or coastal grasslands at high tide).

2.2.5 The consistently used high tide roosts of wading birds are:

- at and directly downstream of the Application Site (survey sites A and B) where birds roost on the rocks placed in front of the saltmarsh area and on the saltmarsh itself;

- within the lagoons set back from The Haven opposite the sewage treatment works mid-way between the Principal Application Site and The Wash SPA/Ramsar boundary; and
- at the mouth of The Haven where some revetments of rock armour, and adjacent shoreline/mudflats exposed during neap high tide, provide attractive roosting habitat for large numbers of waterbirds of mixed species with a minimum of 100-200 birds, routinely 2,000-3,000 birds and a peak of 6,890 birds across baseline surveys.

Vessel Disturbance at the Application Site

2.2.6 Vessel disturbance at the Application Site during focused disturbance surveys most commonly involved disturbance (by all vessel types and sizes) to small numbers of cormorant, grey heron or little egret and larger numbers of gulls, all of which were close to the pathway of vessels. However, disturbance events did include disturbance from large commercial vessels and small pilot boats to high tide roosting waders, occasionally exhibiting flight response in larger numbers (25 to 75 birds) and commonly with the majority of roosting birds present responding. Waders were recorded to react to proximity of cargo vessels, and variously the proximity or wave wash of pilot boats. When disturbed in these numbers, waders typically returned to the same location by the end of the flight response. Disturbance flights where birds changed location occurred with smaller numbers of individuals, moving generally a short distance (i.e., within the same survey section). The high tide roosts at site A and site B were consistently used by waders, mainly redshank and ruff.

Mitigation Measures

- 2.2.7 Mitigation has been outlined for the construction phase habitat loss due to wharf construction which includes loss of the high tide roost location in site A. The mitigation will ensure the area surrounding the high tide roost at site B is managed to enhance the roosting habitat in this area by providing additional habitat for the roosting waders there, in order to facilitate a single large roost within site B. This feature is termed the Habitat Mitigation Area as discussed in the Outline Landscape and Ecological Mitigation Strategy (document reference 7.4(3), REP10-014).
- 2.2.8 No further mitigation measures for disturbance to birds at the Principal Application Site are considered by the Applicant to be necessary ; further to those outlined in the final DCO and Examination documents relating to habitat loss. The mitigation outlined and secured to mitigate loss of habitat during wharf construction, also secures continuation of the high tide roosting waterbird population in vicinity of the

Principal Application Site, and as a result there is considered no likely significant effect on features of The Wash SPA/Ramsar due to vessel disturbance at the Principal Application Site (which is capable of occurring only during high tide periods). Notwithstanding the above position, without prejudice additional enhancements to mitigation measures are discussed below.

- 2.2.9 Further enhancement additional to the measures above could be achieved through the construction of palisade fencing around the landward sides of the Habitat Mitigation Area. This would prevent disturbance from any people and dogs using the footpath (with appropriate permissions gained from the landowner). This would reduce disturbance from intrusion by works personnel or third parties including the public onto waterbird habitat; this intrusion is thought to have a greater disturbance effect (High/high to moderate) than the noise levels from a permanent facility (Regular noise (50 db – 70 db) Moderate to Low) (as shown in the extract below from Cutts et al. (2013) and therefore reduce overall disturbance levels.

Personnel and plant on mudflat:	High (and should be restricted at all times)
Third party on mudflat:	High (but difficult to restrict)
Personnel and plant on seaward toe and face:	High to Moderate
Intermittent plant and personnel on crest:	High to Moderate
Third party on bank:	High to Moderate
Irregular piling noise (above 70db):	High to Moderate
Long-term plant and personnel on crest:	Moderate
Regular piling noise (above 70db):	Moderate
Irregular noise (50db - 70db):	Moderate
Regular noise (50db - 70db):	Moderate to Low
Occasional movement of crane:	Moderate to Low
Noise below 50db:	Low
Long-term plant only on crest:	Low
Activity behind flood bank (inland):	Low

Taken from Cutts et al (2013) Waterbird Disturbance Mitigation Toolkit

- 2.2.10 Should the Secretary of State determine that the inclusion of this measure is necessary it could be secured by adding the following wording to section A1.4 of the Outline Landscape and Ecological Mitigation Strategy (document reference 7.4(3), REP10-014), which is secured by requirement 6 of the draft DCO (document reference 2.1(6), REP10-004):

“Subject to any landowner permissions being obtained, palisade fencing will be constructed between the construction site and the Habitat Mitigation Area, and between the footpath and the Habitat Mitigation Area, to provide further reduce the potential disturbance from sources associated with high to moderate disturbance, such as workforce or third party entry to saltmarsh, foreshore or

mudflat.”

Vessel Disturbance along The Haven

2.2.11 Vessel disturbance to designated feature waterbirds of the protected sites is limited along The Haven interior as there is no high tide roosting site consistently used by waterbirds on The Haven foreshore or saltmarshes, either upstream of The Wash SPA/Ramsar boundary (survey site C) or on The Haven within the boundary of The Wash SPA/Ramsar (survey site D). A high tide roost in site C sees waterbirds aggregate in lagoons set back from The Haven (opposite the sewage treatment works). On the occasion where large commercial vessel disturbance was recorded on waders in site C, the birds were able to remain within The Haven area due to the presence of the set-back lagoons. These acted as an effective refuge. On the occasion that the pilot boat disturbed 43 brent geese and a mixed gull flock into flight upstream of the sewage treatment works in site C, all birds returned to their original location. There is therefore no indication of a requirement to mitigate potential project-related disturbance and displacement effects on waterbirds in the interior of The Haven (sites C and D), given this adjacent site provides an alternative and nearby roost location. Further details of the surveys undertaken along The Haven are set out in the Deadline 8 Submission - Final Waterbird Survey Report Summary of Data (document reference 9.91, REP8-018) and Deadline 9 Submission - Final Waterbird Survey Report (document reference 9.98, REP9-032) and shown below in **Figure 1**.

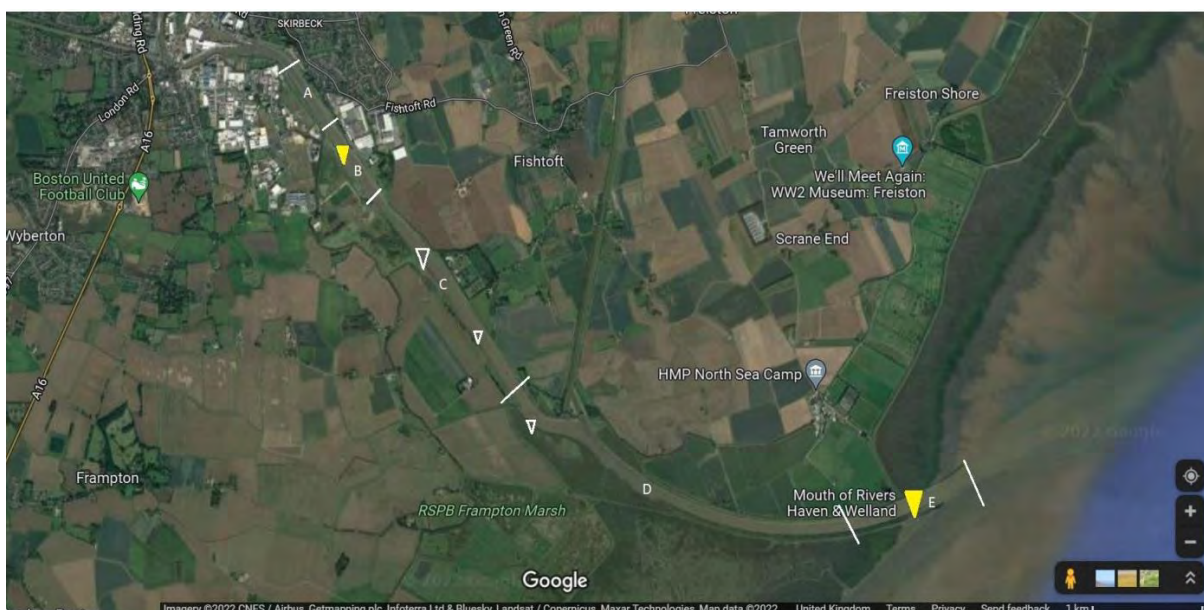


Figure 1 High tide (redshank) roost locations on The Haven (triangles). Letters A to E and divider lines indicate survey sections for ornithology baseline surveys reported in Table 4-1, Table 4-2 and Table 4-3. Symbol size indicates order of magnitude of bird numbers (approx. 10, approx. 100, approx. 1,000-10,000). Yellow solid symbols indicate routine use by birds. White open symbols indicate

single occurrence over repeat surveys. (From Deadline 8 Submission - 9.91 Final Waterbird Survey Report Summary of Data (document reference REP8-018), Figure 5-1)

Mitigation Measures

- 2.2.12 No mitigation measures were considered to be necessary for this impact. Energy calculations carried out for birds elsewhere on The Haven (at the Haven mouth high tide roost; Deadline 5 Submission - Chapter 17 Marine and Coastal Ecology and Appendix 17.1 Habitats Regulations Assessment Update (document reference 9.59, REP5-006)) demonstrated that birds that return to the same site post-disturbance showed low energy usage during disturbance events.
- 2.2.13 Without prejudice enhancements to measures along the length of The Haven could include 'toolbox talks' for pilots navigating The Haven (in pilot cutters and large commercial vessels) with the aim of increasing awareness of bird species using The Haven and the international significance of The Wash waterbird assemblage. This could reduce potential for vessel disturbance that occur through a possible lack of understanding of how disturbance by vessels can affect birds. Practices adopted could include slowing when on course towards large gatherings of brent geese, gulls or other waterbirds on The Haven, and change of course to pass such flocks at greater distance when piloting smaller vessels such as the pilot cutter.
- 2.2.14 In the event that the Secretary of State determines that the inclusion of this measure is necessary it could be secured by the Navigation Management Plan (NMP) which is secured by condition 14 of the Deemed Marine Licence (DML) in Schedule 9 of the draft DCO (document reference 2.1(6), REP10-004). This could be achieved by adding the following text to paragraph 3.3.1 of the Technical Note for Navigation Management and Ornithology (document reference 9.70, REP6-033) (referred to in condition 14 as the Navigation Management Planning Process: Risk to Birds):
- 'The use of toolbox talks for pilots navigating The Haven (in pilot cutters and large commercial vessels) with the aim of increasing awareness of bird species using The Haven and the international significance of their populations within The Wash embayment.'*
- 2.2.15 Should the Secretary of State determine that the inclusion of the above measure is necessary and to add additional certainty that vessel management measures to address potential impacts on designated birds (and marine mammals) are secured in the Navigation Management Plan and will be implemented, the Applicant proposes on a without prejudice basis the following amendment to sub-

paragraph 6 of condition 14 of the DML:

'(6) Unless otherwise agreed by the MMO in writing, the navigation management plan must be implemented as approved by the MMO and—

- a) no vessels associated with the construction of the authorised development may be received at Work No. 4 until the any measures relating to the matters in sub-paragraph 4(d) as set out in the navigation management plan have been implemented; and*
- b) no vessels associated with the operation of Work No. 1 may be received at Work No. 4 until the any measures relating to the matters in sub-paragraph 4(e) as set out in the navigation management plan have been implemented.'*

Vessel Disturbance at the Mouth of The Haven

2.2.16 Vessel disturbance at the mouth of The Haven has been quantified and discussed throughout the post-Application and Examination periods. The high-tide aggregation of waterbirds has been disturbed by large commercial vessels (via their proximity) and pilot boats (via their proximity or their wave wash) during baseline surveys. It was found that generally the first vessel that transited through The Haven disturbed the larger flocks of birds that then flew to alternative roosting locations and were not subsequently disturbed by additional vessels (Deadline 6 submission - Change in Waterbird Behaviour Report (document reference 9.71, REP6-034)). The additional vessels were therefore not considered to have an Adverse Effect on Integrity of the site. Energy calculations were undertaken for the remaining birds that seem to return to the same roosting site, generally lapwing and golden plover, that showed low energy usage for the disturbance events. These birds can also use farmland nearby which provides suitable roosting locations for these species (Deadline 5 Submission - Chapter 17 Marine and Coastal Ecology and Appendix 17.1 Habitats Regulations Assessment Update (document reference 9.59, REP5-006)).

2.2.17 Although the effect above is not considered to represent an adverse effect on the integrity of the site, the Applicant has produced a without-prejudice derogation case outlining in-principle compensation sites capable of supporting the numbers and species of waterbirds potentially disturbed at the mouth of The Haven (Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures, (document reference, 9.30(2), REP8-006)). These would be delivered should the Secretary of State conclude there is an adverse effect on the integrity of The Wash SPA/ Ramsar site (see also responses to BEIS letter point 3.6 below).

Mitigation Measures

- 2.2.18 No mitigation measures were considered to be necessary for the disturbance at the mouth of The Haven as the majority of birds were already flying off to alternative roosting sites when the first vessel transits along The Haven, even under baseline conditions (Change in Waterbird Behaviour Report (document reference 9.71, REP6-034)). However, in order to further reduce the disturbance to designated bird species the Applicant included in condition 14 of the DML in Schedule 9 to the draft DCO (document reference 2.1(6), REP10-004) the need to include in the NMP details of “*measures for managing disturbance to designated bird species developed in accordance with the process in the Navigation Management Planning Process: Risk to Birds*”. The Applicant does not consider that these measures are necessary to mitigate the impact, but they are offered as measures that may reduce disturbance to birds.
- 2.2.19 Without prejudice enhancements to measures at the mouth of The Haven could include ‘toolbox talks’ for pilots navigating The Haven as above ((in pilot cutters and large commercial vessels) with the aim of increasing awareness of bird species using The Haven and the international significance of The Wash waterbird assemblage. This could reduce potential for vessel disturbance that occur through a possible lack of understanding of how disturbance by vessels can affect birds). Practices adopted could include reducing speed when on course towards large gatherings of brent geese, gulls or other waterbirds on The Haven, and a change of course to pass such flocks at greater distance when piloting smaller vessels such as the pilot cutter.
- 2.2.20 In the event that the Secretary of State determines that the inclusion of this measure is necessary it could be secured by the amendment to the Technical Note for Navigation Management and Ornithology (document reference 9.70, REP6-033) as set out in paragraph 2.1.14 above. Additionally, the without prejudice amendment proposed to condition 14 of the DML at paragraph 2.1.15 above would provide additional certainty that such measures would be appropriately secured.

Response to the Request for Updates to the Template Navigation Management Plan

- 2.2.21 A NMP is to be prepared and submitted 13 weeks prior to the commencement of any licensed activity, as requested under condition 14 of the DML (draft DCO, document reference 2.1(6) REP10-004) “*The undertaker must submit a NMP in writing to the MMO for written approval in accordance with the procedure in Part 4, following consultation with the harbour authority, the relevant statutory nature conservation body and the Environment Agency to the extent that it relates to matters relevant to their functions, at least 13 weeks prior to the commencement*”

of any licensed activity.”

- 2.2.22 The NMP submitted for approval “must be substantially in accordance with the NMP template.” An updated NMP template (document reference 9.80(1), REP8-011) was submitted at Deadline 8 during the examination.
- 2.2.23 As discussed in the Technical Note for Navigation and Ornithology (document reference 9.70, REP6-33), The Port of Boston (the statutory harbour authority for The Haven and part of the Wash) and the Applicant (Alternative Use Boston Projects Ltd (AUBP)) remain of the view that developing a detailed NMP should wait until detailed design of the scheme is underway and discussions on methodology can be discussed with a contractor. This same approach was adopted for the Environment Agency’s Boston Barrier scheme that was the subject of a Transport and Works Act Order. As set out above, the NMP must include details of *“measures for managing disturbance to designated bird species developed in accordance with the process in the Navigation Management Planning Process: Risk to Birds”* (this is the Technical Note for Navigation Management and Ornithology (document reference 9.70, REP6-033)). The NMP will be a ‘live’ document, updated as required on an ongoing and adaptive basis through the construction and operational phases.
- 2.2.24 The Applicant has set out above some without prejudice additions that could be made to the Technical Note for Navigation Management and Ornithology/ Navigation Management Planning Process: Risk to Birds, should the Secretary of State consider enhanced measures are necessary and a without prejudice amendment to condition 14 of the DML should additional certainty be required. However, the Applicant does not consider that there are any amendments that would necessitate an update to the NMP Template other than updating the relevant document references for the Technical Note for Navigation Management and Ornithology/ Navigation Management Planning Process: Risk to Birds if necessary.

