

## **Vattenfall Wind Power Ltd**

### **Thanet Extension Offshore Wind Farm**

Appendix 43 to Deadline 6 Submission: Applicants  
Response to Natural England's responses to ISH8  
Action Points and the Applicants Deadline 5  
Submissions on HRA matters (offshore ornithology  
and marine mammals)

Relevant Examination Deadline: 6

Submitted by Vattenfall Wind Power Ltd

Date: May 2019

Revision A

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Date of Approval:	May 2019
Revision:	A

Revision A	Original Document submitted to the Examining Authority
N/A	
N/A	
N/A	

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## **1 Purpose of the Note**

- 1 The current note is prepared in response to parts of the following:
  - Natural England’s Response at Deadline 5 (REP5-066) (specifically Appendix 1 and Appendix 2); and
  - Natural England’s Response to the Issue Specific Hearing (ISH) 8 Action Points (REP5-064) (specifically the following sections within that document: section 7 (OTE SPA and the SEZ), section 8 (FFC SPA and kittiwake), sections 10, 11 and 12 (SEZ) and section 13 (SIP)).
- 2 The above issues are addressed below in sections 2-5.

## 2 Response to matters associated with comments on the SEZ

- 3 It is noted that the majority of SEZ related comments made by Natural England are addressed in Section 4 (under the OTE SPA and RTD). Comments addressed here are limited to those made in NE's response at Deadline 5 (REP5-064), as summarised in Table 1 below, with the exclusion of comments listed under section 7 by NE – these are instead addressed under Section 4 below (OTE SPA and RTD).

**Table 1: Applicants Response to Comments made by NE Regarding the SEZ in their Deadline**

### 5 Response

Paragraph Ref	NE Comment	Applicants Response
10	Overall, Natural England agrees with the conclusions reached within this document [REP4-027] following the introduction of the Structure Exclusion Zone (SEZ). Table 3 highlights the various chapters and protected sites that will be affected or have implications as a result of the SEZ. In the parameters of Natural England's remit, we believe the applicant has successfully identified the topics and protected sites that could be affected by the SEZ. This is primarily the implications for the Outer Thames Estuary SPA.	Noted
11	Overall, Natural England agrees with the conclusions of this review [REP4B-010] that the introduction of the SEZ results in no significant change to the effects presented in the ES. Consideration by Natural England of the implication of the SEZ upon the Outer Thames Estuary SPA is provided in section 6 of this response.	Noted
12	Overall, Natural England agrees [REP4B-016] that the only sections within the RIAA that are affected by the introduction of the SEZ are those relating to the Outer Thames Estuary SPA, and obvious changes to the project description section. Consideration by Natural England of the implications of the SEZ upon the Outer Thames Estuary SPA is provided in section 7 of this response.	Noted

### 3 Response to matters associated with the FFC SPA and kittiwake

4 Comments addressed here are limited to those made in Section 8 of NE’s response at Deadline 5 (REP5-064), together with NE’s response to ISH8 Action Points (REP5-066), specifically those contained in question 3 and those in Appendix 1 as they relate to FFC SPA and kittiwake. Table 2 below summarises the Applicants response on a paragraph by paragraph basis.

**Table 2: Applicants Response to NE Deadline 5 Response (APP5-064) and NE Appendix 1 (APP5-066) – FFC SPA and kittiwake**

Natural England Comment (summary)	Applicants Response
APP5-064	
Comments in section 8	As per the Applicants response to Appendix 1 of APP5-066 as given below
APP5-066	
<p>However Natural England’s view (as was already advised at Hornsea 2 and East Anglia 3) is that it was not possible to rule out an adverse effect on integrity on the SPA from operational, consented and proposed projects due to the level of annual collision mortality predicted for kittiwake, and the predicted impacts on the population of the SPA.</p>	<p>The Applicant notes the comment from NE. However, would add the following references.</p> <p>With respect to Hornsea Project Two, in the SoS decision letter and statement of reasons<sup>1</sup>, it states in paragraph 4.29:</p> <p><i>‘The Secretary of State notes that the Panel concluded that there would not be adverse effects on the integrity of the European sites set out in paragraph 4.24 [which included both FFC pSPA and Flamborough Head and Bempton Cliffs SPA] as a result of the Development alone or in combination with other plans or projects, provided that suitable mitigation was put in place’.</i></p> <p>With paragraph 4.30 stating:</p>

<sup>1</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010053/EN010053-002078-Secretary%20of%20State%E2%80%99s%20Decision%20Letter%20which%20includes%20the%20Statement%20of%20Reasons>

