

REPORT

Boston Alternative Energy Facility

Applicant's Response to Secretary of State's Letter of
25th November 2022

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1 Purpose of this Report

- 1.1.1 This document is submitted in response to the letter issued by the Department for Business, Energy & Industrial Strategy (BEIS) on behalf of the Secretary of State (SoS) dated 25th November 2022 (“the BEIS letter”) with regards to the Boston Alternative Energy Facility (the Facility). The BEIS letter requests responses from the Applicant (Alternative Use Boston Projects Limited), as well as other parties, to a number of questions. The Applicant’s response is provided below within **Section 2**.
- 1.1.2 In addition, the Applicant provides an update on the agreement with the Environment Agency in relation to disapplication environmental permits for flood risk activities within **Section 3**.

2 The Applicant’s Response

2.1 Response to Paragraph 4.1 – Air Quality

- 2.1.1 Paragraph 4.1 within the BEIS letter states: *“In response to the information request, Natural England updated its air quality advice. In summary it stated that Natural England cannot advise that an Adverse Effect on Integrity (“AEoI”) resulting from changes in air quality can be excluded, as insufficient information has been provided on the air quality impacts on the protected sites. This applies to The Wash Special Protection Area (“SPA”) and Ramsar, and The Wash and North Norfolk Coast Special Area of Conservation (“SAC”).”*
- 2.1.2 Natural England’s response (Natural England’s updated advice on potential Air Quality impacts dated 11 November 2022) was categorised into four technical issues, addressed in the following sections:
- Identification of Critical Levels and Critical Loads;
 - Application of the screening thresholds;
 - Consideration of mitigation; and
 - Appropriate assessment.
- 2.1.3 Within these sections, a number of themes were identified and, as such, the Applicant’s response below is structured to provide the necessary further information as follows:
- Engagement with Natural England on Air Quality

- Identification of Appropriate Critical Levels and Critical Loads;
- Consideration of sources and pollutants;
- Clarification on screening approach;
- Clarification on mitigation and the realistic emissions scenario; and
- Further discussion on Appropriate Assessment.

Engagement With Natural England on Air Quality

2.1.4 Natural England was consulted on air quality matters throughout the assessment process and had multiple opportunities to raise concerns or queries on the air quality assessment at the scoping and Section 42 consultation stages. As noted in previous submissions and during the Examination, the Applicant attempted on several occasions to engage with Natural England on air quality issues to discuss the assessment methodology, potential impacts on ecological receptors and to fully understand their perceived concerns. Natural England did not engage on any detailed technical aspects with the Applicant on this matter, as they recognise in their Deadline 10 submission (REP10-036), which stated:

“As previously highlighted, Natural England has had resource limitations in relation to providing further air quality advice. This has fundamentally been due to COVID complications. Unfortunately, we continue to be unable to update our advice provided at Deadline 5 [REP5- 014]. In recognition that this is the last deadline before the end of examination on 7th April 2022, we offer an alternative of responding to a pre determination consultation from the Secretary of State to any outstanding queries they may have relating to this matter.”

2.1.5 It should be noted that Natural England’s Deadline 5 submission (as referenced above) (REP5-014) provided only high-level commentary on the Outline Air Quality and Dust Management Plan (document reference 9.39, REP3-015) and the Air Quality Deposition Monitoring Plan (document reference 9.51, REP4-016) and did not provide detailed commentary on their concerns which have now manifested in their recent, post-Examination response to the Secretary of State. The air quality assessment was therefore undertaken with very limited input from Natural England.

2.1.6 The response from Natural England on air quality in response to the Secretary of State’s letter of 14th October 2022 has come at a very late stage in the process. They are the first detailed comments that have been received from Natural England regarding any detailed technical assessment on air quality. The increased level of detail now being presented well beyond the closing of the DCO Examination (and compared with that which was provided pre- and during-

Examination) is striking. Notwithstanding the late stage of Natural England's engagement, within this response we have been able to comprehensively respond to and rebut all the perceived issues that have been raised.

Identification of Appropriate Critical Levels and Critical Loads

2.1.7 Natural England has requested clarification in paragraphs 2-5 of its response ("Natural England's updated advice on potential Air Quality impacts dated 11 November 2022", herein "Natural England's Updated Air Quality Advice") on the qualifying features of the designated sites and whether they are sensitive to effects of air pollution, and the Critical Loads and Critical Levels which apply. The features and Critical Loads and Levels used in the assessment were provided in Table 14-7 and Table 14-9 of the Air Quality chapter of the Environmental Statement (ES) (document reference 6.2.14(1), REP1-006). For the avoidance of doubt, the habitats listed in **Table 2-1** include those which are present within the area of concern and their respective Critical Loads and Levels. Any habitats or features not included within this table which are included within the qualifying features of the designated sites have therefore been excluded, as they are either not present within the area of concern, are covered by the features discussed in detail in the table (i.e. mudflats and saltmarsh as the primary concern within the estuaries feature), are sublittoral features and therefore not vulnerable to significant effects from aerial emissions or are covered by consideration of the key species in the area of concern (i.e. redshank for the bird species that are within the SPA).

Table 2-1 Critical Loads and Levels Used for the Habitats and Features of Concern

Habitat/ Feature	Critical Load		Are Lichens and Bryophytes Integral for this Habitat?	Critical Level			
	Nutrient Nitrogen (kgN ha ⁻¹ yr ⁻¹)	Acidity (keq ha ⁻¹ yr ⁻¹)		Ammonia (NH ₃) (µg m ⁻³)	Oxides of Nitrogen (NOx) (µg m ⁻³)	Sulphur Dioxide (SO ₂) (µg m ⁻³)	Hydrogen Fluoride (HF) (µg m ⁻³)
Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (Saltmarsh)	20-30 kgN ha ⁻¹ yr ⁻¹ (published on the Air Pollution Information System (APIS)) 10-20 kgN ha ⁻¹ yr ⁻¹ (published following closure of the examination)	Not sensitive	No	3*	30 (annual mean)* 200 (24-hour mean)**	20	5 (daily mean) 0.5 (weekly mean)
Mudflats and sandflats not covered by seawater at low tide	Sensitive but no comparable habitat with Critical Load estimate established.	Not sensitive	No	3*	30 (annual mean)* 200 (24-hour mean)**	20	5 (daily mean) 0.5 (weekly mean)
<i>Lutra Lutra</i> (Otter)	Habitat used by otters (rivers and streams) is considered sensitive but whether the otter is sensitive to impacts on its habitat is site specific.	The species and habitat (rivers and streams) are sensitive, but there are no Critical Loads on APIS for assessment.	No	3	30 (annual mean)* 200 (24-hour mean)**	No critical level assigned for this feature	5 (daily mean) 0.5 (weekly mean)

