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Boston Alternative Energy Facility

Appendix B4 to Natural England's Deadline 7 Submission

**Natural England's Comments on Chapter 17 Marine and Coastal Ecology and
Appendix 17.1 Habitats Regulations Assessment Update [REP5-006]**

For:

The construction and operation of Boston Alternative Energy Facility (AEF) that would generate approximately 102 MW of renewable energy and is located immediately south of Boston town, Lincolnshire.

Planning Inspectorate Reference: EN010095

1st March 2022

Natural England's Comments on Chapter 17 Marine and Coastal Ecology and Appendix 17.1 Habitats Regulations Assessment Update [REP5-006]

Introduction

This document provides Natural England's response in relation to the Applicant's Deadline 6 Submission Chapter 17 Marine and Coastal Ecology and Appendix 17.1 Habitats Regulations Assessment Update [REP5-006].

Summary

Natural England welcomes the updates to the Habitat Regulations Assessment. However, Natural England advises that there are still many outstanding concerns which need to be addressed before the scale and the significance of the impacts on the designated site features can be agreed to inform the Secretary of State's Habitats Regulations Assessment.

In addition, without confidence in the assessment of the impacts, we advise a more precautionary approach to both the Secretary of State's HRA and the compensatory requirements is warranted.

Detailed Comments

	Paragraph No.	Comment	RAG status
1.	3.2.5	<p>NE continues to request further clarification on the proposed Habitat Mitigation Area - in particular regarding the removal of the low-profile banks. We specifically require details of where the bank will be removed, the method, a calculation of the volume of material to be removed and where this will be disposed of. In addition, the location of the created 3 shallow pools and methods used.</p> <p>Also, regarding the placement of rocks from the Principal Application Area to the proposed Habitat Mitigation Area - to facilitate roosting of Redshank - will these function in the same way as the remaining banks (Old sea wall) that is presumably not being removed? This may restrict visibility of predators.</p> <p>Natural England suggest one additional mitigation option here: restricting access by Members of Public and dog walkers onto the Habitat Mitigation Area from the Coastal Path using fencing. This would minimise disturbance if this area is being used more regularly by roosting birds. Signage actively asking Members of public to keep dogs on the lead (and why this habitat is important) would be beneficial.</p>	

2.	3.3.1	For clarity it would be good to include the annual number of vessels here so it is comparable with the values given in the following sentence.	
3.	3.5.3	Natural England's comment on paragraph 3.2.5 with regards to the use of the rocks within the proposed Habitat Mitigation Area applies here too.	
4.	3.5.4	Natural England's comment on paragraph 3.2.5 with regards to dogs accessing the proposed Habitat Mitigation Area applies here too.	
5.	Table 3.1	<p>Natural England advises that the EA may require notification (Flood Permit) if works are undertaken along the banks of The Haven.</p> <p>Prior to the Boston embankment works, the saltmarsh along The Haven was cattle grazed in several places maintaining a short-sward with open bare patches. NE are uncertain whether grazing is still undertaken (due to the removal of the old fences). This may be something that could be looked into. The fences will have reduced the disturbance impact of dogs accessing the saltmarsh/mudflats from the PROW/ LNR. But habitat management may still need to be provided over the lifetime of the project.</p>	
6.	Figure 3.1	NE presume the locations of the two arable fields being put forward is not yet common knowledge and this information will be shared?	
7.	4.2.1	The importance of Ruff (as per updated passage survey and subsequent docs) is not noted in this text.	
8.	4.2.5	<p>Natural England advises that while the criteria identified are typical, they are not exhaustive. For example, Functionally Linked Land (FLL) may act as a breeding ground supplying recruitment to an SPA; FLL may act as a population sink and consequently draw individuals out of an SPA; removal of individuals would be considered against a mortality impact of a 1% increase in background mortality levels rather than 1% exposure to pressure etc.</p> <p>While exposure of 1% of the population to pressure is often used as a threshold this should not be taken as a definitive, where populations are declining impacts affecting 1% of a population may have wider ecological implications than when the population is increasing and has more resilience.</p> <p>Natural England advises that this requires further assessment.</p>	