Natural England Comment (summary)	Applicants Response
	<p><i>‘NE and Scottish Natural Heritage (“SNH”) agreed with the views of the Panel.’</i></p> <p>It is therefore unclear how the above statements compare to NE’s statement that they advised that it was not possible to rule out an AEoI in-combination for Hornsea Two.</p> <p>With respect to East Anglia Three, in the Appropriate Assessment<sup>2</sup>, the SoS found the following in paragraphs 6.62 and 6.63:</p> <p><i>‘NE advised that “the EA3 contribution while not de minimis is so small as to not materially alter the significance or the likelihood of an adverse effect on the integrity of the SPA”. The reductions in collision risk mortality identified during the Examination by the Applicant, and the positions taken by NE and the RSPB, led the ExA to conclude that the in-combination effects on the kittiwake qualifying features of the pSPA would not be great enough to lead to an adverse effect on the integrity of the site’</i></p> <p>The final position in the SoCG with NE<sup>3</sup> found:</p> <p><i>‘The updated cumulative totals including East Anglia THREE are not materially different from the most recently consented totals for Hornsea Project 2, therefore NE has no further concerns’</i></p> <p>The SoCG states, with respect to an in-combination effect on the Flamborough Head and Filey Coast pSPA that:</p> <p><i>‘It is agreed by both parties that, the EA3 contribution while not de minimis is so small as to not materially alter the</i></p>

<sup>2</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010056/EN010056-002381-East%20Anglia%20THREE%20Habitats%20Regulations%20Assessment%20Dated%207%20August%202017.pdf>

<sup>3</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010056/EN010056-002080-East%20Anglia%20Three%20Limited%20-%20SoCG%20with%20NE%20Rev%20D.pdf>

Natural England Comment (summary)	Applicants Response
	<i>significance or the likelihood of an adverse effect on the integrity of the SPA.'</i>
We agree with paragraphs 12 to 14, but note that paragraphs 15 and 16 appear to be the Applicant's views.	Noted.
<p>Regarding the potential reductions of the number of turbines for constructed windfarms compared to the worst case scenario for collision risk assessed in the Environmental Statement, Natural England's position is that whilst a consent for a greater number of turbines is still 'live', the worst case scenario should continue to be considered until such time as the remaining capacity is formally withdrawn. Furthermore, an updated CRM for the installed turbine parameters should be carried out, using the specific design parameters of the turbines in question. Natural England notes that East Anglia One is the sole windfarm for which this is the case. Accordingly we advise that 'as built' reductions, with the exception of for East Anglia One, should not be given weight in the HRA.</p>	<p>The position of NE is noted and reflected in the inclusion of such worst case scenarios within the modelling undertaken for collision risk.</p> <p>However, the 'as built' project compared to the 'as assessed' project is relevant when placing a project in context. As referenced in REP4-029, The Crown Estates Headroom report quantified the significance of the 'headroom' afforded by the difference between assessed and constructed projects, with a figure of 40 kittiwake identified when these factors were taken into account.</p> <p>This is demonstrated in the recent (and successful) non-material change application for Dogger Bank Creyke Beck which provided a revised set of CRM figures with respect to kittiwake mortality and any apportionment of that risk to the FFC SPA. The revised CRM within this report presented a reduction in the mortality rates associated with Dogger Bank Creyke Beck to kittiwake from the FFC SPA from 109 individuals (within the consented project's HRA assessment) to 40.2 individuals (within the revised project's update to the HRA assessment). This provides additional headroom for other projects of up to 68.8 kittiwakes from the FFC SPA. The Applicant acknowledges that despite Natural England and the RSPB not agreeing on all the parameters used within the CRM for this revised set of assessments, including the use of Band Option 3, they did accept</p>



Natural England Comment (summary)	Applicants Response
	<p>that there would be no adverse effect from the project alone under all scenarios and at all avoidance rates and also in combination with other plans and projects under all scenarios.</p> <p>Therefore, while the Applicant acknowledges that the HRA should be assessed based on consented design envelope (and not 'as built'), and that Thanet Extension has been assessed based on consented design, the precaution built in through the process is relevant, especially given the very small numbers attributed to Thanet Extension in the context of the existing headroom and in light of recent agreed changes to both Triton Knoll and for the Dogger Bank Creyke Beck project that provide headroom in excess of the very small contribution that Thanet Extension makes to the overall in-combination total.</p>
<p>Whilst we may not agree with every aspect of REP4-029, Natural England agrees that Thanet Extension will not have an adverse effect on the integrity on the kittiwake population of the Flamborough &amp; Filey Coast SPA when considered alone. However, Natural England considers that it is not possible beyond reasonable scientific doubt to rule out an adverse effect on integrity when the project is considered in combination with other plans and projects. Although Thanet Extension is some distance beyond the likely foraging range of kittiwake from the SPA during the breeding season, there is the potential for the proposal to make a contribution to the overall collision mortality total due to impacts in the non-breeding season. As previously stated, this</p>	<p>Noted that NE agree with the conclusion for the project alone.</p> <p>As regards to NE's position with respect to it not being possible 'beyond reasonable scientific doubt' to rule out an adverse effect on integrity when the project is considered in combination with other plans and projects, the Applicant does not agree for a number of reasons. These are: existing legal conclusions of no AEoI in all cases (including the recent confirmation of Creyke Beck in April 2019), the headroom available in assessments due to precaution built in, the pending decommissioning of Beatrice Demonstrator, the findings by Vanguard that, at a most precautionary level, the in-combination effect would be a slowing of the rate of growth in the population (and not a reduction), and the very small contribution to the in-combination totals</p>