Habitat/ Feature	Critical Load		Are Lichens and Bryophytes Integral for this Habitat?	Critical Level			
	Nutrient Nitrogen (kgN ha ⁻¹ yr ⁻¹)	Acidity (keq ha ⁻¹ yr ⁻¹)		Ammonia (NH ₃) (µg m ⁻³)	Oxides of Nitrogen (NO _x) (µg m ⁻³)	Sulphur Dioxide (SO ₂) (µg m ⁻³)	Hydrogen Fluoride (HF) (µg m ⁻³)
<i>Phoca vitulina</i> (Common seal)	No expected negative impact on species due to impacts on the species' broad habitat.	No expected negative impact on species due to impacts on the species' broad habitat.	No	The feature's habitat is not sensitive	The feature's habitat is not sensitive	The feature's habitat is not sensitive	Not listed on APIS but assumed not to be sensitive as this is the case for all other airborne pollutants
<i>Tringa tetanus</i> (Redshank)	The species is not sensitive to impacts on its habitat	The species is not sensitive to impacts on its habitat	No	The species is not sensitive to impacts on its habitat	The species is not sensitive to impacts on its habitat	No critical level has been assigned for this feature, please seek site specific advice	Not listed on APIS but assumed not to be sensitive as this is the case for all other airborne pollutants
<p>*APIS states that site-specific advice should be sought as to whether the habitat is sensitive to ammonia or NO_x. No guidance has been provided by Natural England as to whether these sites are sensitive, and therefore impacts of ammonia and NO_x were considered in the assessment in line with good practice.</p> <p>** Document reference 9.8, REP1-021 provides evidence as to why the 24-hour NO_x Critical Level of 200 µg m⁻³ is most appropriate for use</p>							

2.1.8 With regard to **nitrogen(N) deposition**, the estimate of the percentage of background N deposition onto The Wash and North Norfolk Coast by apportionment has been obtained for combined UK sources from the Air Pollution Information System (APIS)¹. This source apportionment is shown below in **Figure 2-1**. This shows that the highest contributions to total N deposition are from European imports and livestock (particularly when combined with fertiliser application).

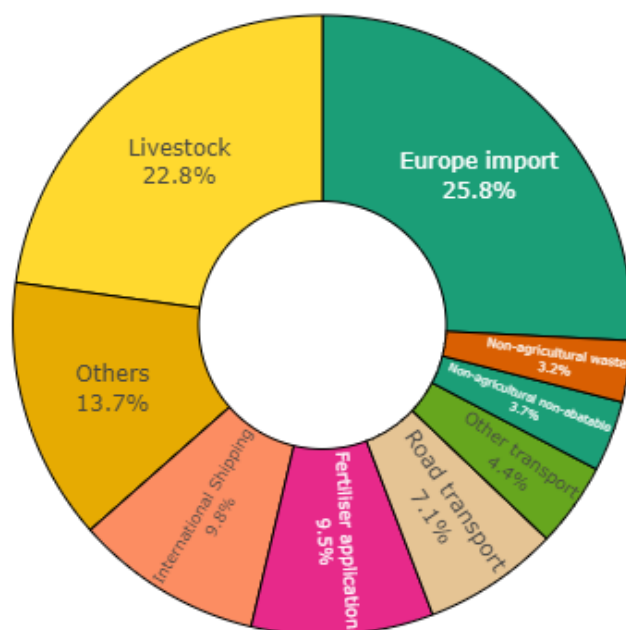


Figure 2-1 Sources ranked by total N deposition (KgN/ha/yr) from combined UK sources

2.1.9 Whilst the above chart includes the contribution from only atmospheric emissions, in a more local context the condition of the water environment is also relevant. The water catchment assessment for the River Witham identifies the status as ‘of bad ecological status’. With regard to diffuse sources, the cause is identified as ‘poor nutrient management’ within the category of agriculture and rural management.

2.1.10 In terms of balances between inputs and outputs for N deposition it is noteworthy that the proposed site for the proposed Facility is currently partially in agricultural use, with a number of fields farmed for maize production. The current agricultural use of the site contributes to N losses that ultimately increase the N loading in The Wash. Surface runoff is one of the primary routes for such agricultural N losses

¹ <https://www.apis.ac.uk/>

and considerable proportions of agricultural N are lost during rainfall events following fertiliser application. The main forms of N losses are nitrate (NO₃⁻) and ammonium (NH₄⁺) in maize fields. N losses from maize fields via surface runoff are typically significantly higher than those in other arable uses (Zeng et al., 2021). The Haven is located directly to the east of the proposed Application Site. The proximity of The Haven, as well as the presence of a surface water drainage system (which presently collects surface water from the Industrial Estate where the Application Site is located), ensures that there is a high likelihood of surface water runoff entering The Haven either directly, or via the small surface watercourse (which flows in to The Haven approximately 2km further down-estuary).

- 2.1.11 Conversion of the land from agricultural use to industrial sources is expected to significantly reduce the N losses from the current land use. The sources of N in industrial settings are much more limited and are expected to have a lower concentration and be less frequent than that which is reasonably expected from the current agricultural use of the site. It is anticipated that the current agricultural use of the site contributes significantly higher N loads than the future industrial use, including the effect of air emissions. Conversion of the site to the proposed industrial use would then in fact lead to a significant reduction in overall N loading from the site to the Black Sluice Drainage Catchment, the wider Haven and ultimately The Wash. Further to this, some of the Biodiversity Net Gain measures (as well as any without prejudice compensation measures presented) would also convert agricultural land into longer term less disturbed habitats which would further reduce N inputs to the localised area, which is also part of the wider Wash catchment.
- 2.1.12 In addition to further analysis of the data for N deposition, Natural England requested that impacts were considered in relation to a proposed revised Critical Load for N deposition for saltmarsh of 10 – 20 kgN ha⁻¹ yr⁻¹, based on documentation published subsequent to the closure of the Examination. The report that recommended the change in Critical Load was published by the overseas German Environment Agency (GEA) (2022) and was a culmination of data review of gradient changes in vegetation types, including saltmarshes, and an expert workshop on empirical Critical Loads. The assessment presented in the Environmental Statement (ES) was based on the current Critical Load of 20 kgN ha⁻¹ yr⁻¹. The impact of the Facility as a percentage of the Critical Load would be doubled from that reported in the ES, were a revised Critical Load to be imposed at the lowest value advised in the referenced paper (10 kgN ha⁻¹ yr⁻¹). For clarity, if these revised Critical Loads were to become formally adopted and published on APIS, the revised impact from the Facility, and a comparison of the



results presented with the ES, are presented in **Table 2-2** for the construction and operational phases.