Response to the request to include, but not be limited to, consideration of concerns raised by Natural England [REP8-024], regarding the Technical Note for Navigation Management and Ornithology [REP6-033] and evidence that adaptation of vessel movement parameters would mitigate impacts and/or can be secured [REP9-063].

- 2.2.25 As well as incorporating Natural England’s concerns in the above responses the Applicant has provided the below responses to the key comments ((1) to (5)) taken from Natural England’s ‘Comments on the Technical Note for Navigation Management and Ornithology’ (REP8-024). It should also be noted that the comments raised by Natural England were responded to in the Applicant’s Fifth

Report on Outstanding Submissions (document reference 9.99, REP9-033):

1) Natural England notes that this plan has not been developed in a HRA context but suggests it can and should be adapted.

2.2.26 The NMP is to be developed in association with Natural England (Natural England is specified as a required consultee on condition 14 of the draft DML). The final approved NMP will need to cover more than just HRA issues and sets out a process in both the Technical Note for Navigation Management and Ornithology/ Navigation Management Planning Process: Risk to Birds and the NMP Template to ensure that, where HRA issues are discussed, this is made clear and that the measures are provided in context. It also sets out how Natural England will be consulted on the draft NMP before submission for approval.

2) Within the document it is suggested that it can be used as a HRA level impact management tool, but there is no evidence that adaptation of vessel movement parameters will mitigate impacts and/or can be secured. Especially as many aspects of vessel movement such as vessel speeds (please see Natural England Deadline 8 Appendix C4) and tides are outside of the projects control.

2.2.27 It is acknowledged that the management of vessels is strictly under the control of the Port of Boston, as the statutory harbour authority, and the Project cannot affect this management which is in place to ensure safety of navigation and efficient port operations. Further discussions have been held with the Port of Boston to identify where guidance could be given and measures identified in the final approved NMP to reduce the risk of disturbance impacts through vessel management. The drafting of condition 14 of the draft DML requires the NMP to include measures for managing disturbance to designated bird species developed in accordance with the process set out in the Technical Note for Navigation Management and Ornithology (document reference 9.70, REP6-033). The securing mechanism for the vessel management procedures to be a consideration within the development of the NMP is clear and unambiguous, however the Applicant has proposed on a without prejudice basis an amendment to condition 14 of the DML as set out above that will ensure the relevant measures are implemented prior to any potential impacts occurring. Natural England is identified as a statutory body that will be consulted in the development of the NMP.

2.2.28 The following vessel management considerations are paraphrased from those included in the Technical Note (document reference 9.70, REP6-033):

- Opportunities for encouraging vessel movements in close proximity (as a group), since this could reduce the number of disturbance flights in species

prone to repeat disturbance. Noting that the key user group most likely to travel in groups are the fishing vessels.

- Opportunities for managing vessel movements so as to reduce vessel speed where appropriate and beneficial to do so (vessel speed is indicated to be an increasingly important factor in disturbance when making close approach (Ronconi & St Clair 2002), and high proximity to shore is unavoidable in the narrow profile of The Haven).
- Opportunities for minimising vessels being held on-station at or near the MOTH. Measures outlined in the Port of Boston's Pilotage Statement (document reference 9.73, REP6-036), paragraphs 8.6 and 8.7 describe how vessels are managed in this regard and is applicable for minimising this kind of disturbance.

2.2.29 Since the close of examination, further discussions have been held between the Port of Boston and the Applicant. The Port of Boston as the statutory harbour authority has offered, on a without prejudice basis, subject to the pilotage requirements for navigational safety and efficiency (vessel management) and the application of the principle of 'safe speed' (application of Convention on the International Regulations for Preventing Collisions at Sea (COLREGS)), that when reasonably practicable to do so, it will require that all ships that are subject to compulsory pilotage when moving between the Port of Boston designated anchorage in the Wash and the Docks maintain a speed below 10 knots. This will apply to all vessels that are subject to compulsory pilotage (both existing shipping and the additional shipping resulting from the Facility) meaning that all commercial vessels over 30m in length will be subject to these new operating conditions.

3) Natural England advises that associated plans referenced in the technical note are not currently available and therefore we are unable to provide further advice.

2.2.30 As responded to in the Applicants Fifth Report on Outstanding Submissions (Document Reference REP9-033), the Applicant sought clarity on what plans Natural England were referring to. The Applicant is not able to discern from the comment which plans are referenced. The Applicant is happy to make information available to Natural England where this will alleviate any remaining concerns if so required.

4) Natural England is concerned that the Applicant has not set out how the plan would take birds into account, how it could be modified and how appropriate Nature Conservation oversight would be achieved. Until this is provided, we can have no confidence that the impacts can be appropriately managed to suitably minimise the risk to nature conservation.

2.2.31 The Technical Note for Navigation Management and Ornithology (document reference 9.70, REP6-033) discusses how ornithological management measures will be incorporated into the plan (Sections 4.2.4 and 4.2.5 which state that

2.2.32 *“The following documents set out the ornithological aspects of the HRA:*

- *Chapter 17 Marine and Coastal Ecology and Appendix 17.1 - Habitats Regulations Assessment - Ornithology Addendum (document reference 9.13, REP1-025); and*
- *Chapter 17 Marine and Coastal Ecology and Appendix 17.1 Habitats Regulations Assessment Update (document reference 9.59, REP5-006).*

The NMP will take account of the mitigation recommended in the finalised HRA documents at the end of the Examination, and also take in to account any decision by the Secretary of State on compliance with the regulations and the likelihood of AEoI”).

2.2.33 The NMP Template (document reference 9.80(1), REP8-011) sets out in section 1.4 how Natural England will be consulted in the production of the NMP to ensure appropriate Natural England oversight and the consultation with Natural England is specifically secured by condition 14 of the DML in Schedule 9 of the draft DCO (document reference 2.1(6), REP10-004).

2.2.34 *5) Natural England advises that in order to provide the necessary confidence to Secretary of State that the impacts can be mitigated, the Plan could be adapted to address nature conservation concerns, that impacts can be avoided and that the plan can be managed in accordance with statutory requirements.*

2.2.35 As discussed above, the NMP is intended to be a post-consent document and would be developed with involvement of various relevant parties (including Natural England), drawing on the specific project information which will only become available during that post-consent phase. While the primary purpose of the NMP is to address and manage the safety of navigation on The Haven, where vessel management measures also have a beneficial effect on bird disturbance these will be detailed. As such, the NMP is intended to address nature conservation concerns, where this does not conflict with safe operation of the vessels, and, along with additional plans, will enable mitigation of impacts and adaptation of management measures if necessary, during the ongoing project development and operation.

2.2.36 With regard to the request to include consideration of Natural England’s concerns regarding evidence that adaptation of vessel movement parameters would mitigate impacts and/or can be secured in its Comments on Report on the

Implication for European Sites (RIES) [REP9-063], the Applicant is unclear which particular comment is being referred to as Natural England does not address the adaptation of vessel movements in the context of impacts on birds. Notwithstanding this, the above responses to REP8-024 address these points.

2.3 Response to Question 3.2 - Clarification on the Harbour Seal Assessment and Requirement for an Updated Assessment

Question 3.2

Is requested to explain whether it considers that an updated assessment of impacts to harbour seal is required to account for an appropriate worst-case scenario, in light of its inability to enforce vessel speed limits...

- 2.3.1 The original and updated assessments regarding vessel effects on harbour seal, as set out in Environmental Statement (ES) - Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055) and Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 6.4.18, APP-111) did not rely on any specific vessel speed information in order to inform the assessments and conclusions. The assessments were based on an area of effect (i.e. the area at which harbour seal may be at risk of effects relating to increased vessel presence, including for increased risk of collision), rather than using any vessel speed in order to quantify that level of risk. This is line with the standard approach to collision risk assessments for marine mammals.
- 2.3.2 While there is a higher risk of collision to mammals from vessels travelling at higher speeds, due to the increased level of impact (Wang *et al.*, 2007), the assessment assumes that harbour seal are at risk of collision from all vessels transiting, rather than from only those vessels that are travelling at a specific speed, and therefore represents a worst-case assumption. This can be seen in the assessments for the construction phase for the ES Chapter 17 Marine and Coastal Ecology, paragraphs 17.8.141 to 17.8.147 (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055)).
- 2.3.3 This assessment (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055)) uses an area of effect-based approach, assuming that 95% of harbour seals within that area would be able to avoid collision with vessels, and 5% would be at risk of collision, based on an estimated collision risk rate of 5% for marine mammals. This was based on the strandings data available through the Cetacean Stranding's Investigation Programme (CSIP), which identified the cause of cetacean strandings in England. The methodology adopted also assumes that all seal:vessel collisions result in animal mortality.
- 2.3.4 However, a review of all harbour seal (and grey seal) strandings data, as reported by the Scottish Marine Animal Stranding Scheme (SMASS) from 2009 to 2020 (SMASS, 2009; 2010; 2012; 2013; 2014; 2015; 2016; 2017; 2018; 2019; 2020), reveals a potential collision fatality rate of 2.8%. During the 2009 to 2020 period, a total of 624 harbour seal were reported as stranded. Of these 180 were fully

investigated (necropsied), and a cause of death established. The cause of death for five of the harbour seal was as a result of a physical trauma of unknown cause (vessel collision cannot be ruled out for these seals), and none was specifically considered to be due to vessel collision. This results in five out of 180 known causes of harbour seal death in Scotland being possibly due to vessel collision (or a rate of 2.8%). If the rate of 2.8% was applied to the assessments as undertaken (rather than the currently used 5% (or 95% avoidance)), the assessed risk to the harbour seal population would be reduced. There is no data on harbour seal necropsies from stranded animals in England. The assessments presented in the Boston Alternative Energy Facility DCO Application have not been undertaken using this updated collision risk rate, however the information has been provided here to indicate the reasoning for the Applicant's belief that the completed assessments do assess the worst-case scenario, and therefore provide an appropriately precautionary assessment.

- 2.3.5 The impact assessment (for harbour seal) (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055)) in the ES submitted with the DCO Application concludes a magnitude of 'medium', with a sensitivity of 'low' for seals, resulting in the overall impact significance of collision risk during construction for seals of 'minor'. The ES was updated at both Deadline 1 (Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027)) and Deadline 9 (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17(1), REP9-011)). The impact assessment at Deadline 1 was updated to take account of the reduced harbour seal population within The Wash, and at Deadline 9 the assessment was updated to remove any reference to the vessel speed limits. In both updates, the overall assessment did not change. The same applies to the risk of increased collision during operation, with an impact significance of 'minor', based on the area-based approach as described previously. Again, while this impact assessment for harbour seal was updated at both Deadline 1 and Deadline 9 to take account of both the reduced harbour seal population and the removal of the vessel speed limits, no changes were necessary to the overall conclusions, which continue to be considered to be precautionary. Management measures to be put in place during operation (as set out within the ES and the Outline Marine Mammal Mitigation Plan (OMMMP)) include incorporating vessel movements into existing vessel routes, and having observers on-board vessels to monitor for seal presence.
- 2.3.6 The Habitats Regulations Assessment (HRA) (Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) applied the same assessment process as stated above. There is a reference to the speed restriction within The Haven (as at the time of writing, this was understood to be

the case), however, this was included for background information purposes only. It was not used within the actual assessment, and did not have any influence on the conclusions.

- 2.3.7 As with the ES, the HRA (Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) was updated at Deadline 1 (Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027)) and Deadline 9 (Appendix 17.1 Habitats Regulations Assessment (document reference 6.4.18(1), REP9-013)) to take account of both the reduced harbour seal population within The Wash, and the removal of the vessel speed limits. Again, this did not alter the overall outcome for the assessment for harbour seal.
- 2.3.8 Given the above, the Applicant is confident that the assessments presented within the DCO Application, and as updated through the Examination, are robust and based on worst-case assumptions with the assessments having no reliance on vessel speed limits. No updated assessment of impacts to harbour seal is therefore required due to any inability of the undertaker to enforce vessel speed limits.

2.4 Response to Question 3.2 - Without-Prejudice Additional Mitigation Measures and / or Enhancements

Question 3.2

...The Applicant is also requested to provide without-prejudice additional mitigation measures and / or enhancements to the existing proposed mitigation measures to reduce collision risk impacts to the harbour seals of The Wash and North Norfolk Coast SAC, with particular regard to concerns raised by Natural England in [REP10-036] and [REP10-038].

- 2.4.1 As stated in the Applicant's response to the Rule 17 letter (Applicant's Response to the Rule 17 Letter (document reference 9.106, REP10-022)), paragraphs 3.1.2 and 3.1.5:

"The assessments provided in the ES Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055) and the Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14(1), REP9-020) do not indicate that there would be any significant impacts on marine mammals during construction or operation of the Proposed Facility. Additionally, the assessment in the Habitats Regulations Assessment (HRA) (Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) does not indicate that there would be an adverse effect on the integrity of The Wash and North Norfolk Coast Special Area of Conservation (SAC) due to increased

vessel presence. The measures within the Outline Marine Mammal Mitigation Protocol (OMMMP) (document reference 9.12 (2) (REP7-003)) are therefore provided as a precautionary approach. The commitment to undertake best practice management measures and ensure all vessel activity is within current practices within the area would reduce any potential risk to harbour seals.”

“The Applicant has undertaken the assessments on the best available information, taking a precautionary approach, and as stated above (paragraph 3.1.2), have concluded that there is no potential for adverse effect on the integrity of the site. In addition, the Applicant has asked Natural England on a number of occasions what management measures they would request in order to provide them assurance that the harbour seal population will not be affected (Issue Specific Hearing 2; Fifth Report on Outstanding Submissions (document reference 9.99 (REP9-033)), and Natural England have not been able to provide an answer. Therefore, the Applicant stands by the current management measures as outlined in the OMMMP.”

- 2.4.2 The Applicant’s position on this matter has not changed; the assessments presented do not indicate that there would be any significant impacts that necessitate mitigation, or that there is an adverse effect on the integrity of The Wash and North Norfolk Coast Special Area of Conservation (SAC), due to increased vessel presence. The information presented in the application and previously in this response is considered a robust basis for the assessments. The Applicant has not received any evidence-based information from Natural England as to why they are of a differing opinion and would seek further (and in the Applicant’s view unnecessary and unjustified) mitigation for seals and vessels.
- 2.4.3 The mitigation detailed in paragraph 3.3.2 of the OMMMP (document reference 9.12(2), REP7-003)^{Error! Bookmark not defined.}, regarding vessels, is provided below:
- 2.4.4 *Mitigation measures and monitoring will be applied to reduce the potential impacts due to the increased number of vessels in the area (i.e. the potential for an increase in collision risk and disturbance from vessels). These are summarised below:*
- *Subject to the pilotage requirements for navigational safety and efficiency (vessel management), and the application of the principle of ‘safe speed’ (application of COLREGS), vessel speeds of ‘as low a speed as reasonably practicable’ are to be encouraged within The Haven and The Wash.*
 - *Noting that since the potential for fatal collisions with marine mammals is significantly reduced at vessel speeds of less than 10*

knots, BAEF vessel speeds should be aimed to be below that speed.

- *Safety permitting, vessels will maintain the same course (if possible) and speed to give, if required, any seal(s) time to avoid the vessel.*
- *Monitoring Option 1: Observers on board each vessel, monitoring for marine mammals as the vessel makes it way through The Wash and up The Haven.*
- *Monitoring Option 2: Adaptive monitoring programme to record marine mammal presence and behaviour in response to vessels within The Haven and The Wash.*

2.4.5 This mitigation is provided as a purely precautionary approach only, in line with the Applicant's desire to adopt best practice measures wherever practicable. None of the measures outlined are required to mitigate impacts to acceptable levels.

2.4.6 However, since the close of examination, further discussions have been held between the Port of Boston and the Applicant. The Port of Boston, as the statutory harbour authority, has offered, on a without prejudice basis, subject to the pilotage requirements for navigational safety and efficiency (vessel management) and the application of the principle of 'safe speed' (application of COLREGS), that when reasonably practicable to do so, it will require that all ships that are subject to compulsory pilotage when moving between the Port of Boston designated anchorage in the Wash and the Docks maintain a speed below 10 knots. This will apply to all vessels that are subject to compulsory pilotage (both existing shipping and the additional shipping resulting from the Facility) meaning that all commercial vessels over 30m in length will be subject to these new operating conditions.