9.	4.2.6	<p>Natural England advises that the consequence of impacts on Functional Linkage is not binary but is scaled and can run from <i>de minimis</i> through to impact on whole SPA population depending on circumstance and a range of factors. We advise that the consequences of this risk are considered in the Appropriate Assessment phase of an HRA for this project. The text here expresses confusion on this.</p>	
10.	4.2.7	<p>While NE accepts that there is uncertainty over the strength of Functional Linkage, due to lack of information, the precautionary principle requires that in the absence of information an approach is taken which assumes connectivity as this is the more precautionary approach.</p> <p>We note that redshank are currently declining on the Wash which threatens achievement of their Conservation Objectives. Based on the most recent five year mean population (5087 indiv) and given annual mortality in the region of 26% (based on adult birds, but higher in first years), a 1% increase in background mortality would correspond to the loss of around 13 birds from the Wash system. Given the utilization of the development site (treated as Areas A and B) by 150+ birds on a regular basis and incomplete understanding of redshank utilization of the Haven, strength of connectivity, and consequences of loss of a portion of the population, we advise that a high level of precaution is warranted. Consequently, NE remain expectant of effective mitigation and where that is not possible compensation being delivered for impacts in the Haven to ensure continued functionality being provided by functionally linked areas.</p>	
11.	4.2.8	<p>It should be noted that neither of the studies identified in this section reflects the situation in the Haven of an essentially linear habitat with consequently spatially limited resources. NE recognises that redshank are more territorial and have more restricted individual ranges than many other waders, however, in the absence of robust evidence on the ecology of redshank in proximity to the study site, there is high level of uncertainty in reading across the conclusions of these studies.</p>	
12.	4.2.9	<p>The study by Burton et al confirmed that redshank like to remain in limited ranges during the non-breeding period. The follow-up work after construction of the Cardiff Barrage, which resulted in the loss of foraging habitat, indicated that post-development the birds that had lost their foraging territories were not able to adapt by shifting territory, but were lost from the population. Please see: Burton, N.H.K., Rehfisch, M.M., Clark, N.A. & Dodd, S.G. 2006. Impacts of sudden winter habitat loss on the body</p>	

		condition and survival of redshank <i>Tringa totanus</i> . Journal of Applied Ecology 43: 464-473.	
13.	4.2.11	While informative because of the uncertainty identified at comment on paragraph 4.2.8 above, NE does not agree with the conclusion that the functional linkage redshank, or the habitats they utilize, at the development site can be determined based on these studies.	
14.	4.2.12	The identified linkage between areas A and B suggests that they function as one roost area with birds moving between the two areas in response to environmental factors such as disturbance. While we agree this provides some reassurance that Area B will be adopted by birds from Area A, it also highlights the need at the current time for birds to have two areas they can utilize.	
15.	4.2.15	Because of the uncertainty identified at comments on paragraphs 4.2.8 and 4.2.11 above, NE does not agree with the conclusion that the redshank, or the habitats they utilize, at the development site can be considered to be not Functionally Linked. As identified some birds are likely to utilize both the SPA and Area A each winter, while the risk to the SPA is proportional to this level of use, the site is nonetheless functionally linked, and should be assessed as such.	
16.	4.2.18	Because of the uncertainty identified at comment on paragraphs 4.2.8 and 4.2.11 above, NE does not agree with the conclusion that the redshank, or the habitats they utilize, at the development site can be considered to be not Functionally Linked. As identified some birds are likely to utilize both the SPA and Area A each winter, while the risk to the SPA is proportional to this level of use, the site is nonetheless functionally linked, and should be assessed as such.	
17.	4.6.3 and 4.6.4	Natural England queries over what timeframe is this being secured? I.e. as a minimum for the duration of the life-time of the site occupation (and decommissioning phase)? What about the wharf? If that is left in-situ as currently expected? This land (as long as it is used by SPA/ Ramsar bird species) should be considered Functional Linked Land and should be included within the SPA network to retain the sites network coherence. And will need to be managed as such	
18.	4.6.10	NE comment on Table 3.1 applies here too.	
19.	4.6.14	NE comment on paragraph 4.6.3 applies here too.	