Table 2-2 Comparison of Published and Revised Critical Loads for Nitrogen for Saltmarsh with the Process Contribution from the Facility Alone and In-Combination

Designated Site	Process Contribution (PC) from the Facility (kgN ha ⁻¹ yr ⁻¹)	PC/ original Critical Load (CL)	PC/ revised CL	In-combination (IC) PC (kgN ha ⁻¹ yr ⁻¹)	IC PC/ original CL	IC PC/ revised CL	BG (kgN ha ⁻¹ yr ⁻¹)	Predicted Environmental Concentration (PEC) (kgN ha ⁻¹ yr ⁻¹)	PEC / original CL	PEC/ revised CL
The Wash SAC	0.4	2.1%	4.1%	0.4	2.1%	4.3%	12.2	12.6	63%	126%
Havenside LNR	2.8	13.8%	27.6%	2.9	14.7%	29.4%	17.2	20.2	101%	202%
Slippery Gowt Sea Bank LWS	1.4	-	-	1.6	-	-	12.2	13.8	-	-
South Forty Foot Drain LWS	0.4	-	-	0.4	-	-	17.7	18.0	-	-
Habitat Mitigation Area	1.4	7.0%	13.9%	1.6	7.9%	15.7%	17.2	18.8	94%	188%
Additional saltmarsh area (min)	0.1	0.4%	0.7%	0.3	1.3%	2.5%	17.2	17.5	87%	175%
Additional saltmarsh area (max)	1.2	5.8%	11.5%	1.3	6.7%	13.3%	17.2	18.6	93%	186%

- 2.1.13 For **Atlantic salt meadows**, as discussed above, a proposed revision to the current Critical Load (from 20-30 kgN ha⁻¹ yr⁻¹ to 10-20 kgN ha⁻¹ yr⁻¹) has been identified by Natural England. Although these data have not yet been published on the APIS website. Natural England has requested that the proposed revised Loads are considered in the Appropriate Assessment. This change has been identified from the GEA report referenced above, published in August 2022. However, the GEA does recognise that for saltmarshes:

“Since the 2011 update, hardly any new evidence has become available for this EUNIS class, thus, the content of this chapter is more or less identical to that of 2011 (Bobbink and Hettelingh, 2011), except for a few corrections and the outcome of two additional “gradient” studies for salt marshes. No N addition studies with low enough N loads have been published in the present update and revision period.”

- 2.1.14 The report discusses saltmarsh habitats and confirms that *“They are characterised by an open nutrient cycle, receiving large amounts of nutrients from surface water, and exporting similarly large amounts of nutrients through surface water and denitrification (for N). This has led to the conclusion, in accordance with Morris (1991), that these systems are not vulnerable to the effects of increased atmospheric N deposition, at least not at most current deposition rates.”* However, the GEA also acknowledges that saltmarsh vegetation is primarily N limited. The studies reviewed in order to reassess the Critical Loads involved applications of high amounts of N (50 kgN ha⁻¹ yr⁻¹) on two saltmarsh systems, greatly in excess of that generated by the Facility, one of which already had background levels of 15-20 kgN ha⁻¹ yr⁻¹. The GEA summarised the results that the older saltmarsh had no significant effect on biomass but additions of greater concentrations (250 kgN ha⁻¹ yr⁻¹) showed that vegetation was at least partly N limited. These studies involved large increases in the N loadings, which are up to two orders of magnitude greater than the predicted contribution from the Facility.

- 2.1.15 Information from monitoring on a single Dutch island has also been used to inform the GEA studies on Critical Loads for N Deposition. Other studies used within the GEA report included those investigating the gradient of change of saltmarsh vegetation species with averaged N depositions taken from five years of data. The study recommends that rates should decrease for mid and upper marsh but also that:

“field experiments with lower N additions over a longer period of time and/or additional gradients studies to improve the reliability for these adaptations are urgently needed, particularly in southern European latitudes that harbour areas of

extremely high importance for migratory birds”.

- 2.1.16 Additional evidence has been reviewed by the Applicant to inform this response, including reports from Boorman *et al* (2012) who undertook a review of impacts of additional aerial inputs of N to saltmarsh and transitional habitats (using the previous Critical Load levels of 20-30 kg ha⁻¹-yr) and concluded that:

“The annual aerial inputs of N set by the prescribed Critical Loads are small compared with the levels of N stored in the soil. There is little evidence to suggest that additional inputs of N within the Critical Load range are likely to have any major detrimental effect on the N status of the marsh, or on the growth of its vegetation. It is suggested that there may be some mechanisms through which excess N can be removed from the system. Forms of soluble N within the rooting zone of salt marsh plants can either be taken up by the plants or they could be washed out by the regular tidal inundation.”

- 2.1.17 The conclusions that the authors draw from the data examined are that it is unlikely that N inputs at the set Critical Loads (20-30 kg ha⁻¹-yr) will have any damaging effect on the salt marshes of Wales (or elsewhere in the UK). Any possible effects are most likely to be found in the tall vegetation of the closed upper marsh communities where interspecific competition is at its greatest. Thus, it is suggested by Boorman *et al* (2012) that the value of 30 kg ha⁻¹ yr⁻¹ be applied to most of the marsh with the level of 20 kg ha⁻¹ yr⁻¹ being applied to the more densely vegetated upper marsh and to areas of marsh subjected to direct run-off from adjacent catchments.
- 2.1.18 Where N loads increase, the resulting impact on saltmarshes is that they show an increase in late successional species and an increase in productivity and become dominated by graminoids (grass-like plants). The saltmarsh vegetation near the proposed Facility is showing signs of succession but this is most likely due to its position relative to the tidal cycle whereby the marsh is constrained by coastal squeeze as it is backed by a seawall preventing it from rolling backwards or allowing pioneer vegetation to develop at the water’s edge. The profile of the shore also does not provide ideal conditions for pioneer vegetation as it is steep and subject to run off and wash. The saltmarsh does have high proportions of common saltmarsh grass and other more terrestrial grasses (as reported in Natural England’s saltmarsh survey undertaken in September 2021 and provided to the Applicant) but, this is typical for saltmarshes that are in mid-late successional stages that are continuing to accrete sediment and are moving further from the influence of the tide. There were several species of plants within the marsh that were not graminoids including sea aster, spear leaved orache and sea milkwort. Therefore, it can reasonably be concluded that the existing levels

of nutrients at this location are not affecting the vegetation adjacent to the site of the proposed Facility.