2.4.7 The Applicant's vessels will also follow the same vessel collision speed restrictions while transiting through The Wash, to the anchorage area. All vessels travelling to the Facility will abide by a vessel speed limit of 10 knots, subject to the above same conditions regarding COLREGS and navigational safety, as far as is practicable. The Applicant will twice a year issue a tool box note (or similar) to request all shipping agents and vessel masters associated with the Applicant's vessels to issue guidance on this matter.

2.4.8 These measures limit any effect of the Applicant's vessels, but also reduces any baseline effect that may already exist.

2.4.9 In the event the Secretary of State determines this measure is necessary this could be secured by amending the text in paragraph 3.3.2 of the OMMMP as follows:

- ~~• Subject to the pilotage requirements for navigational safety and efficiency (vessel management), and the application of the principle of 'safe speed' (application of COLREGS), vessel speeds of 'as low a speed as reasonably practicable' are to be encouraged within The Haven and The Wash.

 - ~~○ Noting that since the potential for fatal collisions with marine mammals is significantly reduced at vessel speeds of less than 10 knots, BAEF vessel speeds should be aimed to be below that speed.~~~~
- Subject to the pilotage requirements for navigational safety and efficiency (vessel management) and the application of the principle of 'safe speed' (application of COLREGS), that when reasonably practicable to do so, the Port of Boston will require that all ships that are subject to compulsory pilotage when moving between the Port of Boston designated anchorage in the Wash and the Docks maintain a speed below 10 knots. This will apply to all vessels that are subject to compulsory pilotage (both existing shipping and the additional shipping resulting from the Facility) meaning that all commercial vessels over 30m in length will be subject to these new operating conditions.
- The Applicant's vessels will also follow the same vessel collision speed restrictions while transiting through The Wash, to the anchorage area. All vessels travelling to the Facility will abide by a vessel speed limit of 10 knots, subject to the above same conditions regarding COLREGS and navigational safety, as far as is practicable. The Applicant will twice a year issue a tool box note (or similar) to request all shipping agents and vessel master's associated with the Applicant's vessels, to issue guidance on this matter.

2.4.10 The final approved Marine Mammal Mitigation Protocol is secured by condition 17 of the DML to Schedule 2 of the draft DCO (document reference 2.1(6), REP10-004) and this must be substantially in accordance with the OMMMP. Condition 14 of the DML requires the NMP (approved in consultation with the Port of Boston) to include details of measures for managing potential risks to marine mammals in accordance with the marine mammal mitigation protocol approved under condition 17.

2.4.11 Should the Secretary of State determine the inclusion of the above measure necessary and to add additional certainty that vessel management measures to address potential impacts on marine mammals (and designated birds) are secured in the Navigation Management Plan and will be implemented prior to any potential impact occurring, the Applicant proposes on a without prejudice basis the following amendment to sub-paragraph 6 of condition 14 of the DML:

'(6) Unless otherwise agreed by the MMO in writing, the navigation management plan must be implemented as approved by the MMO and—

- c) no vessels associated with the construction of the authorised development may be received at Work No. 4 until the any measures relating to the matters in sub-paragraph 4(d) as set out in the navigation management plan have been implemented; and*
- d) no vessels associated with the operation of Work No. 1 may be received at Work No. 4 until the any measures relating to the matters in sub-paragraph 4(e) as set out in the navigation management plan have been implemented.'*

2.4.12 The mitigations follow best practice measure and appropriate for the Facility (as highlighted above), and there are no further additional measures that could be applied, or that are needed, to ensure protection to the harbour seal population.

2.4.13 Responses with particular regard to concerns raised by Natural England in [REP10-036] and [REP10-038]

2.4.14 The Applicant has set out specific responses to points raised by Natural England in REP10-036 and REP10-038 in **Appendix A**.

2.5 Response to Question 3.3 - Effectiveness of Marine Mammal Observers

Question 3.3

Is requested to propose measures to improve the effectiveness of the proposed Marine Mammal Observers in The Haven, and their ability to implement vessel course corrections. This should include detail of how mitigation will be secured.

2.5.1 The mitigation detailed in the OMMMP (document reference 9.12 (2), REP7-003), paragraph 3.3.2, includes no requirement to alter the course of the vessels due to the presence of a harbour seal in direct line of the vessel passage. This is to allow the harbour seal itself to predict the heading of the vessel and move out of the way. In addition, while transiting through The Haven, it would not be possible to alter course due to the narrow nature of the waterway. This is in line with the various marine mammal and vessel 'Codes of Conduct' that are referred to in paragraph 3.3.10 of the OMMMP.

2.5.2 As set out fully in **paragraph 2.4.6** (above) further discussions have been held

between the Port of Boston and the Applicant, with both parties agreeing to additional without-prejudice mitigation that, subject to vessel management and safety, the Port of Boston will require that all ships that are subject to compulsory pilotage when moving between the Port of Boston designated anchorage in the Wash and the Docks maintain a speed below 10 knots. Additionally, AUBP vessels will also follow the same vessel collision speed restrictions while transiting through The Wash, to the anchorage area.

- 2.5.3 The mitigation measures follow best practice wherever possible and appropriate for the Facility (as highlighted above), and there are no additional measures that could be applied, or that are needed, to ensure protection to the harbour seal population.
- 2.5.4 The OMMMP is secured by Condition 17 of the draft DML contained within Schedule 9 to the draft DCO (document reference 2.1(4), REP9-004) which requires a final MMMP to be approved by the Marine Management Organisation (MMO) following consultation with the statutory nature conservation body and Lincolnshire Wildlife Trust. The final MMMP submitted for approval must be in accordance with this Outline MMMP. The measures outlined for vessels (Section 3.3 of the OMMMP (document reference 9.12 (2), REP7-003)) will form part of the NMP secured by Requirement 14 of the draft DCO.

2.6 Response to Question 3.4 - Further Information to Assist in the Determination of the Without Prejudice Imperative Reasons of Overriding Public Interest Case

Question 3.4

Is requested to provide further information, beyond that already provided to the Examination, which may assist the Secretary of State in considering its without prejudice case with regards to Imperative Reasons of Overriding Public Interest ("IROPI").

- 2.6.1 The response to this question is provided in **Appendix B** of this document.

2.7 Response to Question 3.5 - Without-Prejudice Compensation Measures with Regard to Harbour Seals

Question 3.5

Is requested to provide without-prejudice compensation measures with regards to collision risk impacts on the harbour seal feature of The Wash and North Norfolk Coast SAC.

- 2.7.1 In the Applicant's response to the Rule 17 letter (document reference 9.106,

REP10-022), paragraphs 3.1.2 and 3.1.5 state:

“The assessment in the Habitats Regulations Assessment (HRA) (Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) does not indicate that there would be an adverse effect on the integrity of The Wash and North Norfolk Coast Special Area of Conservation (SAC) due to increased vessel presence. The measures within the Outline Marine Mammal Mitigation Protocol (OMMMP) (document reference 9.12 (2) (REP7-003)) are therefore provided as a precautionary approach. The commitment to undertake best practice management measures and ensure all vessel activity is within current practices within the area would reduce any potential risk to harbour seals.”

“The Applicant has undertaken the assessments on the best available information, taking a precautionary approach, and as stated above (paragraph 3.1.2), have concluded that there is no potential for adverse effect on the integrity of the site. In addition, the Applicant has asked Natural England on a number of occasions what management measures they would request in order to provide them assurance that the harbour seal population will not be affected (Issue Specific Hearing 2; Fifth Report on Outstanding Submissions (document reference 9.99 (REP9-033)), and Natural England have not been able to provide an answer. Therefore, the Applicant stands by the current management measures as outlined in the OMMMP.”

- 2.7.2 The above was reiterated in the Applicant's final response to outstanding submissions (Comments on Report on the Implications of European Sites (RIES) [PD-014] (REP9-063), Table 2-5, comment 8)^{Error! Bookmark not defined.}, the Applicant is ‘confident that the vessels associated with the Facility would not impact on the harbour seal population and that the mitigation measures as set out in Outline Marine Mammal Mitigation Protocol (OMMMP) (document reference 9.12 (2), REP7-003) will be sufficient to address concern over the potential for effects on marine mammals’.
- 2.7.3 The Applicant's position on this matter has not changed and the assessments presented do not indicate that there would be an adverse effect on the integrity of The Wash and North Norfolk Coast SAC due to increased vessel presence.
- 2.7.4 The cause of the decline in the harbour seal population within The Wash is not currently known, but there is no indication that the cause of the decline is due to vessel presence within The Wash and The Haven. The Applicant does not consider that collision with vessels would be a potential cause of population decline, as no collision of harbour seal and vessels has been recorded for vessels associated with the Port of Boston.

- 2.7.5 Given that the precautionary approach already applied for mitigation has adopted all applicable measures to reduce risk it is not considered that there are any additional measures that could be applied for a without prejudice compensation case.
- 2.7.6 Feedback has been gained from the pilots working at the Port of Boston in relation to their experience of seal collisions through a questionnaire provided by the Port of Boston to the pilots. In total, six of the Port of Boston pilots provided detail on their experience with harbour seals within The Haven. These six pilots have had just under 10,000 passages through The Haven during their tenure as a pilot. Most of the responses stated that they have seen a seal between The Wash and the Port of Boston docks a couple times a year, with some reporting that they had seen a seal less than once a year, and one respondent that observes a seal several times a month. One of the responses stated that they had never seen a seal while on passage. Seals are much more likely to be observed within The Wash than The Haven, and when seals are in The Haven, they are more likely to be a lone individual.
- 2.7.7 None of the respondents had experienced a vessel collision with a seal in over 10,000 passages, or had heard of any vessel collision with a seal. Two responses stated that they had once seen a seal carcass in The Haven. Where seals were sighted, they were seen to move out of the path of a vessel themselves, indicating that they are well adapted to avoid vessel transit routes when required, and that there is a low risk of any collision event occurring.
- 2.7.8 The responses to the questionnaire provide additional comfort that the issue of vessel collisions with seals associated with the SPA are rare and highly unlikely to be a significant contributing factor to any deterioration in seal numbers. It also provides additional comfort that the provisions made in the OMMMP are indeed precautionary.

2.8 Response to Question 3.6 - Further Information regarding the without-prejudice proposed compensation sites for The Wash SPA

Question 3.6

Is requested to provide further information regarding the without-prejudice proposed compensation sites for The Wash SPA, with regard to concerns raised by Natural England and the RSPB, such as in [REP9-058, REP9-059, REP10-036] and [REP10-043, REP10-045, REP10-046] respectively which were outstanding at the end of Examination, and any associated updates to documents including the Compensation Measures Document [REP8-006]. This should include, but not be limited to:

- land survey data;
- suitability of the habitat proposed to effectively address the ecological requirements of each of the affected individual species and that this does not displace existing qualifying features of the designated sites;
- carrying capacity;
- an update on compensation site selection, along with details of when the site is expected to be secured;
- confirmation of how the purchase / lease of the proposed compensation site will be secured in the DCO;
- details of alternative compensation measures to be adopted, should the preferred compensation sites not be secured;
- an updated Proposed Development construction timetable which allows for the design, delivery and implementation of fully ecologically functional compensation measures before the predicted adverse effects occur; and
- • how the proposed compensation will be adequately secured through the DCO / DML.

Without-prejudice proposed compensation sites

- 2.8.1 In response to the question regarding i) land surveys, ii) the suitability of the habitat proposed to effectively address the ecological requirements of each of the affected individual species, and iii) that this does not displace existing qualifying features of the designated sites and has the carrying capacity to support the species; the Applicant provides the following response.
- 2.8.2 In order to identify potential compensation land, each species was considered in detail as to its requirements for habitat and proximity to other features. This review was included in the “Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Document” (document reference 9.30(2), REP8-006). The site selection process was then undertaken based on what type of site was needed to meet the requirements for without prejudice compensation sites.
- 2.8.3 Detailed topographic and substrate surveys would be undertaken post-consent as this is not feasible prior to this, but preliminary site visits in November 2021 and preliminary site bird surveys in October 2022 have confirmed that the sites put forward would provide suitable habitats based on a visual inspection of the site in terms of position relative to The Haven, visual topographic and substrate

conditions and potential to convert to bird habitat. The sites were checked for potential levels of disturbance from various sources, including walkers/recreation, and agricultural and other commercial activities.

- 2.8.4 The sites were also considered based on the use of the sites by existing qualifying species of the designated sites, and some of the potential sites were discarded, as they already provided habitat for waders and wildfowl species and transformation of land for other feature waterbirds of The Wash SPA was likely to entail displacement of existing populations of qualifying features of the site.
- 2.8.5 Recent and specific surveys of existing habitat and waterbird use of all proposed compensation sites and potential alternative compensation sites (see section 'Details of alternative compensation sites, should the preferred compensation sites not be secured') were carried out on 29 and 30 October 2022. Surveys were carried out between two hours before and after high water (as timetabled for Boston), in order to capture waterbird use of the sites during the period when this was most likely. Each individual field site was observed for approximately 30 minutes from a suitable vantage point. All bird species' use of the site, including within any bordering drains and ditches, was recorded to field maps along with notes on the current land use of the site, existing habitat features, levels of disturbance, and any other potentially relevant information to compensation site suitability and design. Notable bird species (species other than corvids and pigeons) flying over the site were also recorded.
- 2.8.6 The results of the surveys are discussed further in association with the sites discussed below.
- 2.8.7 Natural England's response in REP9-058 stated that *"We advise that the identified sites are unlikely to support all impacted species but should be sufficient to mitigate development site impacts and would potentially compensate for a substantial part of the impacts at the Mouth of the Haven. Critical to a positive derogation case will be (a) securing the sites and (b) refining site plans and (c) establishing appropriate governance. If options for creating an alternative roost close to the impact site (best option for the SPA looking at this in a birds-only manner) are not going to be considered further, then we advise that the proposed compensation location/s provide a suitable option."*
- 2.8.8 Natural England's statement above has concluded that the proposed compensation locations provide a suitable option.
- 2.8.9 It is of note that the Applicant's assessments have indicated a baseline disturbance impact. It is not the responsibility of the Applicant to mitigate or

compensate for this impact. Rather it is within Natural England's remit to provide appropriate management measures to address this. Should the Secretary of State determine that compensation is required it may be possible that the compensation sites could be developed in conjunction with Natural England to also address this baseline impact.

2.8.10 In terms of an alternative roost close to the impact site, the Applicant did approach Natural England to discuss the option of placing rocks within The Wash SPA/Ramsar close to the existing Haven mouth roost site but further away from the vessel routes. At the time this was not encouraged due to the location being within The Wash and North Norfolk Coast SAC and it would involve some habitat loss under the rocks. The Applicant would be amenable to re-visiting this option through the development of the ornithology compensation implementation and monitoring plan, especially since it does provide a feasible alternative roosting site that could provide habitat for several species. This option would only be viable however if the works were determined not to have a Likely Significant Effect on the SAC.

2.8.11 The short-listed sites identified for without prejudice compensation provide extensive areas of compensation habitat. The majority of species that roost in this area already have alternative roosts within the area as they are using these when existing vessels transit through The Haven and are likely to have been doing this for many years. The sites put forward, together with the existing use of alternative sites already in the area, would be expected to meet the carrying capacity for any additional species and numbers that are displaced.

Fields at Wyberton Road

2.8.12 The Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-006) in section 4.7 identified two sites that had been initially short listed as being suitable for compensation by providing alternative habitat away from The Haven for waterbirds that are features of The Wash SPA/Ramsar. The sites consist of a 19 ha (hectare) field referred to here as Wyberton Road North and a 7.5 ha field referred to here as Wyberton Road South. The 12 ha of contiguous land at the east boundary of Wyberton Road South is also securable by the Applicant and the Applicant's Response to the Rule 17 Letter (document reference 9.106, REP10-022) includes an appended letter of comfort from the land owners of the Wyberton Road South sites.