20.	4.7.1	Natural England requests a map of the locations so we can see which side of The Haven it is on. Is the Applicant considering both sites or one/ or the other?	
21.	4.7.2	<p>Natural England has several queries in relation to this section of the HRA. For example: Which bank of the Haven does this paragraph refer to?</p> <p>Regarding the creation of shallow lagoon with an island, presumably water depth will be deep enough to restrict predator access to the island? Or will there be predator fencing? Also, how will the water levels of the lagoon be maintained and where will the water be sourced? Will there be any impacts on RSPB water requirement?</p> <p>Natural England advises that Fencing may be necessary to restrict dog access from the coastal footpath to minimise disturbance.</p>	
22.	4.8.1	<p>Natural England's comment on Table 3-1 is also relevant here regarding the possibility of grazing, Also, fencing to minimise access along channel itself.</p> <p>Natural England advises that some of the scrub within the Havenside LNR might be important for migrant birds - RSPB would be able to advise further. Further along the Haven there are records of Turtle Doves using scrub.</p>	
23.	4.11.1	Who is the applicant considering is part of the Ornithology Engagement Group?	
24.	5.1.2	Natural England is pleased to see monitoring mentioned. However, we have further queries including but not exclusively For how long? Will this cover the proposed sites and what about the Habitat Mitigation Area? Also, will it cover The Haven mouth with regards to the vessel movements/ disturbance?	
25.	5.3.1	Natural England notes that one of the conservation objectives for The Wash SPA <i>The distribution of the qualifying features within the site has not been fully assessed in the HRA. This therefore requires further consideration by the Applicant</i>	
26.	5.3.8	<p>Note advice: "With respect to human disturbance target, the Supplementary Conservation Advice (Natural England 2021) states: <i>"Disturbance should be judged as significant if an action (alone or in combination with other effects) impacts on waterbirds in such a way as</i></p>	

		<p><i>to be likely to cause impacts on populations of a species through</i></p> <p><i>I. changed local distribution on a continuing basis; and/or</i></p> <p><i>II. changed local abundance on a sustained basis; and/or ..”</i></p> <p>Which is of particular relevance to the risks posed by the increase in boat traffic. We advise that this requires further consideration in the HRA assessment</p>	
27.	5.5.3	Natural England advises that the Mouth Of The Haven (MOTH) Site supports on average around 1% of individual waterbirds on Wash SPA (but up to 3.5% on occasion) (as defined). Therefore, this is an important area	
28.	5.5.5	Natural England advises that the MOTH Site supports on average 35-46% (but up to 65% on occasion and 96% over time) of key species (as defined). Therefore, this is an important area	
29.	5.5.6	‘Local Area’ Site supports consistently between 1 and 2% of individual waterbirds on Wash SPA (but up to 4.4% on occasion) (as defined).	
30.	5.5.7	‘Local Area’ Site supports on average 51-60% (but up to 74% on occasion and 96% over time) of key species (as defined).	
31.	Table 5.4	Natural England advises that no project specific data as is standard best practice has been provided to support WeBS counts. In addition, no metadata has been presented on the WeBS data to determine the levels of disturbance on the days the counts were taken to help determine if the assigned level of importance are in fact accurate. Therefore, we advise that caution in the interpretation is warranted.	
32.	Figure 5.1	We note the high level of importance of the MOTH area within the wider local area as illustrated by the graph.	
33.	5.5.9/Table 5.6	Based on survey data vessel movements on average impact 1477 individuals/tide (min 156 indiv, max 6626 indiv) and 29% (min 13%, max 52%) of key species (as defined). Natural England considers this to be a significant level of disturbance and an adverse effect on integrity can’t be excluded	
34.	5.5.11	It is not possible to conclude that the baseline disturbance is not having an impact on individuals affected as this is the baseline.	

		<p>From the survey documents is it clear that vessel disturbance is experienced by birds and that two responses are apparent (1) redistribution to alternate roosts (with in some instances in the Haven repeated displacement of individuals); or (2) temporary displacement which may be repeated if there are multiple boat passages.</p> <p>We advise that this will only be intensified by the proposals</p>	
35.	5.5.13	Natural England advises that while the number of individuals impacted, and diversity, will be the same the frequency will increase. Therefore, significance of the impacts with intensify and the ability for the birds to recover from the disturbance diminish.	
36.	5.5.14	Natural England advises that Birds will be impacted on all high tides.	
37.	5.5.17	<p>Natural England disagree that numbers of birds impacted is not significant. The disturbance study shows that the presence of large vessels routinely displaces birds to alternate roosts. While the baseline situation where birds are already impacted such that they are displaced on c75% of tides this will increase such that they can be expected to be displaced on 100% of tides from the MOTH roost. This can be expected to alter distribution for the life of the development which should be considered as permanent. Even if birds adopt other pre-existing roosts on the SPA there will still be a net loss of one roost site from the assemblage roost network. While work to map out and quantify the importance of the roost network around the Wash is ongoing any individual roost that routinely supports over 1% of the SPA assemblage and higher percentages of individual species is likely to be considered significant.</p>	
38.	5.5.19	Natural England disagrees with the conclusion that there is no likely risk , however, NE agree that any measures to mitigate and lower risk such the SPA is not exposed to pressures are to be welcomed.	
39.	5.5.20	This measure is welcomed, however, outcomes that are required because of SPA requirements are legally separate from net gain requirements.	
40.	6.2.7	We note and welcome the commitment to ensure that the Lighting strategy will be designed to minimise impacts on birds at the development site.	
41.	Table 7.1 response to NE	While the 'baseline' situation is that birds are regularly displaced this does not mean that regular displacement should be considered consistent with achieving site	