- 2.1.19 The Applicant recognises that the background loadings from existing sources are above the newly suggested, but not yet formally published on APIS, Critical Load for The Wash. However, as the proportional increase due to the proposed Facility is small in comparison (4% increase when using the lower proposed Critical Load (against a 2% increase when using the current Critical Load on APIS)) and that the main source of N inputs is from agricultural sources, it is considered that the increase due to the proposed Facility would not have a significant effect on the saltmarsh within the SAC and along The Haven.
- 2.1.20 With regard to **mudflats** and their sensitivity to airborne pollution and deposition, as shown above in **Table 2-1** APIS shows that mudflats are sensitive to N deposition but that there are no comparable habitats with established Critical Load estimates available and there are therefore no Critical Loads for mudflats on APIS. It is therefore not possible to draw conclusions regarding the impacts of predicted deposition. However, as shown from the modelling (presented in Table 14-30 of Chapter 14 of the ES, document reference 6.2.14(1), REP1-006), the contribution from the Facility will be very small in comparison to the background levels for background inputs to N deposition from the localised area. Given that the overall dominance for sources of N deposition are from agricultural sources and European Imports (as shown in **Figure 2-1**) the small contribution from industrial inputs and the even smaller input from the Facility can be considered negligible. In addition, intertidal habitats are submerged twice daily and therefore it is unlikely that N deposition would have an adverse impact on these areas, in part due to regular tidal inundation, as noted by Boorman *et al* (2012) as quoted above within **paragraph 2.1.16**.
- 2.1.21 In the case of **otter**, as reported in the Environmental Statement Chapter 12: Terrestrial Ecology (document reference 6.2.12, APP-050), there are no recent records of otter within 2 km of the Principal Application Site. The section of the tidal River Witham within the Survey Area does not provide suitable holt building habitat for otters due to a lack of bankside features that would provide suitable cover. Furthermore, the ditch network within the Survey Area was assessed as sub-optimal for otters. Therefore, otters are considered to be absent from the Principal Application Site although they may use the tidal River Witham for commuting in the wider area. This is assessed within Appendix 17.1 Habitats Regulations Assessment (document reference 6.4.18, AS-006). Given that otters do not use the key habitats within 2km of the Facility, any impacts during construction and operation were screened out for likely significant effect.

2.1.22 With regard to **acid deposition**, whilst the Facility will give rise to emissions of acidifying pollutants, the habitats and features of concern are either not sensitive to acidity, or there are no appropriate Critical Loads against which to consider impacts (in the case of otter). Given the above consideration of the very low potential for otter to be using habitats within 2km of the site, such that they are not expected to be significantly affected by air pollution within the study area, it is considered that no significant effects would occur from acidity levels. As such, impacts of acidity are not considered to require assessment.

Sources and Pollutants

2.1.23 Natural England notes in paragraph 6 of Natural England's Updated Air Quality Advice that the screening threshold for impacts in relation to Critical Loads or Levels within a designated site is 1% of the relevant benchmark, and that "*an HRA should be carried out for the project alone, and in combination with other plans or projects (that do not form part of the background air quality in the area)*". As noted by Natural England in paragraph 7 of Natural England's Updated Air Quality Advice, two other projects were included within the in-combination assessment. With regard to the query as to whether the predicted impacts of the Facility included all potential sources, paragraph 14.7.38 of Chapter 14 Air Quality (document reference 6.2.14(1), REP1-006) notes that the total predicted pollutant concentrations for human receptors include the combined releases from the Facility stacks, development-related vessel and road traffic activities. This same approach was taken for ecological receptors, and the reported Process Contribution (PC) values therefore represent the total contribution from the Facility from all sources of emissions (where these sources have emissions of the relevant pollutants).

2.1.24 Natural England requested in paragraph 11 of Natural England's Updated Air Quality Advice that construction phase ammonia emissions also be considered within the Appropriate Assessment. The Applicant responded, providing a comprehensive response to Natural England's queries regarding construction phase ammonia in row 107 of Table 1-13 of the Applicant's Comments on Relevant Representations (document reference 9.2, REP1-035).

2.1.25 In summary, the Applicant's response noted that there are two potential sources of ammonia during construction: road traffic and vessels. There are no roads in the vicinity of The Wash, and traffic flows on roads in the vicinity of the South Forty Foot Drain (of which only 1% of the designated site area is within 200 m of the road) were below the relevant screening criteria. Emissions would therefore not be significant. Ammonia from vessel emissions has the potential to occur only where Selective Catalytic Reduction (SCR) technology is used. This technology

would primarily be used to achieve stringent nitric oxide (NO_x) (the N oxides that are most relevant for air pollution) emission limits imposed under MARPOL on new vessels (those constructed on or after 1st January 2021) operating within the North Sea. It is considered unlikely that a significant proportion of vessels utilised by the Facility would utilise this new technology. In addition, emissions from vessels would be intermittent and the construction phase is short-term in nature (unlike the continuous emissions of ammonia from the Facility stacks which were explicitly considered within the ES).

2.1.26 Natural England has raised concerns regarding the increase in background ammonia concentrations in recent years (paragraph 21 of Natural England's Updated Air Quality Advice). Whilst this upward trend in background concentrations has been occurring since 2017, the latest data referred to by Natural England were published following the closure of the Examination. It should also be noted that in May 2022, APIS began to provide data at a finer resolution (data are now provided for 1 km² resolution rather than the previous 5 km² resolution). The rise in mapped ammonia concentrations may be an artefact due to this finer resolution of data. Nevertheless, with regard to operational phase impacts, the maximum in-combination ammonia concentration predicted within any of the designated sites or areas of saltmarsh habitat was 0.45 µg m⁻³; with the addition of the latest 2019 mid-year background concentration of 2.29 µg m⁻³, the Critical Level for ammonia (3 µg m⁻³), would still not be exceeded when considering the worst-case emissions from the Facility (emissions at the Best Available Techniques-Associated Emission Level (BAT-AEL) which is a requirement of the Environmental Permit). The results of the 'realistic emissions scenario' (presented in document reference 9.72, REP6-035) and discussed in greater detail in a later section of this response), shows that actual emissions of ammonia are likely to be significantly reduced (by approximately 80%) from those reported in the ES.