Wyberton Road North

- 2.8.13 **Land surveys** of Wyberton Road North on 29 and 30 Oct 2022 detail that the site is currently partitioned into arable and non-arable use. While footpaths run along all sides of the site, the footpath along the west boundary has existing screening from the remainder of the field due to presence of mature (predominantly hawthorn) hedgerow. Standing water was found to already be present on site where ruts and hollows occurred, indicating the potential for creation of shallow water areas.
- 2.8.14 **Suitability of the habitat** is achievable as detailed in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures, document reference (document reference 9.30(2), REP8-006), to effectively address the ecological requirements of each of the affected species. This includes creation of a lagoon of 2-30 cm depth and up to 4.5 ha in size, landscaping of a gravel island and an earth island, zoning of terrestrial habitat into wet grassland, dry grassland and conservation crop rotation, addition of boundary blinds with viewpoints and other boundary management including some tree removal.
- 2.8.15 **Displacement of qualifying features of designated sites** already present will be negligible during site conversion to wetland. A small number of curlew (2-4 birds) were recorded foraging within the field during site visits, but no other feature waterbird species' use of the site was noted. A moderate number of gulls (<100 individuals) was present on both days, along with two kestrel plus common farmland songbirds and pigeons, typical of agricultural fields in winter. There are lagoons set back from The Haven on the waterward side of the Haven Bank from this field which are regularly used at high tide by an aggregation of waterbirds, but these are sufficiently isolated from the field site that noise and visual disturbance to these waterbirds is not likely.
- 2.8.16 **Carrying capacity** of the site (should it be converted to a wetland site of similar area) is estimated to be in the order of magnitude of thousands of waterbirds in an assemblage comprising all taxonomic groups associated with The Wash SPA/Ramsar (waders, ducks, geese, large waterbirds, gulls) as detailed in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-006). This estimate is based on existing sites of similar size and landscaping.

Wyberton Road South

- 2.8.17 **Land surveys** of Wyberton Road South on 29 and 30 Oct 2022 detail that the site is in arable use with a winter wheat crop.

- 2.8.18 **Suitability of the habitat** is achievable as detailed in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-006), to effectively address the ecological requirements of in-principle affected species. This includes conversion to wet grassland through restricting drainage, and restricting access and disturbance potential from neighbouring land and residences through addition of fencing or blinds. Management would be undertaken to retain a short sward grassland to ensure that the site remains suitable for lapwing and golden plover in particular but also black-tailed godwit and wigeon.
- 2.8.19 **Qualifying features of designated sites** will not be displaced during site conversion to wetland. No waterbird suitability or use was noted for this field site in its current state. One large drainage ditch with open water did not hold any waterfowl and remaining ditches were narrow, dry and vegetated. On the field itself, birds recorded were common pheasant plus a small number and diversity of common farmland songbirds typical of agricultural fields in winter.
- 2.8.20 **Carrying capacity** of the site (should it be converted to a wetland site of similar area) is estimated to be in the order of magnitude of tens or hundreds of waterbirds in an assemblage comprising lapwing, golden plover, black-tailed godwit and wigeon associated with The Wash SPA/Ramsar as outlined in the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-006). With the inclusion of the 12 hectares of contiguous land at the eastern boundary, and re-wetting of this segment of land as discussed at deadline 10 (REP10-022), the total carrying capacity of Wyberton Road South would be comparable to that of Wyberton Road North, i.e., in the order of magnitude of thousands of waterbirds, most likely comprising lapwing, golden plover, black-tailed godwit and wigeon associated with The Wash SPA/Ramsar.

Update on Compensation Site Selection

- 2.8.21 Section 4 of the Compensation Measures document (document reference 9.30(2), REP8-006) sets out the approach to site selection and land acquisition of the sites where the without prejudice compensation measures would be located. Since the close of the Examination the Applicant has continued to scope the outlined search zones for suitable sites in addition to the two sites identified in the Compensation Measures document in order to provide a range of suitable sites. This has included searching for available land listed for as being for sale, discussing land parcel availability with local landowners known to the Applicant, and engaging with local land agents and large-scale landholders.
- 2.8.22 Where potential sites have been identified the Applicant has undertaken diligent

enquiry including desktop investigations to identify suitable geographical features, has undertaken preliminary site visits by public access, and has made Land Registry enquiries.

- 2.8.23 Further details regarding the two identified potential compensation sites are outlined above with regards to Wyberton Road North and Wyberton Road South (**paragraphs 2.8.13 - 2.8.20**). With regard to Wyberton Road South, the Applicant provided Appendix A1 to the Applicant's Response to the Rule 17 Letter (document reference 9.106, REP10-002) a letter of comfort from the land owners of both parcels of land at Wyberton Road South demonstrating the landowner has agreed in-principle to consider the use of their land for compensation if required. With regard to Wyberton Road North, the Applicant is in ongoing dialogue with the landowners of this site with a view to either lease or purchase the land should the SoS determined it is required for compensation.
- 2.8.24 Additionally, the Applicant has identified a number of potential alternative sites to develop compensation measures should the short-listed sites not be secured. These are detailed in within the section below.

Details of when the site is expected to be secured

- 2.8.25 The Applicant assumes that the reference to when the site is/sites are expected to be secured relates to when legal agreements associated with the purchase/lease of the compensation sites will be agreed with the land owners.
- 2.8.26 As per the Indicative (worst-case) Habitat Implementation Programme (**Figure 2**), land acquisition where necessary is scheduled to occur during the four months following the DCO being granted. The Applicant does not consider it is appropriate or reasonable for it to enter into legal agreements for the purchase or lease of the sites in advance of a decision being made on the Development Consent Order, especially when compensation is being proposed on a without prejudice basis as it is the Applicant's position that there are no adverse effects on the integrity of the relevant designated sites. Such a requirement would be contrary to the recently made decisions on Hornsea Three Offshore Wind Farm Order 2020, the Norfolk Boreas Offshore Wind Farm Order 2021, the East Anglia ONE North Offshore Wind Farm Order 2022, the East Anglia TWO Offshore Wind Farm Order 2022 and the Norfolk Vanguard Offshore Wind Farm Order 2022 (**the Offshore Windfarm DCOs**) in respect of which legal agreements relating to the sites for without prejudice compensation measures were not required in advance of the orders being made. Please see the section below on how the purchase/lease of the proposed compensation sites will be secured in the DCO.

Confirmation of how the purchase / lease of the proposed compensation site will be secured in the DCO

2.8.27 As set out in paragraph 5 of Schedule 11, the ornithology compensation implementation and monitoring plan (OCIMP) (document reference 9.81(1), REP8-013) submitted for approval must include “details of landowner agreements demonstrating how the land will be bought or leased and assurances that the land management will deliver the ecology objectives of the OCIMP”. This ensures that appropriate landowner agreements are or will be in place to deliver the necessary compensation. While the Applicant anticipates that the land will have been purchased or lease agreements entered into at the time the OCIMP is submitted to the SoS for approval, the drafting allows for the Applicant to enter into option agreements for the sites, that could become effective once the OCIMP is approved should the Applicant or landowner determine that is the more commercially appropriate approach at the time. This is the same approach taken in the above mentioned Offshore Windfarm DCOs.

2.8.28 In the event that the Secretary of State determines that compensation is required, the Applicant suggests amending paragraph 5(b) of Schedule 11 as follows to explicitly cover the circumstances where the land has already been bought or leases at the time the OCIMP is submitted for approval:

“details of landowner agreements demonstrating how the land has been or will be bought or leased and assurances that the land management will deliver the ecology objectives of the OCIMP;”

Details of alternative compensation measures to be adopted, should the preferred compensation sites not be secured

2.8.29 As set out in **paragraphs 2.8.2 and 2.8.3**, the Applicant has continued to investigate alternative compensation sites that would provide similar habitat and area for use by any displaced birds, in the event the preferred compensation sites are not secured. Case examples are outlined below. However, current and ongoing availability of sites gives the Applicant confidence that a range of suitable sites will be acquired which will function as compensatory habitat, should the Secretary of State conclude that compensatory habitat is required (or contribute to Biodiversity Net Gain should no requirement for compensation be concluded).

Field at Corporation Point

2.8.30 An approximately 22 hectare field on the north side of The Haven at Corporation Point presents additional Haven-adjacent land which could provide wetland

distanced from vessel movements, should the SoS determine there is an adverse effect on the integrity of designated sites and the preferred sites not be available.

- 2.8.31 **Land surveys** of the field at Corporation Point on 29 and 30 Oct 2022 detail that the site was recently ploughed, with most surrounding drainage ditches being dry, narrow and vegetated. The raised (Haven Bank) footpaths along two sides of the site are frequently used including by cyclists and dog walkers.
- 2.8.32 **Suitability of the habitat** is achievable to effectively address the ecological requirements of each of the in-principle affected waterbird species. Transformation of the site to achieve this would follow a programme similar to that for Wyberton Road North, with creation of a large lagoon (with one or more island and raised features within the water body), and altering the visibility of footpath users against the horizon by addition of blinds on the relative edges of the site (with viewpoints situated at various points along them).
- 2.8.33 **Qualifying features of designated sites** already present will not be displaced. 22 curlew roosted on the land at high tide on one survey visit day but not on the following day, indicating that the site provides a temporary rather than consistent roost site (i.e., used for the full duration of high water or on a daily basis). The remainder of birds recorded were common pheasant and a small number and diversity of farmland songbirds and pigeons typical of agricultural fields in winter.
- 2.8.34 **Carrying capacity** of the site is in principle similar to that of Wyberton Road North which is located at similar distance from, and along, The Haven; and is of similar area.
- 2.8.35 **Dock-level roosting site for redshank and other waders in vicinity of Principal Application Site**
- 2.8.36 An additional compensation measure that could be proposed if an Adverse Effect on Site Integrity is concluded by the Secretary of State (particularly if disturbance at the Principal Application Site is considered a route to Adverse Effect on Integrity) is to provide an additional roosting opportunity for wading birds at the same height as surrounding port and wharf structures, providing a site that is inaccessible to the public and allowing greater vantage over The Haven which may be preferred by some species or individuals, or under specific conditions such as excessive water levels (e.g. unusually high spring tides, storm surges). The Port of Boston has highlighted an opportunity for transfer from the Environment Agency of the riverside wall and associated land (as shown in **Figure 2** and **Figure 3**) which could constitute a raised roost site beside The Haven and enhance mitigation roosting habitat options. The site is referred to here as the Port

of Boston site reflecting its location rather than ownership.



Figure 2 Ground view of securable land behind sheet-pile wall in south bank of The Haven (credit: Andrew Chick Ecology)



Figure 3 Annotated aerial view showing the indicative outline of raised land (within white polygon) behind sheet-pile wall in the bank, opposite Port of Boston lock on north side of The Haven. Principal Application Site lies within red line. (Imagery copyright 2022 Google, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map data copyright 2022)

2.8.37 The site comprises land on a raised flood bank behind sheet pile reinforcement on the south side of The Haven among a mix of residential and industrial

properties, with a thin strip of saltmarsh on the foreshore below. A public footpath runs up to both ends of the raised site's footprint, currently diverted around the site for engineering works associated with Boston Barrier, and this is used by the public including by dog walkers. This footpath would remain in place as a permanent feature to the required specification of the local highways authority (Lincolnshire County Council). There is potential to manage this site for wading birds by ensuring that the site comprises low sward grassland and managing disturbance by walkers through the installation of suitable fencing.

- 2.8.38 In order to demonstrate that this enhancement could provide suitable habitat, two recent UK examples are outlined below to demonstrate successful precedent for a dock-level roost site used by redshank.

Heysham Heliport wader roost, Lancashire

- 2.8.39 The 'Heliport' high tide wader roost comprises a fenced area containing a former helipad, scattered grassland vegetation and a sloping sea wall facing northwest onto Half Moon Bay on the landward side of Near Naze at Heysham on the east side of Morecambe Bay. Waders predominantly use the sloping sea wall while the flat ground provides overspill space when wave action reduces space on the wall (Heysham Observatory 2020). Although lack of maintenance has meant that gaps or collapses in the fence have allowed casual trespass by the public (walkers and dogs), resulting in disturbance of the roost (Heysham Observatory 2015), Heysham Bird Observatory has provided simple measures including signage and secure fencing to maintain the value of the site (Heysham Observatory 2020). Counts of redshank when the roost is undisturbed have approached 700.



Figure 4 Ground view west along the sloping seawall and across the fenced area containing the former helipad site with short vegetation at Heysham. Oystercatcher are roosting on the slope. The palisade fencing at the near end extends onto the decline, preventing works and third party access at this location. (Credit: Heysham Bird Observatory)

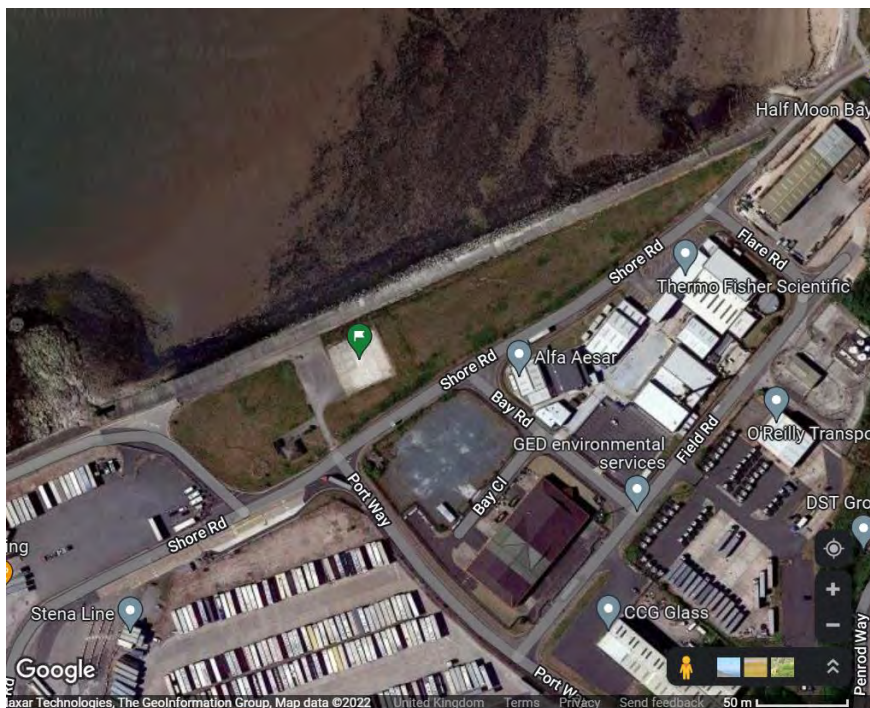


Figure 5 Aerial view showing the seawall used by roosting waders close to the former helipad (green marker) at Heysham (Imagery copyright 2022 Google, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group, Map data copyright 2022)

Seaham Harbour and Marina, County Durham

2.8.40 Waders including redshank routinely roost on sections of the inner harbour at Seaham, sheltered from the North Sea wave action by the north and south piers of the harbour. As with the Heliport roost at Heysham, this site benefits from inaccessibility to the public (through presence of 2m palisade fencing) despite its location close to a commercialised café area and directly above a sandy beach frequently used by dog walkers. A peak count of 70 redshank is known at this roost location, plus similar numbers of lapwing and gulls. The roost site is very sparsely vegetated.



Figure 6 Elevated view showing roost site (behind gateway) used by redshank and other waders and gulls in the Port of Seaham (copyright: The Lookout/Meta)



Figure 7 Annotated aerial view showing roost site used by redshank and other waders and gulls in the Port of Seaham (Imagery copyright 2022 Google, Bluesky, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map data copyright 2022)

Implications for Boston site

2.8.41 The Port of Boston site is situated directly adjacent to inaccessible open water or saltmarsh at high water (where redshank are already recorded from initial site

surveys) and has temporary Heras fencing. The site can be made more suitable for roosting redshank by creating a secure fence perimeter from all landward directions, permitting flight access from the waterward direction, and ensuring only sparse vegetation and availability of hard standing.

Rocks placed in the intertidal zone or shallow subtidal zone within the SPA

2.8.42 As discussed above at **paragraph 2.8.10** , an approach was made to Natural England regarding placement of rocks to be used for roosting close to the existing placed rocks that provide a heavily used roost near the mouth of The Haven. This was not considered to be viable as it would cause habitat loss in the SAC. However, more recent correspondence from Natural England in their Appendix B5 - Comments on Without Prejudice Habitats Regulations Assessment Derogation Case – Compensation Measures (REP8-8023) has refuted this and stated that “*Natural England advises that any compensation measures should not be to the detriment of the SAC features such that the conservation objectives for that site are hindered as a consequence of the compensation measures. But, if there are no other viable alternatives then this option should still be considered, albeit there would then be consequential impacts on the SAC to address*”.