	paragraph 2.4 & 2.5	Conservation Objectives. Under the baseline conditions birds are able to utilize the roost at the MOTH on 25% of tides, this will no longer be possible. And may be disturbed more than once per high tide	
42.	Table 7.1 response to RSPB paragraph 2.53	We note that continuing work on roost site concerns will not be complete until March 2022, leaving limited time to give due consideration to the findings.	
43.	7.2.20	<p>Natural England advises that because of repeated disturbance Golden plover may be at energetic risk because of the proposal. NE notes the recognition that this may be a matter that requires compensation in relation to the development. Natural England welcomes the clarification provided on this area of risk.</p> <p>Compensating energetic impacts by enhancement of foraging requirement requires different management approaches than roost compensation and should be considered as part of the Without Prejudice Compensation package.</p>	
44.	7.2.20	<p>Based on a significance threshold of a 1% increase in background mortality Natural England advises that, given the current populations for lapwing and golden plover on the Wash, increases in mortality above 38 birds (lapwing) and 41 birds (golden plover) would be of concern.</p> <p>If increases in energetic requirements directly translated into effective mortality (i.e. mortality on site or displaced from the SPA such that they are effectively lost from the population) of individuals exposed to risk at the Mouth of Haven 'Local Area' then anticipated impact would be in the order of 30 birds (lapwing) and 48 birds (golden plover) per annum. (local pop based on Table 5.1 in Chapter 17 and Appendix 17.1 Habitats Regulations Ornithology Addendum; Wash population based on WeBS online; annual mortality based on BTO Bird Facts pages).</p> <p>For lapwing impact is below threshold, but for golden plover impact is above. While this comparison is highly precautionary (an impact in energy intake requirements is not likely to directly translated into increased mortality; but is likely to be linked to seeking and adoption of alternate feeding resources if they are available in these species) the potential for site loss of golden plover and lapwing coupled with the fact that both these species are in decline on the Wash is of concern.</p>	
45.	7.3.3	Because of the above. NE considers that risk of AEol to Golden Plover cannot be ruled out, at present.	

		Natural England notes that Golden Plover do not feature in the 9.71 Change in Bird Behaviour report although they are described in Appendix 17.1 to the Chapter 17 Ornithology Addendum as responding to 5 of 9 disturbance events by returning to their initial roost and on 4 of 9 occasions abandoning it. Natural England requests clarification of the observed responses to vessel movement shown by golden plover and consideration of implications of added energetic requirements if these cannot be compensated for.	
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Annex 1

Redshank –

Current 5 year mean for the Wash: 5087 indiv

Annual survival: 0.740 ± 0.014 (Adult); 0.430 (in First-Year)

Annual mortality of Wash pop: $(1-0.74) \times 5087 = 1322.62$ birds

1% increase on baseline: $1322 \times 0.01 = 13.2$ birds

Lapwing

Current 5 year mean for the Wash: 12976 indiv

Annual survival: 0.705 ± 0.031 (Adult); 0.595 (in First-Year)

Annual mortality of Wash pop: $(1-0.705) \times 12976 = 3,828$ birds

1% increase on baseline: $3828 \times 0.01 = 38.3$ birds

If 3.76% increase in energy = 3.76% mortality; then impact at site = pop $\times 0.0376 = 789 \times 0.0376 = 29.7$

Golden Plover

Current 5 year mean for the Wash: 15212 indiv

Annual survival: 0.730

Annual mortality of Wash pop: $(1-0.73) \times 15212 = 4107$

1% increase on baseline: $x 0.01 = 41.1$ birds

If 3.79% increase in energy = 3.79% mortality; then impact at site = pop $\times 0.0379 = 1261 \times 0.0379 = 47.79$