2.1.27 Natural England also requested that the Applicant undertake an assessment of the impact of operational emissions of dioxins and furans, polychlorinated biphenyls (PCBs) and trace metals on ecological receptors (paragraph 10 of Natural England's Updated Air Quality Advice). Natural England suggested that the modelling of these pollutants undertaken to inform the Human Health Risk Assessment (document reference 9.9, REP1-022) be used to consider the effects on ecological receptors. The need for an assessment of trace pollutants is not a standard requirement for similar developments. In addition, it was not requested by Natural England as part of the Section 42 consultation period nor during the Examination (prior to Natural England confirming they had severe difficulties in responding on air quality matters). However, further commentary on heavy

metals, dioxins, furans and PCBs is provided below.

2.1.28 As acknowledged by Natural England in paragraph 10 of Natural England's Updated Air Quality Advice, and confirmed by APIS, there are no site-specific Critical Loads for heavy metals. Whilst Critical Loads have been published for some habitats (grassland (acid and calcareous), heathland, bog, managed coniferous woodland, managed broadleaved woodland and unmanaged woodland) these are not relevant to the designated sites in the vicinity of the Facility and were therefore not considered to be suitable for use in an assessment. However, APIS notes that the lack of available Critical Loads should not preclude an assessment, and that comparison to Soil Guideline Values in the Environment Agency's H1 guidance may be appropriate. A comparison of the contribution from the Facility of certain metals to the Maximum Deposition Rates (MDRs) published in Environment Agency guidance² is presented in **Table 2-3**. It should be noted that not all metals listed in the Environment Agency guidance were assessed as part of the Human Health Risk Assessment, as only trace metals which are included in the IRAP³ model used as part of that study were assessed.

Table 2-3 Metals Deposition from the Facility

	PC (ng/m ³)	Predicted Deposition Rate from the Facility (mg/m ² /day)	Maximum Deposition Rate (from H1 guidance) (mg/m ² /day)	PDR/MDR
Arsenic	1.8	0.004	0.02	21.92%
Cadmium	0.54	0.001	0.009	14.61%
Chromium	4.9	0.012	1.5	0.80%
Lead	2.7	0.007	1.1	0.60%
Mercury	1.1	0.003	0.004	65.07%
Nickel	3	0.007	0.11	6.48%

2.1.29 **Table 2-3** shows that deposition resulting from the Facility is below the maximum deposition rates for all considered metals. As such there would not be any significant impacts.

2.1.30 There is less available information on other bioaccumulative pollutants, such as dioxins and furans and PCBs. The Facility will be required to operate using Best Available Techniques (BAT) to prevent or minimise emissions, as a duty under its Environmental Permit. There are a number of management and control techniques which are stipulated within the Waste Incineration (WI) sector BAT Conclusions document⁴ to reduce emissions to air of organic compounds (including dioxins and furans and PCBs), such as optimisation of the combustion

² <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#calculate-pc-for-substance-deposition>

³ The Industrial Risk Assessment Program is software used for undertaking multi-pathway human health risk assessments

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019D2010&from=EN>

process, control of the waste feed, on-line and off-line boiler cleaning and rapid flue gas cleaning. As a result of this, there are stringent BAT-AELs for dioxins and furans and dioxin-like PCBs, which were published in the revised WI BAT-C document in December 2019. Emissions of these pollutants were considered to be 'consentable' for other plants at previous limits, or with no specified ELVs but a requirement for monitoring and reporting. Emissions from the Facility would present a betterment in comparison to existing energy-from-waste plants.

Clarification on screening approach

2.1.31 The Likely Significant Effect (LSE) screening was reported in the Applicant's Deadline 3 Submission - Other: Habitats Regulations Assessment (HRA) Screening and Integrity Matrices (document reference 9.42, REP3-018) and Deadline 5 Submission - Habitats Regulations Assessment Screening and Integrity Matrices (document reference 9.42(1), REP5-003) and concluded that LSE related to air quality could be screened out for the SPA but not for the SAC as the following conclusions were drawn.

- The construction-phase aerial deposition was considered insignificant, as a result of the air quality modelling reported in ES Chapter 14 Air Quality (document reference 6.2.14(1), REP1-006).
- The air quality modelling results show the area of influence could affect some habitats, as these Annex I habitats are at risk from changes in air quality and subsequent deposition LSE could not be excluded without assessment.
- The air quality modelling carried out for the operational phase of the Facility concluded that the area of influence does overlap with the SAC. However, marine mammals are unlikely to be sensitive to the potential effect of the Facility on air quality during operation. As such, no LSE was concluded.

2.1.32 Further investigation was then undertaken and is discussed within the HRA documents, including within Appendix 17.1 Habitats Regulations Assessment (document reference 6.4.18(1), AS-006). This investigation included review of the estimates of Critical Load under APIS, information on the sensitivity of saltmarshes within the Marine Life Information database and Natural England's Advice on Operations.

2.1.33 Having reviewed the LSE screening for construction the Applicant recognises that the investigation into the level of impact should have been undertaken in the Appropriate Assessment phase rather than the decision made for the LSE. For construction, the emissions of only SO₂ were predicted to be in exceedance of 1% of the Critical Level in-combination, as detailed in Table 14-22 of Chapter 14 of the ES (document reference 6.2.14(1), REP1-006). Although this would have

taken it through the screening process the investigation showed that the majority of the in-combination impact is associated with the emissions generated by the adjacent Biomass No. 3 Ltd facility; the Process Contribution (PC) of the Facility during construction was predicted to be 0.1% of the SO₂ Critical Level. Given this context, and the short-term nature of construction phase emissions, it was not considered that there would be a significant effect.

- 2.1.34 Given the findings above with regard to the trace pollutants, that the predicted metals deposition rates are all below the maximum deposition rates and that emissions of dioxins and PCBs would be strictly controlled under the conditions of the operational Environmental Permit (an assumption that Natural England has explicitly stated (within paragraph 10 of Natural England's Updated Air Quality Advice) is acceptable to take into account at the LSE screening stage on the basis that it would be unrealistic to exclude these measures), it is considered that these parameters would not be expected to have a Likely Significant Effect and would have been screened out of the Appropriate Assessment phase.