2.8.43 This option could be jointly developed with Natural England to address both the existing baseline disturbance (for which the Applicant is not required to provide compensation) and the vessel disturbance from any additional vessels associated with the Applicant Project. The Applicant is happy to investigate this option further as an alternative to the compensation sites currently proposed. If acceptable, the rocks would be placed in a similar position relative to the tide as the existing rocks used by birds for roosting but would be further from the navigation channel to reduce potential for disturbance. This site could also provide additional habitat for birds such as turnstone and oystercatcher. This option is only viable if there is no Likely Significant Effect on the Special Area of Conservation.

An updated Proposed Development construction timetable which allows for the design, delivery and implementation of fully ecologically functional compensation measures before the predicted adverse effects occur

2.8.44 Ecological functionality is an evolving process and there is no final step in ecological functionality. That said there is a level of functionality that is necessary to support the species for which a site is being developed. Through discussions with RSPB about the development of their sites it was considered that a time period of two years minimum would be necessary to provide functionality for the birds. The birds are likely to use the site before this but to get a more robust habitat the two year period is considered to be the minimum. Natural England have agreed with this as stated in their response in REP9-058: “Natural England’s

Comments on Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures [REP8-006]" which stated *"Natural England concurs with the view that two years should be allowed between site establishment and its need to provide compensation. Sites undergoing this type of restoration take time to establish and often require follow-up work after initial site establishment"*. A two-year adaptive management period for the potential compensation sites is identified as being achievable before the potential adverse effects arise at the beginning of hot commissioning of EfW Line 2, as identified in **Figure 9**.

Updated Proposed Development Construction Timetable

- 2.8.45 Given the delay in the DCO determination date to 10th January 2023, the Applicant has updated the proposed Indicative Habitat Mitigation and Compensation Implementation Programme within Figure 4-3 of the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-006), based on the changes to the determination programme. The updated document is submitted along with this letter.
- 2.8.46 In addition, the updated indicative construction and habitat implementation programmes are presented as **Figure 8** and **Figure 9** with additional commentary provided below.

Indicative Construction Programme

- 2.8.47 The headline changes to the indicative construction programme based on the delay to DCO determination, are set out in **Table 2-1**. This table includes key changes relating to the overall construction programme and key activities at the wharf due to the proximity of this part of the Proposed Development to The Haven and associated ornithological receptors.

Table 2-1 Comparison of Changes to the Indicative Construction Programme

Item	Programme as Per the DCO Application (REP1-031)	Revised Programme
On-Site Construction Works		
Commencement	1 July 2023	1 August 2023 for the Habitat Mitigation Area (HMA) 1 March 2024 for the Power Export Island and associated circuits 1 June 2024 for other aspects
End	1 May 2027	30 June 2028

Item	Programme as Per the DCO Application (REP1-031)	Revised Programme
Duration	3 years 10 months	4 years 10 months for main programme (excluding Power Export island and HMA)
Wharf Construction		
Commencement	4 June 2023	4 June 2024
Wharf Piling	Between 4 June 2023 and 30 September 2023	Between 4 June 2024 and 30 September 2024
End	17 April 2025	4 May 2026
Duration	318 days	333 days

2.8.48 The programming takes account of the following seasonal restrictions set out in the draft DCO (document reference 2.1(6), REP10-004) regarding piling at the wharf and dredging:

- Schedule 9 (DML), Part 3, paragraph 12 (c) (iv) states, “that dredging activities must only be undertaken from 1 July to 28 February inclusive.....”; and
- Schedule 9 (DML), Part 3, paragraph 13 (2) (c) states, “.....that piling activities must only be undertaken between 1 June and 30 September.....”.

2.8.49 The overarching result of the construction programme change is to lengthen the programme by 12 months.

2.8.50 The Applicant has reviewed the ES in light of the change to the construction programme, and confirms that the assessments provided are still considered to be worst-case. There are several examples where the lengthening of the construction programme reduces environmental impacts due to the likelihood that some construction activities that would have overlapped may now not do so. Reductions in peak vessel and traffic counts and constriction noise are two areas where impacts could potentially reduce.

Indicative Habitat Mitigation and Compensation Implementation Programme

2.8.51 The indicative programme for the wider compensation sites is based on a worst-case situation where planning permission is required. The Applicant maintains its position with regard to ensuring that the wider compensation sites identified are provided for, and managed so that the measures are effective (and fully ecologically functioning) before any adverse effects potentially occur. This position is stated in paragraph 4.8.7 of the Without Prejudice Habitats Regulations Assessment Derogation Case: Compensation Measures (document reference 9.30(2), REP8-006), is maintained by the Applicant, and is reproduced below:

2.8.52 *Notwithstanding that commitment, compensation (if determined as being required by the Secretary of State) will need to be effective when the potential negative effect arises. For the purposes of the without prejudice compensation case, the Applicant has taken an extremely conservative view on this matter, applying the precautionary principle fully, and the following should be noted:*

- *Disturbance (leading to AEOI) is not predicted during the construction phase of the scheme where peak weekly vessel numbers will not exceed five (paragraph 18.7.51 of ES Chapter 18 Navigational Issues (document reference 6.2.3, APP-055). This equates to 260 vessels per year.*
- *There is disagreement between the Applicant and several Interested Parties that the 580 vessels per annum will cause an Adverse Effect on Integrity (AEoI) to the national network sites, with the Applicant maintaining that this level of disturbance does not cause AEOI.*
- *It is the commissioning phases where the vessel numbers start to increase, notably when 'hot commissioning' occurs (i.e. when the Energy from Waste lines start accepting some Refuse Derived Fuel (RDF)). Each of the three lines is commissioned separately and sequentially using a maximum of 16.5% of the operational maximum vessels per line (i.e. 0.165×480 RDF vessels/annum = 79 vessels/annum). Commissioning takes at least 6 months per line and is likely to take longer as issues arise that require remediation before operation.*
- *Seventy nine (79) vessels/year is significantly below both the maximum peak weekly construction vessel forecast and the operational maximum in vessels, as set out above. It is therefore considered conservative to have the compensation sites for disturbance constructed/landscaped two years before the start of the hot commissioning for the second EfW line, where maximum vessel numbers may rise to 158/annum. Figure 4-3 identifies that as worst-case (i.e. the earliest this could occur) being March 2027.*
- *Compensation for disturbance effects relate to the over-wintering birds and Figure 4-3 shows a significant buffer built in to the compensation sites programme before October 2027.*

2.8.53 Given the continued provision for compensation sites (if required) to be constructed in advance of the operation of the potential impacts occurring, a period of no less than 2 years is available for the measures to be subject to adaptive management and liaison with the Ornithology Expert Group (OEG) to take place. Therefore, the Applicant is certain the compensation sites for disturbance which is determined by the SoS to lead to AEOI will be effective and functional by the time that such negative effects could occur.

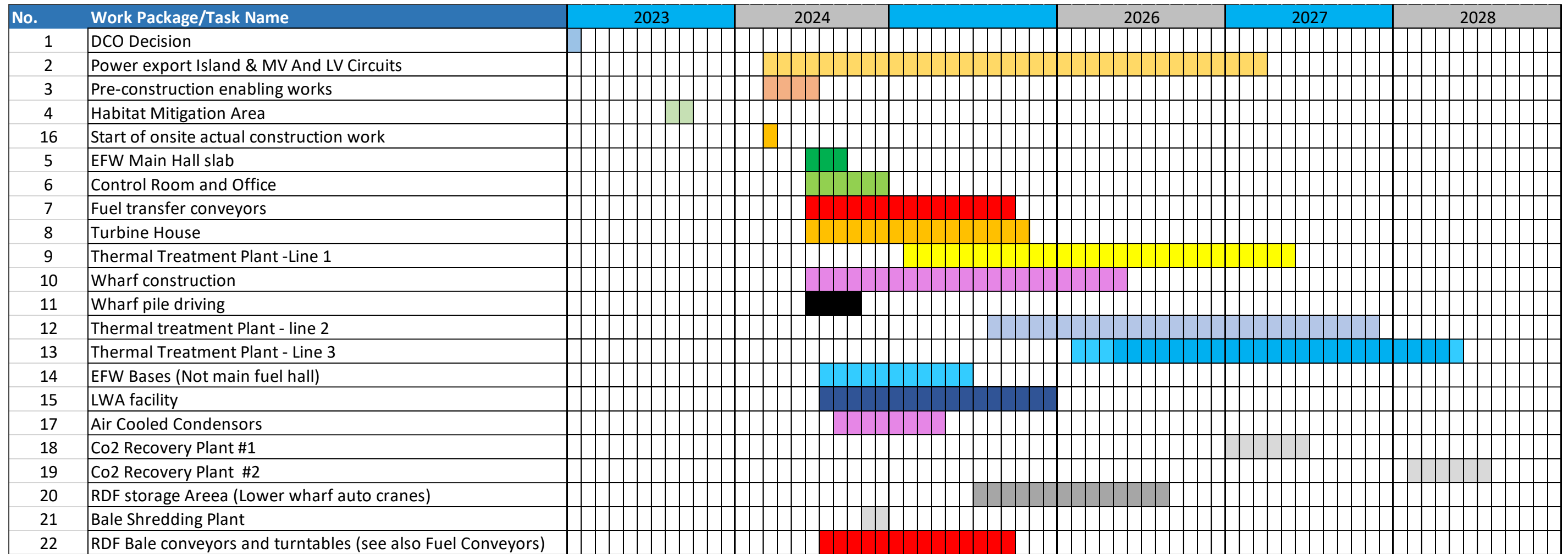


Figure 8 Indicative Construction Programme (using DCO determination date of 10th January 2023)

How the proposed compensation will be adequately secured through the DCO / DML

- 2.8.54 As set out in the Applicant's Response to the Examining Authority's Commentary on the draft DCO (document reference 9.58, REP5-005) and the Applicant's Responses to the Examining Authority's Third Written Questions (document reference 9.75, REP7-007) in the event the Secretary of State determines there is an adverse effect on integrity, the Applicant has included in the draft DCO (document reference 2.1(6), REP10-004) a without prejudice schedule (Schedule 11) which secures the mechanisms to ensure the compensation measures will be delivered.
- 2.8.55 This includes the approval of an ornithology compensation implementation and monitoring plan (OCIMP), by the SoS, following consultation with an Ornithology Engagement Group (OEG), which must include (additional details are specified in Schedule 11):
- a) details of location(s) where compensation measures will be delivered and the suitability of the site(s) to deliver the measures (including why the location is appropriate ecologically and likely to support successful compensation);
 - b) details of landowner agreements demonstrating how the land will be bought or leased and assurances that the land management will deliver the ecology objectives of the OCIMP;
 - c) details of designs of the compensation measures and how risks from avian or mammalian predation and unauthorised human access will be mitigated;
 - d) an implementation timetable for delivery of the compensation measures that ensures all compensation measures are in place prior to the impact occurring;
 - e) criteria for assessing the effectiveness of the compensation measures;
 - f) details of the proposed ongoing monitoring and reporting on the effectiveness of the measures
 - g) details of any adaptive management measures;
 - h) provision for annual reporting to the Secretary of State, to include details of the use of each site by waterbirds (split into species accounts) to identify barriers to success and target the adaptive management measures.
 - i) details of the management and maintenance prescriptions and a maintenance schedule appropriate to the habitats to be created at each compensation location; and

- j) minutes from all consultations with the OEG and copies of any written consultation responses from the OEG on matters relating to the development of the OCIMP.

2.8.56 Paragraph 6 of Schedule 11 ensures that the Applicant implements the compensation measures set out in the approved OCIMP and ensures the measures are in place and effective prior to the impact occurring. In order to provide additional certainty that that measures will be implemented prior to the relevant impacts occurring, the Applicant proposes on a without prejudice basis that paragraph 6 of Schedule 11 could be amended as follows:

The undertaker must implement the measures as set out in the OCIMP approved by the Secretary of State, unless otherwise agreed in writing by the Secretary of State in consultation with the relevant statutory nature conservation body. In particular, [for habitat loss as a result of the construction of Work No. 4, the relevant measures must be in place prior to any dredging or construction works on the intertidal habitat no dredging or construction works on the intertidal habitat forming part of the authorised development may begin until the relevant measures set out in the OCIMP have been implemented and] [for the compensation for disturbance by the increased number of vessels,] the [relevant] measures must be in place for at least two years prior to the hot commissioning of line 2 of Work No. 1A no hot commissioning of line 2 of Work No. 1A may begin until two full years following the implementation of the [relevant] measures set out in the OCIMP have elapsed.

2.8.57 Whilst it remains the Applicant's position that the habitat at the Principal Application Site is not functionally linked to The Wash SPA, should the Secretary of State determine that there is a functional link the Applicant has included drafting in Schedule 11 to account for this (shown in square brackets). In the event that the Secretary of State agrees with the Applicant's position in this regard that text would need to be deleted.

2.8.58 The Applicant has taken an approach to securing the compensation measures consistent with that determined to be appropriate in the aforementioned Offshore Windfarm DCOs. The drafting of Schedule 11 is based on the precedented schedules included in those DCOs.

2.9 Response to Question 3.7 - Crown Estate Evidence

Question 3.7

Is requested to provide evidence of its statement made in the Overall Summary of Case [REP10-019], that: "The Crown Estate have provided consent pursuant to s135(2) of Planning Act 2008 by email to the Planning Inspectorate on 6 April 2022".

- 2.9.1 The Crown Estate provided their consent pursuant to section 135(2) of the Planning Act 2008 directly to the Planning Inspectorate on 6 April 2022. A copy of this letter is enclosed at **Appendix C**.
- 2.9.2 The Applicant is currently preparing heads of terms for the agreement for lease specified by the Crown Estate at paragraph 3 of their letter.

2.10 Response to Question 3.8 - Natural England's Suggested Alternative Diversion Route

Question 3.8

Is requested to provide a plan of Natural England's suggested alternative to the proposed diversion route of the England Coast Path, as shown in Figure 1 of [REP2-047]. This is described in [REP5-015] as: "This alternative would continue with approximately 200m of the northern section of BOST/14/4 and introduce a short new section of footpath (110m) which would join BOST/14/11."

- 2.10.1 The alternative Public Right of Way (PRoW) suggested by Natural England is presented in Figure 1 of their Deadline 2 Submission - Further Natural England Advice in Relation to the Alignment of the England Coast Path (ECP) (REP2-047). This has been reproduced below as **Figure 10** below. The alignment would reduce the permanent stopping up of approximately 220m of footpath and introduce a new path of up to 110m (the NE-SW aligned section on the figure below).
- 2.10.2 The Applicant maintains its arguments set out in the Written Summary of the Applicant's Oral Case at Issue Specific Hearing 2 (ISH2) on Environmental Matters (Part 1) (document reference 9.47, REP3-023) that Natural England's proposed diversion is not appropriate or necessary, as summarised below:
- The provision of a new path would remove approximately 220m² of planting decreasing Biodiversity Net Gain and the effectiveness of screening of nearby views to the site;
 - Noise from wharf operations along this proposed route would potentially cause the footpath not to be preferentially used; and
 - Taking a footpath down this part of the site increases security risk which is a key consideration for the Facility.