Clarification on Mitigation and the Realistic Emissions Scenario

- 2.1.35 Within an Air Quality Deposition and Monitoring Plan (document reference 9.51 REP4-016), the Applicant noted that, although the assessment presented in the ES was based upon the maximum permitted emissions from the Facility, in accordance with BAT-AELs, there is clear evidence⁵ that EfW plants do not operate at their emission limits at all times, and that emissions are typically significantly lower than the BAT-AELs. In Appendix D3 of its Deadline 5 submission (REP5-014), Natural England requested further quantification of the effect of these more realistic emission levels on designated sites and specified that these should be included in the HRA Appropriate Assessment. These more realistic emission scenarios were therefore provided in document reference 9.72, REP6-035.
- 2.1.36 It should be noted that the realistic emission scenarios were presented to provide context as to the likely actual impacts of the Facility, and illustrate the worst-case nature of the impacts reported within the ES. This realistic emission scenario was not considered in either the ES or the HRA to constitute mitigation; these results were presented specifically at the request of Natural England. The HRA screening and Appropriate Assessment were undertaken based on the BAT-AEL (worst-case) emission levels. The Facility's operational emission limits will be set by the Environment Agency as prescribed within an Environmental Permit which will be required for the Facility to operate. Emission limits will be established and conditioned by the regulator so as to ensure that impacts on the environment are

⁵ https://www.tolvik.com/wp-content/uploads/2022/05/Tolvik-UK-EfW-Statistics-2021_Published-May-2022.pdf

prevented or minimised.

- 2.1.37 The realistic emissions scenarios also incorporate measures adopted by the Applicant, including the provision of ship-to-shore power for vessels (cold ironing) which will be adopted by 100% of vessels arriving at the wharf, which serve to avoid or minimise non-stack emissions from across all aspects of the Facility.
- 2.1.38 Monitoring has not been proposed to mitigate the impacts of the Facility as it is recognised by the Applicant that monitoring does not form mitigation. As discussed in the Air Quality Deposition Monitoring Plan (document reference 9.51(1), REP6-027) monitoring has been put forward following comments by the Environment Agency at Issue Specific Hearing 2 that monitoring could be used to confirm actual future N deposition and ambient concentrations at the saltmarsh habitats. The Applicant concurs that this would be a useful exercise. With regard to the duration of monitoring, Natural England commented that a year of monitoring would not be sufficient to capture impacts over a range of meteorological conditions. This is acknowledged by the Applicant and, as noted in Section 2.3 of the Air Quality Deposition Monitoring Plan (document reference 9.51(1), REP6-027), monitoring is proposed over a *minimum* of a calendar year, with the exact duration to be agreed with Natural England and the Environment Agency before commencement of the survey. It is also noted in Section 4 of the Plan that the final agreed document will be live and will be regularly updated by the Applicant, in consultation with Natural England and the Environment Agency. Subject to the results of the initial year of monitoring, appropriate actions and any necessary mitigation measures would be discussed and agreed as required.

Further Discussion on Appropriate Assessment

- 2.1.39 As discussed above, the screening phase of the Habitats Regulations Assessment identified that there was the potential for a LSE due to emissions from the Facility. This was through the potential for airborne concentrations of NO_x, SO₂ and ammonia and N deposition within the boundaries of protected sites as a result of the operational phase emissions from the Facility. This was therefore investigated further for the relevant features against the Conservation Objectives for the site. It is acknowledged above (**paragraph 2.1.33**) that the investigation of SO₂ during construction should have been considered in the Appropriate Assessment rather than the screening stage for LSE but that the overall outcome for the assessment of this potential effect would be the same in that the temporary nature and quantified scale of the impact would not expect to result in a significant effect.
- 2.1.40 The Conservation Objectives for the site are detailed in the HRA and are to ensure that the integrity of the site is maintained or restored as appropriate, and to ensure

that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- The extent and distribution of qualifying natural habitats and habitats of qualifying species;
- The structure and function (including typical species) of qualifying natural habitats;
- The structure and function of the habitats of qualifying species;
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;
- The populations of qualifying species; and
- The distribution of the qualifying species within the site.

2.1.41 These Conservation Objectives were therefore considered during the investigation of the potential effect of any emissions. Additional work has been undertaken on the sensitivity of relevant designated features, as outlined above in **Section 2.1**, to further investigate any potential for effect on the Conservation Objectives set for the habitats and the species that are features of the designated sites. Investigation has also been undertaken for any potential functionally linked habitats that may support features of the designated sites. This includes saltmarshes that provide a habitat for redshank (a feature of the SPA) and habitat for otter (a feature of the SAC). Saltmarsh sensitivity has been discussed further in **Section 2.1** particularly with regard to a proposed revised Critical Load, as recommended within a report published by the German Environment Agency (2022) which has been considered alongside evidence from previous studies showing no change to saltmarsh vegetation even with levels of N deposition higher than the previously accepted Critical Loads and the condition of the saltmarsh in the site-specific location. The original assessment is therefore considered to still be valid for saltmarsh, in that it is not considered to be sensitive to the small scale of change that would occur due to emissions from the proposed Facility. Redshank are not considered to be sensitive to air quality effects either as individuals or via effects on their habitat, as can be seen from review of the APIS website (summarised in **Table 2-1**). Otter are to be considered on a site-specific basis. As otters are not known to use the transition habitats along The Haven within a distance of 2km from the Facility they are not expected to be significantly affected by any habitat changes or effects of deposition on the habitats from emissions.

2.1.42 For intertidal areas within The Wash and The Haven, the discussion relating to inundation was made for mudflat and shellfish beds. It is expected that such

habitats would be subject to inundation at high water on the majority of, if not all tides.