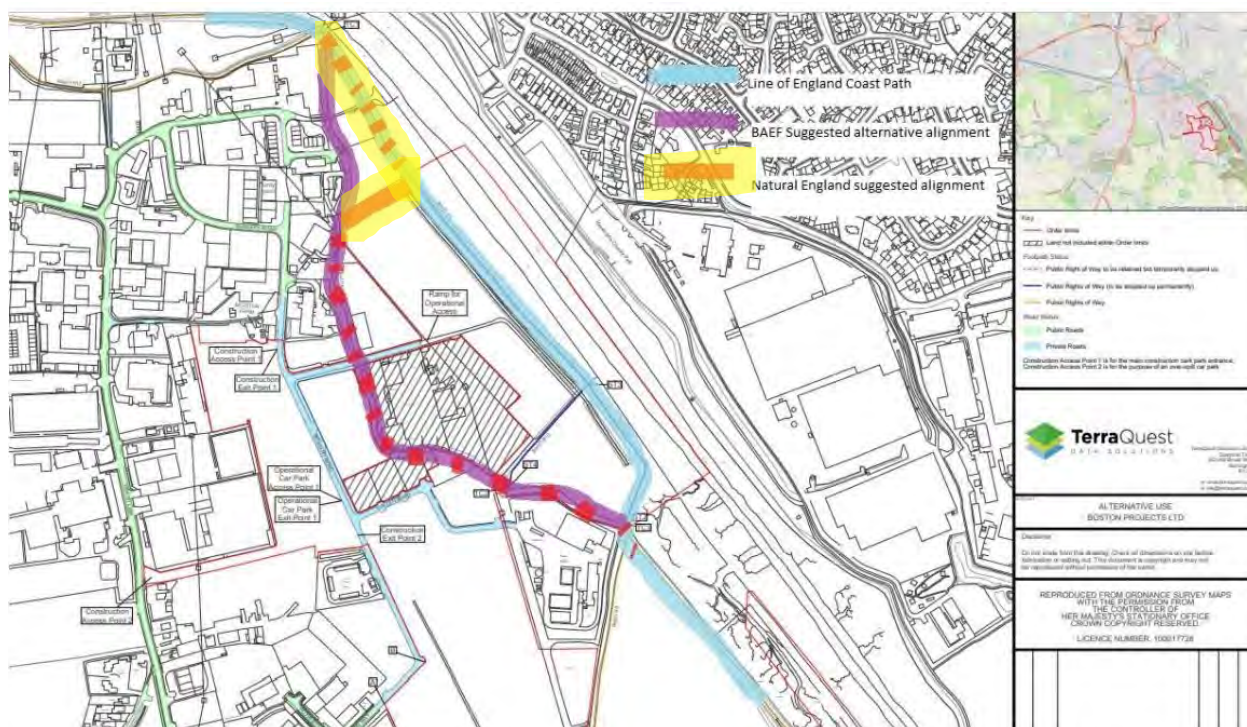


Figure 10 Natural England's Alternative PRow Alignment

3 Additional Comments

3.1 Response to Question 4.1 to Natural England

Question 4.1

Is invited to comment on the implications for the Proposed Development of the proposed change to the Conservation Objectives for the harbour seal feature of The Wash and North Norfolk Coast SAC from “maintain” to “restore”, with particular regard to when this change may come into effect.

- 3.1.1 While this question is directed to Natural England, the Applicant considers it is appropriate to provide comment on this question. As set out in REP4-014 and REP9-033, the assessment for The Wash and North Norfolk Coast SAC has been based on the current Conservation Objective of ‘maintain’. While Natural England has stated its wish to update the Conservation Objectives to ‘restore’ (within their Deadline 2 submission; REP2-043) there is no publicly available information relating to this and as far as the Applicant is aware this change has not been made and nor has any public statement been made by Natural England that the measures required to update the objective have been initiated. The assessments are therefore based on the information that was available at the time of submission and the current Conservation Objective of ‘maintain’. The Applicant considers this is the correct legal approach and it is not appropriate to require the Applicant to

undertake the assessments on the basis of a 'restore' Conservation Objective where there is no certainty that such a change will be made or the timing of when such a change may come into effect.

- 3.1.2 The Applicant has previously responded to this point on the Conservation Objective in Submission Response to the Marine Management Organisation (MMO) and Natural England's queries regarding Marine Mammals and Fish (document reference 9.49, REP4-014) and again in Table 2-5 of Final Report on Outstanding Submissions (document reference 9.104, REP10-0202). However, a precautionary approach, assessing worst-case scenarios, has been undertaken for all assessments. Given the low number of harbour seals that may be affected, and the relatively small potential ranges of effect, it is not considered that there is potential for adverse effect on the Conservation Objectives (which are currently at 'maintain'). However, mitigation measures will be put in place regardless.
- 3.1.3 The mitigation detailed in paragraph 3.3.2 of the OMMMP (document reference 9.12 (2), REP7-003), regarding vessels is provided as a purely precautionary approach only.
- 3.1.4 If a restore objective is imposed, the justification and means to restore should be based on particular activities which are likely to have caused the decline. There is currently no justification that vessel numbers within The Wash are a contributory factor and there are a number of other factors which could have contributed to the decline.

3.2 Response to Question 4.2 to Natural England

Question 4.2

Is invited to confirm whether it considers that the 'Habitat Mitigation Area' is appropriate to mitigate the effects of the loss of functionally linked land at the Application Site.

- 3.2.1 The Applicant maintains its position that the Habitat Mitigation Area provides suitable mitigation, and that this area is mitigation, and should not be conflated with compensation. The Applicant also maintains that the Principal Application Site is not functionally linked to the SPA as set out in Chapter 17 Marine and Coastal Ecology and Appendix 17.1 Habitats Regulations Assessment Update (Document reference 9.59, REP5-006) where it was concluded in this document that Area B (where the Habitat Mitigation Area is located) does not meet the criteria to qualify as functionally linked land.

3.3 Response to Question 4.3 to Natural England

Question 4.3

Is invited to advise whether an adverse effect on integrity resulting from changes in air quality can be excluded and, if so, for which protected sites and features this advice applies, in light of the Applicant's comments in [REP6-035] and otherwise

- 3.3.1 The Applicant provided a response to Natural England's Deadline 5 submission on this matter (REP5-014) in REP6-035. A considerable weight of evidence was provided in this response using realistic emissions data obtained from up-to-date industry sources, using these to drive the project's air quality model and identifying realistic worst-case impacts on designated sites. The approach is considered robust and conservative (i.e. realistic worst case) in order to identify any likely significant effects. The results identified that further mitigation measures are not required for the emissions of Facility in order to suitably and robustly protect designated sites from air emissions.
- 3.3.2 The Applicant considers this work to provide suitable evidence to Natural England on this matter and reinforces the conclusions set out in the Habitats Regulations Assessment Screening and Integrity Matrices (document reference 9.42(1), REP5-003) that changes in air quality would not cause any Likely Significant Effect (LSE) on National Network sites.

3.4 Response to Question 5.1 to the Environment Agency

Question 5.1

Is invited to provide an update on its position regarding Environmental Permitting, with particular regard to air quality

- 3.4.1 The Update on Environment Agency Position at Deadline 10 (REP10-032) states that:

"We acknowledge that the proposed Energy from Waste (EfW) plant will utilise recognised technology, typical of what has been permitted previously in the UK" and, "Whilst we acknowledge the possible benefits of the proposed Light Weight Aggregate (LWA) process, it would be a novel process and require careful consideration of the potential environmental impacts that may arise from it."

"We acknowledge that the proposed EfW plant will utilise recognised technology, typical of what has been permitted previously in the UK. The proposed CCP plant would utilise a process which is proven on a smaller scale and for which permits have been issued. However the exact design would need to be assessed through the environmental permitting process given the large scale of the proposals."

“Whilst we acknowledge the possible benefits of the proposed LWA process, it would be a novel process and require careful consideration of the potential environmental impacts that may arise from it.”

- 3.4.2 The Environment Agency recognise that a similar process is proven at a smaller scale and has been permitted elsewhere. The RTAL site at Tilbury (Permit Number BK2518/BK2518) which utilises the same process, with the same fundamental process temperatures, and achieves the required emissions limits.
- 3.4.3 By mixing the ash streams together in the LWA plant, technical improvements in the final products can be realised, which may also allow for lower use of overall heat input to the process system whilst still producing a non-leaching LWA, thereby reducing the carbon footprint of both the process and product. The Applicant agrees this aspect is a novel application of the process.
- 3.4.4 The Applicant is pleased that the Environment Agency recognises that the process has been permitted elsewhere in the UK, albeit at a smaller scale. The Applicant has proposed to produce a permitting roadmap for the LWA facility to include the End of Waste Determination, which was agreed in principle with the Environment Agency in a meeting of 25th January 2022 and is committed to work with the Environment Agency along the path to potentially achieve a permittable status.

4 References

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Appendix A Responses with particular regard to concerns raised by Natural England in [REP10-036] and [REP10-038]

Document	Comment	Application response	Link to previous relevant information / responses
REP10-036 – Rule 17 question to the Applicant and Natural England, and Natural England response	<p>Question: In the absence of powers to enforce a vessel speed limit in The Haven to avoid/reduce collision risk for harbour seals please provide a joint statement on an agreed position on mitigation measures. If you are unable to arrive at a joint position, please confirm what your individual positions are</p> <p>Natural England response: Please see Appendix C5 at Deadline 9</p>	A response to all points raised by Natural England within Appendix C5 of Deadline 10 is provided below.	
REP10-036 – Rule 17 question to Natural England	<p>Question: In relation to Annex 1 of REP8-021, please identify the locations where there would be an AEol in relation to seal</p> <p>Natural England response: Natural England advises that there are impact pathways from underwater noise and interactions with vessels in The Haven and The Wash that haven't been fully mitigated for</p>	<p>The Applicant does not consider there would be AEol of The Wash and North Norfolk SAC in respect of harbour seal.</p> <p>The Applicant does not believe there are any remaining risks of underwater noise that remain unmitigated. The Applicant has previously responded to Natural England's concerns on the planned mitigations for underwater noise in the Applicant's Response to the Marine Management Organisation (MMO) and Natural England's queries regarding Marine Mammals and Fish (document reference 9.49, REP4-014).</p> <p>As stated in the Applicant's response to the Rule 17 letter (document reference 9.106, REP10-022); <i>'Paragraph 3.1.2 The assessment in the Habitats Regulations Assessment (HRA) (Appendix 17.1 -</i></p>	<p>Deadline 10 Submission - 9.104 Final Report on Outstanding Submissions, Response to Natural England's Deadline 9 Submission - Appendix J</p> <p>Applicant's Response to the Rule 17 letter, Section 3</p>

Document	Comment	Application response	Link to previous relevant information / responses
		<p><i>Habitats Regulations Assessment (document reference 6.4.18, APP-111)) does not indicate that there would be an adverse effect on the integrity of The Wash and North Norfolk Coast Special Area of Conservation (SAC) due to increased vessel presence. The measures within the Outline Marine Mammal Mitigation Protocol (OMMMP) (document reference 9.12 (2) (REP7-003)) are therefore provided as a precautionary approach. The commitment to undertake best practice management measures and ensure all vessel activity is within current practices within the area would reduce any potential risk to harbour seals.</i></p> <p><i>Paragraph 3.1.5 The Applicant has undertaken the assessments on the best available information, taking a precautionary approach, and as stated above (paragraph 3.1.2), have concluded that there is no potential for adverse effect on the integrity of the site. In addition, the Applicant has asked Natural England on a number of occasions what management measures they would request in order to provide them assurance that the harbour seal population will not be affected (Issue Specific Hearing 2; Fifth Report on Outstanding Submissions (document reference 9.99 (REP9-033)), and Natural England have not been able to provide an answer. Therefore, the Applicant stands by the current management measures as outlined in the OMMMP.'</i></p> <p><i>This was reiterated in the Applicants final response to outstanding submissions (Comments on Report on the Implications of European Sites (RIES) [PD-014] (REP9-063), Table 2-5, comment 8)11, the Applicant is 'confident that the vessels associated with the Facility would not impact on the harbour seal population and</i></p>	

Document	Comment	Application response	Link to previous relevant information / responses
		<i>that the mitigation measures as set out in Outline Marine Mammal Mitigation Protocol (OMMMP) (document reference 9.12 (2), REP7-003) will be sufficient to address concern over the potential for effects on marine mammals'.</i>	
REP10-038 – Appendix C5 to Natural England's D10 response	Natural England maintains its fundamental concern regarding the ambiguity surrounding this key project design parameter.	<p>The original and updated assessments regarding vessel effects on harbour seal did not use any vessel speed in order to inform the assessments and conclusions. The assessments were based on an area of effect (i.e. the area at which harbour seal may be at risk of effects relating to increased vessel presence, including for increased risk of collision), rather than using any vessel speed in order to quantify that level of risk. Therefore, this alteration to the project parameter does not alter the results of the assessments.</p> <p>It has been estimated that while there is an advisory speed limit of 6 knots within The Haven, it is not enforced by any party, and currently cargo vessels travel through The Haven at a speed of up to 12 knots, although slowing as they reach the Port of Boston to between 4 and 6 knots. Vessels travelling at up to 12 knots within The Haven is therefore the current baseline environment. Further detail on this has been provided within the Outline Marine Mammal Mitigation Protocol, paragraphs 3.3.5 to 3.3.9, submitted at Deadline 7 (document reference 9.12 (2), REP7-003);</p> <p><i>'3.3.5 Following consultation with the Port of Boston, additional information has been received on the vessel current (and planned) speed limits within The Haven. While there is currently a general advisory speed limit of 6 knots along The Haven (to mitigate erosion from wash), it is not subject to enforcement by any party.</i></p>	<p>Deadline 7 Submission - 9.12 (2) Outline Marine Mammal Mitigation Protocol (Clean).</p> <p>9.99 Fifth Report on Outstanding Submissions, Natural England's Comments on Technical Note for Navigation Management and Ornithology, Table 2-3, comment 2.</p> <p>9.99 Fifth Report on Outstanding Submissions, Detailed Comments on the DCO schedule of changes, Table 2-4, comment 4.</p> <p>9.99 Fifth Report on Outstanding Submissions, Natural England's Comments on Outline Marine Mammal Mitigation Protocol (MMMP) [REP7- 004] (REP8-025), Table 2-5, comment iv.</p> <p>9.99 Fifth Report on Outstanding Submissions, RSPB comments, Table 2-8, comments 4, 5 & 6.</p> <p>Applicant's Response to the Rule 17 letter, Section 3</p>

Document	Comment	Application response	Link to previous relevant information / responses
		<p>3.3.6 Currently, cargo vessels travel through The Haven at up to approximately 12 knots, but slowing as they move further up The Haven to between 4 and 6 knots near the Port itself. The current speed limit is 'safe speed at all times', in accordance with the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS).</p> <p>3.3.7 An enforced speed limit is inconsistent with current safe practice and would restrict the number of vessels able to transit to the Port each tide (i.e. it would increase the transit time, reducing the number of vessels able to transit each tide, and significantly increase the number of vessels within the anchorage area).'</p> <p>The Applicants response to the Rule 17 letter provides information towards this point (paragraphs 3.1.3 to 3.1.4) (document reference 9.106, REP10-022).</p> <p>Since the close of examination, further discussions have been held between the Port of Boston and the Applicant. The Port of Boston as statutory harbour authority has offered, on a without prejudice basis, subject to the pilotage requirements for navigational safety and efficiency (vessel management) and the application of the principle of 'safe speed' (application of COLREGS), that when reasonably practicable to do so, it will require that <u>all</u> ships that are subject to compulsory pilotage when moving between the Port of Boston designated anchorage in the Wash and the Docks maintain a speed below 10 knots. This will apply to all vessels that are subject to compulsory pilotage (both existing shipping and the additional shipping resulting from the Facility)</p>	

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		<p>meaning that all commercial vessels over 30m in length will be subject to these new operating conditions.</p> <p>The Applicant's vessels will also follow the same vessel collision speed restrictions while transiting through The Wash, to the anchorage area. All vessels travelling to the Facility will abide by a vessel speed limit of 10 knots, subject to the above same conditions regarding COLREGS and navigational safety, as far as is practicable. The Applicant will twice a year issue a tool box note (or similar) to all request shipping agents and vessel master's associated with the Applicant's vessels, to issue guidance on this matter.</p> <p>Should the Secretary of State determine the addition of this measures was necessary it could be secured by the amendments outlined in section 2.4 of this report.</p> <p>The mitigations follow best practice measures and appropriate for the Facility (as highlighted above), and there are no additional measures that could be applied, or that are needed, to ensure protection to the harbour seal population.</p>	
REP10-038 – Appendix C5 to Natural England's D10 response	We advise that, based on the information provided, a worst case scenario of vessel speed of 12 knots should be used to determine the scale and significance of the impacts. However, it remains unclear if the Applicant's environmental impact assessment has used this figure.	The original and updated assessments regarding vessel effects on harbour seal, as set out in ES - Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055) and Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 6.4.18, APP-111) <u>did not</u> rely on any specific vessel speed in order to inform the assessments and conclusions. The assessments were based on an area of effect (i.e. the area at which harbour seal may be at risk of effects relating to increased vessel presence, including for increased risk of collision), rather than	<p>6.2.17 ES - Chapter 17 - Marine and Coastal Ecology.</p> <p>Deadline 1 Submission - 9.14: Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals.</p> <p>Deadline 9 Submission - 6.2.17(1) Chapter 17 Marine and Coastal Ecology (Clean).</p>

Document	Comment	Application response	Link to previous relevant information / responses
		<p>using any vessel speed in order to quantify that level of risk. This is in line with the standard approach to collision risk assessments for marine mammals.</p> <p>This can be seen in the assessments for the construction phase for the ES , Chapter 17, paragraphs 17.8.141 to 147 (document reference 6.2.17, APP-055). This assessment uses an area of effect-based approach, assuming that 95% of harbour seals within that area would be able to avoid collision with vessels, and 5% would be at risk of collision, based in an estimated collision risk of 5% for marine mammals. This was based on the strandings data available through the CSIP, which identified the cause of the cetacean strandings in England. The methodology adopted also assumes that all seal:vessel collisions result in animal mortality. This assessment (for harbour seal) (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17, APP-055)) in the ES submitted with the DCO Application concludes a magnitude of 'medium', with a sensitivity of 'low' for seals, resulting in the overall impact significance of collision risk during construction for seals of 'minor'. The ES was updated at both Deadline 1 (Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027)) and Deadline 9 (Chapter 17 Marine and Coastal Ecology (document reference 6.2.17(1), REP9-011)). The assessment at Deadline 1 was updated to take account of the reduced harbour seal population within the Wash, and at Deadline 9 was updated to remove any reference to the vessel speed limits. In both</p>	<p>6.4.18 ES - Appendix 17.1 - Habitats Regulations Assessment.</p> <p>Deadline 1 Submission - 9.14: Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals.</p> <p>Deadline 9 Submission - 6.4.18(1) Appendix 17.1 Habitats Regulations Assessment (Clean).</p>

Document	Comment	Application response	Link to previous relevant information / responses
		<p>updates, the overall assessment did not change. The same applies to the risk of increased collision during operation, with an impact of 'minor', based on the area-based approach as described previously. Again, while this assessment was updated at both Deadline 1 and Deadline 9 to take account of both the reduced harbour seal population and the removal of the vessel speed limits, no changes were made to the overall conclusions, which continue to be considered to be precautionary. Management measures to be put in place during operation (as set out within the ES and the Outline Marine Mammal Mitigation Plan (OMMMP)) include incorporating vessel movements into existing routes, and having observers on-board vessels to monitor for seal presence.</p> <p>The HRA (Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) applied the same assessment process as stated above. There is a reference to the speed restriction within The Haven (as at the time of writing, this was understood to be the case), however, this was included for background information purposes only. It was not used within the actual assessment, and did not have any influence on the conclusions. As with the ES, the HRA (Appendix 17.1 - Habitats Regulations Assessment (document reference 6.4.18, APP-111)) was updated at Deadline 1 (Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027)) and Deadline 9 (Appendix 17.1 Habitats Regulations Assessment (Clean) (document reference 6.4.18(1), REP9-013)) to take account of both the reduced harbour seal population within The Wash, and</p>	

Document	Comment	Application response	Link to previous relevant information / responses
		<p>the removal of the vessel speed limits. Again, this did not alter the overall assessment for harbour seal.</p> <p>Given the above, the Applicant is confident that the assessments presented within the DCO Application, and as updated through the Examination, are robust and based on worst-case assumptions with the assessments having no reliance on vessel speed limits. No updated assessment of impacts to harbour seal is therefore required due to any inability of the undertaker to enforce vessel speed limits.</p>	
REP10-038 – Appendix C5 to Natural England’s D10 response	Furthermore at 12 knots mitigation measures as presented by the Applicant couldn’t be relied upon to suitably minimise impacts.	<p>Dawson <i>et al.</i> (2008) report that marine mammal surveys have not been successfully undertaken at a vessel speed of 14 knots or higher. Large scale marine mammal surveys are generally undertaken with vessel speeds of 10 knots (e.g. SCANS I, II, and III (Hammond <i>et al.</i>, 2002; 2013; 2021), CODA (Hammond <i>et al.</i>, 2009), and guidance on undertaking marine mammal surveys developed by Scottish Natural Heritage (now NatureScot) (2011) states that vessel speed of 10 knots vessel is optimal for marine mammal surveys. This suggests that vessels speeds of 10 knots are not a hinderance to the ability to detect marine mammals at sea, but that at over 14 knots, the ability to detect marine mammals is significantly reduced.</p> <p>Under the mitigation as detailed in the OMMMP (document reference 9.12 (2), REP7-003), paragraph 3.3.2, there is no requirement to alter the course of the vessels due to the presence of a harbour seal in direct line of the vessel passage. This is to allow the harbour</p>	

Document	Comment	Application response	Link to previous relevant information / responses
		<p>seal itself to predict the heading of the vessel and move out of the way. In addition, while transiting through The Haven, it would not be possible to alter course due to the narrow nature of the waterway. This is line with the various marine mammal and vessel 'Codes of Conduct' that are referred to in paragraph 3.3.10 of the OMMMP.</p>	
REP10-038 – Appendix C5 to Natural England's D10 response	<p>Natural England has noted that the changes within the documents listed above are all related to a removal of a vessel speed limit of 4 or 6 knots. The documents now refer to the maintaining of a 'safe speed' as defined by the COLREGS and the Port of Boston. Firstly, Natural England draws the ExA attention to the principle of safe speed considered under the COLREGS which is in regard to safety of navigation and does not require any consideration of the ecological impacts. Secondly the documents make it clear that there will be no specified speed limit, but that a general aim for vessel speeds should be below 10 knots or as low as reasonably practicable. However, several sections of the documents also state that the vessels will be travelling at a speed of 12 knots, for example para 17.8.123 of the updated Chapter 17 of the ES. This appears to be contradictory and could lead to confusion on what has specifically been assessed, committed too and/or permitted.</p>	<p>While the COLREGS do refer to using vessel speeds that are safe, rather than reducing environmental impacts, there is currently no manner in which the Applicant can control vessel speed within The Haven, as this is in the control of the Port of Boston Pilots to ensure navigational safety. The Port of Boston are the Statutory Undertaker and therefore the competent authority for vessel passage.</p> <p>The assessments indicate that the baseline situation is vessels travelling at 12 knots (reducing as they reach The Haven to between 4 and 6 knots). The vessels associated with the Project will follow this same practice, with an expected worst-case of vessels travelling at 12 knots through The Haven. The management measures put in place on the Project is to make a recommendation to Facility vessels that speed to be below 10 knots where possible and safe to do so, as at below 10 knots, the risk of a collision event occurring, and the risk of any collision being fatal, is significantly reduced to be negligible.</p> <p>All assessments use an area-based approach, and therefore an alteration to the baseline vessel speed (or the vessel speed of the Project) does not alter this assessment.</p>	Issue Specific Hearing 2

Document	Comment	Application response	Link to previous relevant information / responses
		<p>Where there is a presence of vessels, the reduction in vessel speed is a preferred method for reducing collision risk, as stated by the International Whaling Commission (IWC, 2014) and the International Maritime Organisation (IMO, 2016). It is also the only method that has been recommended for smaller marine mammal species such as manatees and dugongs (although it should be noted that harbour seal are more agile than manatees and dugong, and likely better able to avoid vessels) (Calleson and Frohlich, 2007). Collision incidents have been reported between vessels and dugongs with vessel speeds of as low as 2 knots, however, collisions were very rare at speeds of less than 13 knots, and are much more likely to occur at higher speeds. Where vessel speed restrictions have been in place at 10 knots, a reduction in lethal collisions with vessels has been found, and the restrictions were effective (Laist <i>et al.</i>, 2014). The evidence suggests that at any speed of below 10 knots, the potential for collision is significantly decreased. Therefore, all vessels will transit at below those speeds wherever possible and safe to do so.</p> <p>Since the close of examination, further discussions have been held between the Port of Boston and the Applicant. The Port of Boston statutory harbour authority has offered, on a without prejudice basis, subject to the pilotage requirements for navigational safety and efficiency (vessel management) and the application of the principle of 'safe speed' (application of COLREGS), that when reasonably practicable to do so, it will require that <u>all</u> ships that are subject to compulsory pilotage when moving between the Port of Boston designated anchorage in the Wash and the Docks maintain a speed</p>	

Document	Comment	Application response	Link to previous relevant information / responses
		<p>below 10 knots. This will apply to all vessels that are subject to compulsory pilotage (both existing shipping and the additional shipping resulting from the Facility) meaning that all commercial vessels over 30m in length will be subject to these new operating conditions.</p> <p>The Applicant's vessels will also follow the same vessel collision speed restrictions while transiting through The Wash, to the anchorage area. All vessels travelling to the Facility will abide by a vessel speed limit of 10 knots, subject to the above same conditions regarding COLREGS and navigational safety, as far as is practicable. The Applicant will twice a year issue a tool box note (or similar) to request all shipping agents and vessel master's associated with the Applicants vessels, to issue guidance on this matter.</p> <p>Should the Secretary of State determine the addition of this measures was necessary it could be secured by the amendments outlined in section 2.3 of this report.</p> <p>The mitigation measures follow best practice and are appropriate for the Facility (as highlighted above), and there are no further additional measures that could be applied, or that are needed, to ensure protection to the harbour seal population.</p>	
REP10-038 – Appendix C5 to Natural England's D10 response	Furthermore, the 12 knots would represent an increase of double the speed originally considered and consulted upon for vessels within the shipping channel and triple the 4-knot speed limit within The Haven. The securing of vessel speeds is noted as to be controlled through the Navigational	The current baseline situation is that vessels travel at a speed of 12 knots within The Haven, and therefore the vessels associated with the Project travel will travel at the same speeds as the baseline environment. While a speed limit of 4 and 6 knots were referred to in the assessments, these are currently not enforced or followed speed limits by any vessel under the control of the Port of Boston, and therefore, in terms of a vessel	

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	<p>Management Plan, condition 14 of the DML, schedule 9 of the DCO. Natural England notes and welcomes that we will be consulted on this plan, but also notes that the current template plan has no details on a speed limit or how it will be enforced. The reduction of vessel speeds was noted within these updated documents as a mitigating factor. However, the assessments have been updated to state the new vessel speeds, but there has been no update on the assessment to show that the impacts of this change have been appropriately considered within the assessment documents. Given the ambiguity and lack of sufficient security on the vessel speeds, a worst-case scenario should consider vessels moving at 12 knots.</p>	<p>speed limit, there is no change to the baseline environment.</p> <p>The assessments for harbour seals have been undertaken adopting an area-based approach, and therefore a change in vessel speeds does not alter the results of the assessments. This is line with the standard approach to collision risk assessments for marine mammals.</p> <p>Further detail is provided in Section 2.3 of this report.</p>	
REP10-038 – Appendix C5 to Natural England’s D10 response	<p>Given the concerns outlined above, and Natural England’s comments on vessel speed in Appendix C4 [REP8-025] and Appendix F5 [REP8-026], our position remains that the vessel speed restrictions cannot be relied upon as mitigation. This also applies to the concerns on the intertidal habitats from the effect of vessel wash on Saltmarsh, as noted in our updated Risks and Issues Log [REP8-025]. Additionally, the Marine Mammal Addendum to Chapter 17 Page 3 Para 1.1.8 final line, states that the mitigations listed will be secured through requirement 14 of the DCO.</p>	<p>See response above regarding harbour seals and vessel speeds.</p> <p>In relation to intertidal habitats, the potential effect of vessel wash has been considered in detail in the ES within Chapter 16 (APP-054) and it was concluded that the increase in vessel traffic is unlikely to affect the intertidal mudflats and saltmarsh as the contribution to the overall accretion of these areas by locally-generated wind waves and tidal currents would significantly exceed the contribution to erosion from ship waves the effect on sensitive receptors would be negligible.</p> <p>The Applicant acknowledges this error and it should refer to condition 14 of the DML. This will be corrected</p>	

Document	Comment	Application response	Link to previous relevant information / responses
	This is incorrect as this is the Flood Risk Emergency Plan, it should refer to condition 14 of the DML which forms schedule 9 of the DCO.	when the documents are submitted for certification should the DCO be granted.	

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Appendix B - Further information, beyond that already provided to the Examination, which may assist the Secretary of State in considering its without prejudice case with regards to Imperative Reasons of Overriding Public Interest (“IROPI”).

Introduction

A1.1.1 This appendix has been prepared to provide further information on the without prejudice case with regard to Imperative Reasons of Overriding Public Interest (“IROPI”) for the Boston Alternative Energy Facility (‘the Facility’) as requested by the Department for Business, Energy & Industrial Strategy (BEIS) at paragraph 3.4 of in their letter dated 14 October 2022.

A1.1.2 The Without Prejudice Habitats Regulations Assessment Derogation Case: Imperative Reasons of Overriding Public Interest (document reference 9.29, REP2-012) sets out the IROPI argument in respect of the proposed development and is premised on:

- An urgent need for electrical energy;
- An urgent need for waste management;
- The need for lower carbon transportation which is key for maintaining public safety and human health;
- The need for developing in a location which aligns with local planning policy which has socio-economic benefits; and
- Socio-economic benefits related to job creation during construction and operation of the Facility.

A1.1.3 This appendix provides an overview of these points and provides further information where possible.

Urgent Need for Electrical Energy

Need for Energy Security

A1.1.4 Within the UK (and indeed across the world) there is an urgent need for domestic energy security, to be provided a combination of different energy and technology solutions. As highlighted in the British Energy Security Strategy (BEIS, 2022a), the British energy system should be more self-sufficient and requires power that is not only dependant on factors such as wind and sun (which do not provide

wholly predictable and constant energy). Paragraph 2.2.20 National Policy Statement (NPS) EN-1 (Department of Energy and Climate Change (DECC), 2011a) highlights this clearly where it notes (emphasis added):

“It is critical that the UK continues to have secure and reliable supplies of electricity as we make the transition to a low carbon economy. To manage the risks to achieving security of supply we need:

- ***sufficient electricity capacity** (including a greater proportion of low carbon generation) to **meet demand at all times**. Electricity cannot be stored so demand for it must be simultaneously and continuously met by its supply. This requires a safety margin of spare capacity to accommodate unforeseen fluctuations in supply or demand;*
- *reliable associated supply chains (for example fuel for power stations) to meet demand as it arises;*
- ***a diverse mix of technologies and fuels**, so that we do not rely on any one technology or fuel. Diversity can be achieved through the use of different technologies and multiple supply routes (for example, primary fuels imported from a wide range of countries); and*
- *there should be effective price signals, so that market participants have sufficient incentives to react in a timely way to minimise imbalances between supply and demand.”*

A1.1.5 The Facility provides this required reliable low carbon generation with the use of carbon capture (outlined below in **paragraphs A1.1.14- A1.1.18**). In addition, the Facility contributes to the domestication of the UK energy supply chain by utilising a domestic supply route of waste and reducing the amount of waste exported to Europe for use in overseas Energy from Waste (EfW) facilities.

A1.1.6 Similarly, paragraph 3.3.8 of the Draft NPS EN-1 (BEIS, 2021a) also notes (emphasis added):

A1.1.7 “Given the changing nature of the energy landscape, we need a **diverse mix of electricity infrastructure** to come forward, so that we can deliver a secure, reliable, affordable, and net zero consistent system in 2050 for a wide range of demand, decarbonisation, and technology scenarios”.

A1.1.8 The Facility will provide a near-continuous and reliable supply of lower carbon energy to the National Grid, which will primarily be regulated by the throughput of waste as feedstock, and is not dependent on wind or solar conditions. This is consistent with aims of the British Energy Security Strategy and the current and

draft NPS by contributing to the need for a diverse mix of technologies and fuel. The Facility is designed to operate 24-hours/day with bunkering (storage) for up to four day's supply of the waste feedstock and with regular deliveries of Refuse Derived Fuel (RDF) by vessel. The Facility will therefore provide highly predictable base-load renewable electricity generation to feed directly into the National Grid.