- 2.1.43 As discussed above, receptor NO_x, SO₂ and ammonia concentrations are all below their threshold Critical Levels, despite the background levels of ammonia increasing in recent years. Therefore, there is no reason to expect that there would be an effect on the features of interest for the designated sites and therefore for the Conservation Objectives.
- 2.1.44 Acidity is not expected to be a material issue as the habitats and species are not sensitive to Acidity as shown in **Table 2-1** or, as for otters, they are not present in the area to the extent that any changes in pollutant levels would have an effect.
- 2.1.45 Deposition of heavy metals is also below the relevant maximum deposition rates and emissions of dioxins and furans and PCBs will be controlled as a condition of the Facility's Environmental Permit. Therefore, these trace pollutants are not considered to result in a significant effect.
- 2.1.46 In addition to the above, there is highly likely to be a reduction of N inputs to the local catchment and wider Wash, due to the loss of agricultural land on the footprint of the Facility or, due to conversion of agricultural land to habitat suitable for birds which will reduce the N losses. As discussed above, the losses from agricultural land represent a high proportion of N inputs to the localised area so conversion of these areas will result in a beneficial overall effect to the overall emission of N. It is anticipated that the current agricultural use of the site will contribute significantly higher N loads than the future industrial use, including the effect of air emissions. This potential effect of change in land use has not, however, been taken into account in the conclusion of the LSE screening assessment (Appendix 17.1 Habitats Regulations Assessment (document reference 6.4.18(1), AS-006)).
- 2.1.47 In conclusion, given the findings above, it is considered that the emissions from the Facility would not result in an adverse effect on integrity of the designated sites or any functionally linked habitats, either in its own right or given the small contribution to the cumulative effect of N deposition.
- 2.1.48 With regard to more localised habitats the main source of N currently originates from agricultural sources laid to maize, with aerial deposits providing a much lower source of impact. The habitats along The Haven appear to be impacted from other activities such as coastal squeeze and scrub encroachment and debris rather than impacts from air pollution. The biodiversity net gain measures (as well as any without prejudice compensation measures presented) for the site would include

conversion of agricultural fields into habitat for birds (resulting in further reduced agricultural inputs of N), although this has not been taken into account when reaching a conclusion within the LSE screening assessment (Appendix 17.1 Habitats Regulations Assessment (document reference 6.4.18(1), AS-006)).

2.2 Response to Paragraph 4.2 – Restore Objective of The Wash and North Norfolk Coast SAC

- 2.2.1 Paragraphs 4.2 and 4.3 within BEIS letter states: *“Further, in response to the information request, Natural England confirmed its intention to publish updated conservation advice for the harbour seal feature of The Wash and North Norfolk Coast SAC at the next available opportunity, in March 2023. Natural England provided a copy of the finalised draft updated conservation advice.*
- 2.2.2 *The Applicant is invited to comment on Natural England’s responses to the information request.”*
- 2.2.3 The Applicant’s full and final response to this point was provided in Applicant’s Response to Secretary of State’s Letter of 14th October 2022 (document reference 9.107; Section 3.1). In summary, while Natural England is intending in the future to amend the Conservation Objectives for harbour seal within The Wash and North Norfolk Coast SAC, and has now provided the draft Conservation Objectives that Natural England states that it intends to publish in March 2023, the Applicant has made an assessment based on the current and existing Conservation Objectives, at the time of submission. The Applicant considers this was the correct approach as information regarding future potential changes to Conservation Objectives would be highly speculative and has progressed assessment in full regard to the current legal position along with relevant guidance and best practice. The Conservation Objectives that were assessed within the Application documents are the current Conservation Objectives for The Wash and North Norfolk Coast SAC and provided there is no change prior to the Secretary of State making his decision are the relevant Conservation Objectives for the purposes of determining the appropriate assessment.
- 2.2.4 Notwithstanding this, the Applicant acknowledges that the draft updated conservation advice has the potential to be a matter that is important and relevant to the Secretary of State’s decision.
- 2.2.5 As stated within the Habitats Regulations Assessment (HRA) (Appendix 17.1 – Habitats Regulations Assessment (document reference 6.4.18(1), AS-006)), and the Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027), the Project could increase the risk of

vessel collision to a small number of harbour seals, but there is no potential for it to cause a population level effect. The assessment provided within the Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027) considered the reduced harbour seal population number within The Wash and North Norfolk Coast SAC of 2,744 (based on the 2019 harbour seal count; taken from SCOS, 2020), which is slightly lower than the mean count (2019-2021) of 2,833 within the SAC (as provided within The Wash and North Norfolk Coast SAC - updates to supplementary advice on Conservation Objectives for Harbour (common) seal - Final Draft - November 2022 document very recently provided by Natural England). That assessment found there is no potential for a population level effect. The assessment within the Addendum to ES Chapter 17 and Appendix 17.1 - Marine Mammals (document reference 9.14, REP1-027) states that up to 1.7 harbour seal (or up to 0.07% of The Wash harbour seal population) may be at increased risk of collision with vessels, before mitigation. The Project would not cause a significant effect to the harbour seal population, but the Applicant has provided vessel mitigation and management measures without prejudice, and is therefore progressing a highly precautionary approach. With the mitigation measures set out in the Outline Marine Mammal Mitigation Protocol (OMMMP) (document reference 9.12 (2), REP7-003), any risk to harbour seals would be extremely low, and this would be further reduced by the without prejudice measure limiting vessel speeds to 10 knots within both The Haven and The Wash, as presented in the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107; Section 3.1).

2.2.6 . In addition, harbour seals do not often use The Haven where the increase in vessel numbers would be most notable, and therefore the increase in vessels in that area would affect a very small proportion, if any, of the harbour seals associated with The Wash and North Norfolk Coast SAC. As stated in the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107; Section 3.1), the Port of Boston has provided further information on the presence of seals within both The Haven and The Wash, noting limited presence of seals within The Haven. The Applicant was not directly involved in the undertaking of the questionnaire to the Port of Boston pilots, which was undertaken independently by the Port of Boston and later provided to the Applicant.

2.2.7 There is currently no evidence-based understanding as to why the harbour seal population within The Wash is in decline. Therefore, no information on how a restore objective (rather than a maintain objective) could be achieved with confidence is currently available. There are, however, a number of possible reasons, such as a change in prey distributions, natural fluctuations, competition

with grey seal, or due to human activity. As noted within the Applicant's Response to Secretary of State's Letter of 14th October 2022 (document reference 9.107; Section 2.7), there is no indication that the decline is due to vessel presence within The Wash.

2.2.8 A review of the number of vessel arrivals at ports within The Wash between 2009 to 2021 (as provided in **Table 2-4** below) obtained from the Department of Transport, has shown a steady reduction in vessel numbers from 1,071 vessel arrivals in 2010, reducing by approximately 26% to 794 in 2021. These vessel numbers do not account for fishing vessel movements, and only includes vessels with Automatic Identification System (AIS). As noted within *The Wash and North Norfolk Coast SAC - updates to supplementary advice on Conservation Objectives for Harbour (common) seal - Final Draft - November 2022* document provided by Natural England, the harbour seal population within The Wash showed population increases from 2004 to 2018, followed by a sharp decline to 2021. There does not appear to be any correlation between the number of AIS vessels arriving at ports within The Wash, and the sharp decline in the harbour seal population since 2018. This gives further confidence that the reason for any decline in seal numbers in The Wash is not associated with vessel numbers.

Table 2-4 Number of vessel arrivals at ports located within The Wash from 2009 to 2021⁶

Port / year	Boston	King's Lynn	Sutton Bridge	Wisbech	Total
2009	383	305	205	23	916
2010	495	339	212	25	1,071
2011	440	288	228	30	986
2012	416	271	211	38	936
2013	373	218	182	16	789
2014	382	216	168	35	801
2015	412	223	170	43	848
2016	524	221	167	44	956
2017	377	172	154	57	760
2018	371	161	149	90	771
2019	420	164	99	96	779
2020	393	181	82	59	715
2021	432	215	44	103	794

⁶ Department for Transport (2022) Port and domestic waterborne freight statistics: PORT0602: UK port ship arrivals, by port, from 2009. Available from: <https://www.gov.uk/government/statistical-data-sets/port-and-domestic-waterborne-freight-statistics-port>. Accessed on: 01/12/22

- 2.2.9 Due to the unknown cause of the decline, there is currently no indication as to what measures could be put in place to further support the harbour seal population.
- 2.2.10 If the Applicant were to make an assessment under the future proposed *restore* Conservation Objective, the Applicant concludes that there would still be no potential for adverse effect on the integrity of the site. This is due to the very low number of harbour seal at risk of collision impact and therefore the low likelihood of the effect occurring, particularly when the proposed mitigation measures are taken into account, and that it is unlikely that the decline in the population is due to the presence of vessels (there has been a reduction in vessel numbers within The Wash at the same time as the harbour seal population size has declined).
- 2.2.11 Whilst it is unclear what options would be available to restore the harbour seal population, as despite research the cause of the decline is currently unknown, and there is no evidence to suggest that the approval of the Facility would hinder the recovery of the harbour seal population in The Wash.
- 2.2.12 Notwithstanding the Applicant's position that the Facility will not affect the integrity of the site with a maintain or restore Conservation Objective, the Applicant is required, by a condition of the deemed marine licence included in the draft DCO, to consult with Natural England on the best approach to the management of vessels in relation to the harbour seal population through the finalisation of the Outline Marine Mammal Mitigation Protocol (document reference 9.12(2), REP7-003). These measures are also required to be carried through to the Navigation Management Plan.

2.3 Response to Paragraph 4.3 – Additional Response

- 2.3.1 Paragraph 4.3 within BEIS letter states: *“The Applicant is invited to comment on Natural England’s responses to the information request.”*
- 2.3.2 In addition to the points addressed above, Natural England was invited by BEIS 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.’*
- 2.3.3 Natural England’s response to this question is as follows:

“In [REP9 – 058] Natural England advised 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...'

We advise that this position remains unchanged and that more detail in the form of a site specific plan is still required to demonstrate that the mitigation/compensation will be sufficient to offset the impacts to Annex I birds

In addition we highlight that much of our advice and queries raised within our detailed comments table provided in Appendix B5 at Deadline 8 [REP8-23] remain unaddressed by the Applicant including points 8, 12 and 13 relating specifically to the mitigation area.

We also reiterate that the functional linked land is also priority habitat and concerns raised by Natural England throughout the examination on impacts to this habitat have not be mitigated for either."

- 2.3.4 The Applicant notes that the question asked by BEIS is specifically in regard to the Habitat Mitigation Area and therefore the Applicant is unclear on the first two paragraphs of Natural England's response. These appear to relate to compensation areas, not the Habitat Mitigation Area as required by the question posed. However, the Applicant has responded to Natural England's point in REP9-058 (noted above in **paragraph 0**) within the Final Report on Outstanding Submissions (document reference 9.104, REP10-020). Further information with regard to the without-prejudice proposed compensation sites has also been provided in further detail in Section 2.8 of the Applicant's latest response to the Secretary of State's Letter of the 14th October 2022 (document reference 9.107).
- 2.3.5 The detail of the mitigation measures in the Habitat Mitigation Area will be set out in the final Landscape and Ecological Mitigation Plan approved under requirement 5 in Schedule 2 to the draft DCO and condition 18 of the deemed marine licence in Schedule 9 to the draft DCO (document reference 2.1(6), REP10-004). Natural England is a consultee on both the requirement and the condition. Should the Secretary of State determine compensation is required for functionally linked land, site specific plans will be prepared in accordance with paragraph 5 of the 'without prejudice' Schedule 11 to the draft DCO.
- 2.3.6 The Applicant has also provided a response to REP8-23 in the Fifth Report on Outstanding Submissions, including to points 8, 12 and 13 (document reference 9.99, REP9-033).
- 2.3.7 In response to the concerns regarding mitigation for saltmarsh as a priority habitat,

as noted within the Applicant's Report on Outstanding Deadline 2, 3 and 4 Submissions (document reference 9.63, REP5-008), *"The impact on saltmarsh in its own right was not considered to be of significance. This was in context of the amount of loss (1ha), and the fact that the loss was not in any designated areas and with the affected saltmarsh being described in three separate survey reports as being of poor quality. The saltmarsh along The Haven is affected by debris and it is proposed that, as a net gain measure, the debris is removed to restore an area of saltmarsh currently affected by the debris."*

- 2.3.8 Overall, the Applicant maintains its position that the Habitat Mitigation Area provides suitable mitigation (as stated in previous submissions), and that this area is provided for mitigation purposes, and should not be conflated with compensation.

3 Update on Agreement with the Environment Agency

- 3.1.1 The Applicant anticipates that the Secretary of State may wish to receive an update in relation to an agreement being entered into with the Environment Agency (EA) relating to the disapplication of environmental permits for flood risk activities in respect of the Facility. The Applicant can advise that discussions have progressed meaningfully and positively during the last few months and only minor outstanding points remain prior to engrossment and completion of the agreement. An agreement has not been concluded, but the Applicant remains in constructive discussions with the landowner and EA and hopes to conclude an agreement shortly. The Applicant has considered the prospect of applying for flood risk activity environmental permits and will hold the necessary discussions with the EA's permitting team if it becomes apparent that no agreement will be reached. The Applicant will update the Secretary of State if an agreement is reached, or if it becomes apparent that an agreement cannot be reached, by 10 January 2023.

4 References

Boorman, L.A. and Hazelden, J. (2012) Impacts of Additional Aerial Inputs of Nitrogen to Salt Marsh and Transitional Habitats.

German Environment Agency (2022) Review and Revision of Empirical Critical Loads of Nitrogen for Europe.