The Role of Energy from Waste in Secure Electricity Generation

A1.1.9 Where there is proposed to be more energy provided to the grid via wind and solar power, EfW has a vital role in providing a **predictable** and reliable source of electricity. Indeed paragraph 3.4.4 of NPS EN-1 notes:

“Biomass and EfW can be used to generate ‘dispatchable’ power, providing peak load and base load electricity on demand. As more intermittent renewable electricity comes onto the UK grid, **the ability of biomass and EfW to deliver predictable, controllable electricity is increasingly important in ensuring the security of UK supplies.**”

A1.1.10 The role of EfW in the need for energy security is highlighted in NPS EN-3 (DECC, 2011b), and the draft version of NPS EN-3 (BEIS, 2021b). As noted in the IROPI case (document reference 9.29, REP2-012), paragraph 2.5.2 of EN-3 (DECC, 2011b) states that:

“The recovery of energy from the combustion of waste, where in accordance with the waste hierarchy, will play an increasingly **important role in meeting the UK's energy needs**. Where the waste burned is deemed renewable, this can also contribute to meeting the UK's renewable energy targets. Further, the recovery of energy from the combustion of waste forms an important element of waste management strategies in both England and Wales.”

A1.1.11 The Facility will divert waste which is currently being disposed to landfill to produce energy and therefore will be in accordance with the waste hierarchy as noted above. With the added benefit of carbon dioxide recovery (covered further in **paragraphs A1.1.14- A1.1.18**), the Facility will provide a sustainable and renewable form of energy recovery in order to meet targets for renewable energy and carbon emissions and is in line with the requirements of NPS EN-1 and EN-3 (DECC, 2011a; 2011b).

A1.1.12 With regard to carbon emissions, the operation of the Facility would be likely to result in a decrease in greenhouse gas (GHG) emissions compared to existing waste treatment routes and the net contribution to regional and national emissions was not considered to have a material impact on the UK's ability to

meet its Carbon Budgets or the requirements of the Climate Change Act 2008 (Chapter 21 Climate Change (document reference 6.2.21, APP-059)). This conclusion is consistent with other EfW facilities which have been submitted for consent or consented, including, recently for the Medworth EfW facility which concludes within Chapter 14, Climate that there will be a beneficial significant effect in GHG emissions (Medworth CHP Limited, 2022).

Energy Security Summary

A1.1.13 In summary, the Facility provides:

- 80MW of secure and predictable renewable energy exported to the National Grid;
- A contribution towards the UK's diverse mix of technology solutions for energy generation;
- Domestic supply chain of waste UK-derived non-recyclable waste, without resorting to landfill;
- Recovery of energy from waste in accordance with the waste hierarchy; and
- Energy which results in a decrease in carbon emissions compared to fossil fuel-derived power supply and existing waste treatment routes.

Carbon Dioxide Recovery and the Need for Food Grade Carbon Dioxide

A1.1.14 BEIS' Ten Point Plan for a Green Industrial Revolution establishes the need for investing in Carbon Capture, Usage and Storage (CCUS), with the aim to capture 10 Mt (million tonnes) of CO₂ per year by 2030. In addition, as noted previously within the IROPI case (document reference 9.29, REP2-012) BEIS state that the deployment of CCUS at EfW facilities is essential for meeting net zero and deep decarbonisation of industry critical assets (BEIS, 2021c).

A1.1.15 The 2017 report commissioned by BEIS from ECOFYS and Imperial College London, entitled 'Assessing the potential of CO₂ utilisation in the UK' assesses the potential uses for carbon capture and utilisation (CCU), and estimated that by 2030 the future CO₂ demand from the CCU technologies considered is between 113-624 ktCO₂/yr. The food sector uses CO₂ in the critical applications, for humane slaughter of pig and poultry, increased shelf life of Modified

Atmosphere Packaging for vegetables and salads, as well as carbonated drinks, and beers/lagers.

- A1.1.16 CO₂ is critical to UK food security provision. In 2018 there was a shortage of food grade CO₂ which affected predominantly UK food sectors for several months. A report commissioned by the Food and Drinks Federation (2019) determined that this was caused by ‘a perfect storm of events’ and noted *“For a commodity that is critical to large parts of UK food supply, the CO₂ chain was poorly understood by purchasers, government and the public.”*
- A1.1.17 The UK Food & Drink sector’s requirement in 2018 was 600,000 t/yr delivered via a small number of producers. A significant percentage of this will not be available in the future due to the actual or planned closure of two production units owned by CF Fertilisers (who produced around 60% of the UK’s commercial CO₂ requirements (BEIS, 2021d)). Following government support to the supplier, BEIS (2022b) noted that *“In the longer term, the government would like to see the market take measures to improve resilience, and we are engaging on ways this could happen.”* Therefore, it is clear that there is an imperative need for more market resilience in a sustainable CO₂ supply.
- A1.1.18 The Facility will have capacity to contribute 240 t/day or **80,000 t/year of CO₂**, with potential in the future to increase carbon capture and usage, subject to securing necessary permissions. It has the potential to support the nascent technologies in the UK for deep decarbonisation, as well as having the potential where appropriate to export to the European market.

An Urgent Need for Waste Management

- A1.1.19 As previously highlighted in IROPI case (document reference 9.29, REP2-012), the primary sources of fuel will comprise wastes which are currently being landfilled and will be diverted then processed into RDF, and waste that is currently being exported out of the UK. The Facility will process up to 1.2 million tonnes of refuse derived fuel (RDF) as the feedstock to generate energy.
- A1.1.20 As per the IROPI case, the Addendum to Fuel Availability and Waste Hierarchy Assessment (document reference 9.5, REP1-018) identified:
- That around 12.5 million tonnes of combustible waste was landfilled in the UK in 2019, approximately 10.5 million tonnes of which would be available to the proposed Facility via a network of ports; and

- Approximately 2.8 million tonnes of waste-derived fuel (RDF and Solid Recovered Fuel (SRF)) was exported to international destinations in 2019 (Environment Agency, 2021).

A1.1.21 Diverting 1.2 million tonnes of RDF from landfill or exportation to EeFW would be favourable, with benefits including:

- Moving waste diverted from landfill up the waste hierarchy;
- Reaching Circular Economy Package (CEP) landfill target of reducing landfill to a maximum of 10% of municipal waste by 2035;
- Reducing carbon emissions; and
- Enhancing compliance with the proximity principle and an increase in self-sufficiency with regard to management of waste.

Need for processing residues

A1.1.22 As previously highlighted in IROPI case (document reference 9.29, REP2-012), the Facility is proposing to take the bottom ash and the Air Pollution Control residues (APCr) and fly ash and convert these into lightweight aggregate (LWA) rather than disposing to landfill. It is anticipated that just over 200,000 tonnes (design point = 201,890 tonnes) of LWA would be produced from bottom ash residues, and just less than 100,000 tonnes (design point = 97,531 tonnes) from APCr. The LWA will be manufactured to a standard that meets the market specification for use in construction. Hence, the material will be fully recycled into a product that ceases to be waste (subject to confirmation by the Environment Agency (EA)).

A1.1.23 NPS EN-3 (DECC, 2011b) in the section on “Residue Management” notes in paragraph 2.5.83 (emphasis added):

“The environmental burdens associated with the management of combustion residues can be mitigated through recovery of secondary products, for example aggregate or fertiliser, rather than disposal to landfill. **The IPC [in the Draft EN-3 (BEIS, 2021b), ‘the Secretary of State’] should give substantial positive weight to development proposals that have a realistic prospect of recovering these materials.** The primary management route for fly ash is hazardous waste landfill. However, there may be opportunities to reuse this material for example in the stabilisation of industrial waste. The management of

hazardous waste will be considered by the EA through the Environmental Permitting regime.”

A1.1.24 Therefore, it is clear there is a substantial benefit for recovering these materials on site for the production of an aggregate product. This promotes a higher hierarchical option by recycling into an aggregate product, compared to disposal by landfill or other lower options.

A1.1.25 In addition, aggregate produced from natural, virgin resources are finite and diminishing and is required for a wide range of construction and development purposes, therefore production of a LWA is sustainable and contributes towards the circular economy. The methodology for producing LWA at the Facility via firing the aggregate at a high temperature also ensures a high quality LWA which exceeds standard leach tests in the UK and provides a product which will be acceptable to UK markets.

Need for Lower Carbon Transportation

A1.1.26 As noted previously in the IROPI case (document reference 9.29, REP2-012), there is a need for low carbon transportation for EfW facilities as highlighted in the NPSs EN-1 and EN-3. The NPS state that “water-borne or rail transport is preferable of road transport” (DECC, 2011a) and “Applicants should locate new biomass or waste combustion generating stations in the vicinity of existing transport routes wherever possible” (DECC, 2011b).

A1.1.27 The Facility utilises water-borne transportation which limits road movements during operation, resulting in reduced impacts on the UK road network, such as on road safety, pedestrian severance, pedestrian amenity and driver delay and in terms of both carbon emissions and air quality effects.

A1.1.28 The Facility utilises land which is allocated as a “waste area” within the Lincolnshire Mineral and Waste Local Plan (LMWLP), suitable for waste uses including: *“Resource Recovery Park, Treatment Facility, Waste Transfer, Materials Recycling Facility, Household Waste Recycling Centre, Metal Recycling / End of Life Vehicles, Re-Use Facility, C&D Recycling, Energy Recovery”* (Lincolnshire County Council, 2017). All of these potential uses for the land would typically require high levels of road transportation and therefore result in traffic and air quality impacts to the local community. The Facility utilises this allocation without the potential effects of road traffic for importing waste which could arise from an alternative use of this land. In particular, the Facility minimises effects on receptors in proximity to the road network, and particularly

those within the Boston Air Quality Management Areas (AQMAs) which currently experience elevated pollutant concentrations.

Need for Developing in a Location which Aligns with Local Planning Policy

- A1.1.29 As noted above in **paragraph A1.1.28**, and covered within the IROPI case (document reference 9.29, REP2-012), the adopted LMWLP Site Allocations document, adopted in December 2017, identifies the Principal Application Site as predominantly falling within 119 ha of land allocated as WA22-BO: Riverside Industrial Estate Waste Area (Lincolnshire County Council, 2017), which confirms that the site is suitable for potential waste uses including, EfW projects.
- A1.1.30 In addition, the South-East Lincolnshire Local Plan (SELLP) (March 2019) identifies 89.7 ha of land as BO006 within the Riverside Industrial Estate, allocated for the purposes of Business (B1), General industrial (B2) and Storage or distribution (B8) (South-East Lincolnshire Joint Strategic Planning Committee, 2019). Part of the Principal Application Site falls within this Local Plan allocation, with the remainder designated as countryside.
- A1.1.31 Overall, the Facility aligns with these allocations for the site, and meets a national need for waste management as well as contributing to a socio-economic need for jobs as covered below in **paragraph A1.1.33**.
- A1.1.32 Lincolnshire County Council in its Local Impact Report states: “The 2016 Minerals and Waste Local Plan sets out that there is only a modest need for additional capacity for energy recovery from waste and the latest Lincolnshire Waste Needs Assessment (July 2021) confirms that there is no requirement for additional energy recovery in Lincolnshire until at least 2045. However, there is a national need for such facilities and Lincolnshire County Council accepts that the proposal does not compromise the policies of the Minerals and Waste Local Plan in terms of need and location.” (Lincolnshire County Council, 2021).

Socio-economic Need

- A1.1.33 As noted within the IROPI case (document reference 9.29, REP2-012), the Facility is expected to support, at its peak, approximately 250 to 300 direct construction jobs. As discussed in Chapter 20 Socio-economics (document reference 6.2.20, APP-058) it is estimated that approximately 81 to 131 of the 250 to 300 direct construction jobs to be created will be filled by local residents.

During operation, the Facility is expected to create 108 direct FTE job opportunities, with 47 jobs filled by local residents.

- A1.1.34 The local plan for Boston is the South-East Lincolnshire Local Plan 2011-2036 (South-East Lincolnshire Joint Strategic Planning Committee, 2019), which was adopted on 8 March 2019. Policy 7 (Improving South-East Lincolnshire's Employment Land Portfolio) states that: *"the South-East Lincolnshire authorities will, in principle, support proposals which assist in the delivery of economic prosperity and some 17,600 jobs in the area (...) Of these about 10,300 jobs fall into Class B."* Within this policy, Riverside Industrial Estate is identified as a "main employment area", reserved for the main employment classes of B1, B2 and B8 (as discussed above).
- A1.1.35 In addition, the Greater Lincolnshire Local Enterprise Partnership's (GLLEP) Strategic Economic Plan (SEP) (GLLEP, 2016), includes aims for accelerating the delivery of 13,000 jobs in Greater Lincolnshire. The SEP identifies EfW, in addition to other low carbon or environmental goods and services such as biomass and biofuels, as a major opportunity for growth.
- A1.1.36 Therefore, the Facility will support local planning policies through the local jobs provided and will assist in economic prosperity in the area

Conclusion

- A1.1.37 Should the SoS determine there is an AEOL, the Applicant submits that there are clearly IROPI for the proposed development to proceed. The Facility provides a public benefit which is essential and urgent by addressing the imperative needs for reliable and secure forms of electricity, waste management solutions which do not rely on landfill, and further, to the urgent need for reliable domestic sources of CO₂.
- A1.1.38 The Facility brings the UK one step closer to self-sufficiency in terms of energy production, waste management, supply of food grade CO₂ and retention of virgin resources through production of high-quality lightweight aggregate product. If the UK is to reduce energy bills in the long term, secure energy from a diverse range of technology sources is a necessity.
- A1.1.39 The Facility not only meets national needs, but local and regional ones, providing jobs while limiting impacts to local people through use of vessel transportation. Overall, the Facility provides another step towards the urgently needed diversification, domestication and decarbonisation of electricity generation in the

UK whilst meeting a national need to divert waste from landfill and increase domestic usage of RDF.

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Appendix C The Crown Estate Letter of 6th April 2022

National Infrastructure Planning
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

AND BY EMAIL: BostonAlternativeEnergyFacility@planninginspectorate.gov.uk

6 April 2022

Dear Sirs

Planning Act 2008 and the Infrastructure Planning (Examination Procedure) Rules 2010

Application by *Alternative Use Boston Projects Limited for The Boston Alternative Energy Facility Order 202[]*

I write further to the above.

In this letter:

“the Applicant” shall mean *Alternative Use Boston Projects Limited*;

“the Commissioners” shall mean the Crown Estate Commissioners;

“Draft DCO” shall mean the Applicant’s draft development consent order (reference 2.1, Version 4, dated 15 March 2022);

“Order” shall mean *The Boston Alternative Energy Facility Order 202[]* once made by the Secretary of State.

Section 135(2) consent is required for an order granting development consent to include provision(s) to apply to Crown land or rights benefiting the Crown (other than provision(s) authorising the compulsory acquisition of third party interests in Crown land).

The Applicant has confirmed that the Order will not include any provision(s) authorising the compulsory acquisition of third party interests in Crown land and, as such, no consent pursuant to section 135(1) has been sought in connection with the Order.

Subject to:

1. the inclusion and continuing application of the following “Crown rights” wording in the Order:
 - (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 lessee or licensee 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)—*
 - (a) *belonging to Her Majesty in right of the Crown and forming part of The Crown Estate without the consent in writing of the Crown Estate Commissioners;*
 - (b) *belonging to Her Majesty in right of the Crown and not forming part of The Crown Estate without the consent in writing of the government department having the management of that land; or*
 - (c) *belonging to a government department or held in trust for Her Majesty for the purposes of a government department without the consent in writing of that government department.*
 - (2) *Paragraph (1) does not apply to the exercise of any right under this Order for the compulsory acquisition of an interest in any Crown land (as defined in section 227 of the 2008 Act) which is for the time being held otherwise than by or on behalf of the Crown.*

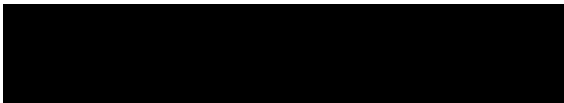
(3) A consent under paragraph (1) may be given unconditionally or subject to terms and conditions and is deemed to have been given in writing where it is sent electronically.

2. the Commissioners being consulted further if any variation to the Draft DCO is proposed which could affect any provisions of the Order which are subject to section 135(2) of the Act; and
3. the Applicant or any beneficiaries of the Order having an agreement for lease or lease from the Commissioners in respect of the Crown land forming part of the Crown Estate to which the Order applies

the Commissioners confirm their consent to Articles 3-6 of the Draft DCO and the relevant Article containing the "Crown rights" wording detailed above, to the extent that they are included in the Order, applying in relation to Crown land forming part of the Crown Estate for the purpose of section 135(2) of the Act.

I trust that the Commissioners will be kept informed as to progress regarding the Order as the Examination progresses.

Yours sincerely



Jonathan Treadaway
Senior Legal Counsel
For and on behalf of the Crown Estate Commissioners