Natural England Comment (summary)	Applicants Response
<p>contribution is likely to be small in the context of an in-combination total arising from a number of operational, consented or proposed projects, several of which are larger and/or closer to the SPA, including projects within the likely foraging range during the breeding season.</p>	<p>by Thanet Extension. Detail on these points is provided in the relevant response in the current table, with the relevance of post submission notes by Vanguard and the recent NMC for Creyke Beck highlighted below.</p> <p>A number of post-submission notes for Norfolk Vanguard, present updated assessments of potential impacts from collision risk on kittiwake connected to the FFC SPA that might arise from the operation of Norfolk Vanguard alone and in-combination, which were re-evaluated / assessed from Thanet Extension’s perspective. These assessments (which did not appear to include the recent NMC changes for Creyke Beck, instead including some 43.9 extra kittiwake for that project) provide predictions using Natural England’s preferred precautionary approach and the Norfolk Vanguard’s preferred evidence based methods.</p> <p>The findings from these post-submission notes were that there would be No AEoI due to kittiwake collisions at Norfolk Vanguard alone or in-combination (noting that Thanet Extension formed part of that in-combination assessment and that additional headroom has since been provided by the Creyke Beck NMC). The post-submission notes considered and presented the most up-to-date collision risk estimates alongside an updated Population Viability Analysis (PVA) in order to provide the ExA with a robust account of collision risk to kittiwake from the FFC SPA from offshore wind farms.</p>
<p>With regard to the specific questions, there appears to be some confusion regarding the two OWFs at Blyth in REP4-029. The turbines being decommissioned are the two turbines</p>	<p>The comment is noted and the Applicant accepts that some confusion has occurred as regards the naming of different offshore wind farms. It can be confirmed that the project currently being</p>

Natural England Comment (summary)	Applicants Response
<p>a short distance offshore from Blyth, which were installed in 2000 by a consortium including E-ON and generally known as Blyth Offshore Wind Farm. This is an altogether different proposal to the Blyth Offshore Demonstrator Ltd. windfarm, also referred to as Blyth NAREC, which is a permission for 15 turbines, 5 of which have been built. Therefore, the predicted reduction in kittiwake collisions for 'Blyth (NaREC Demonstration)' drawn from Table 1 of REP4-029 will not actually arise for the foreseeable future. Therefore, we suggest that the applicant provides evidence to confirm what is being decommissioned and what contribution to the in-combination total it will make.</p>	<p>decommissioned is the Blyth offshore Wind Farm and not the Demonstrator/NaREC facility.</p> <p>As regards Blyth (NaREC Demonstrator), the Applicant would highlight that the consent (and therefore the assessed project) was for a maximum of 15 turbines, with a total capacity of 99.9MW with 5 WTG installed. Of the consented capacity, just 58.4MW remains in the consent (insufficient to install a further 7 of the existing capacity turbines). It is clear that Blyth NaREC, like many OWF, has not installed the full number of WTGs consented.</p> <p>It is confirmed that the Beatrice Demonstrator is scheduled to be decommissioned along the timescale referred to in REP4-029. That project currently contributes 0.23 kittiwake to the in-combination annual kittiwake collision risk totals. That total should be viewed in the context of the 40 kittiwake identified in TCE's Headroom report (referenced above), the further headroom anticipated when nocturnal flight heights are taken into consideration (as referenced by NE in their response to the ISH8 Action Points (REP5-064)) and the recent NMC for Creyke Beck.</p>
<p>Natural England disagrees with the contention at para 22 that 'new evidence' indicates that previous Habitats Regulations Assessments that fed into the current conclusions were over-precautionary. We acknowledge the uncertainty in the assessments, and there is an urgent need for a cumulative and in-combination effects database to allow the competent authority to make their decisions using a database</p>	<p>The position of NE is noted, though the Applicant considers that the principles that underpinned The Crown Estates Headroom report did quantify the significance of the 'headroom' afforded by the difference between assessed and constructed projects. As noted above, the methods used to determine the headroom within The Crown Estates Headroom report may not be agreed with Natural England, but it should be further noted that a recent non-material change</p>

Natural England Comment (summary)	Applicants Response
<p>of cumulative effects that is based on the most up to date information. The lack of agreed figures and a common method to arrive at them inevitably leads to confusion. Therefore, there is a need for an approach that is appropriately precautionary, standardised, accurate, and based on the best available information. The solution would be to develop an interactive, updateable tool linking agreed datasets (e.g. seabird density and windfarm specifications) with agreed tools, for example collision risk modelling using agreed input parameters. Such a tool would allow standardised cumulative effects assessments to be made, and for such assessments to be updated as new input datasets become available (including turbine parameter changes that arise from changes in consented 'as built' scenarios). Therefore, we acknowledge that there is considerable uncertainty around the current estimates of the in-combination totals but we disagree that there is new evidence to suggest assessments are over precautionary.</p>	<p>application to Dogger Bank Creyke Beck, a project that has a makes a greater contribution to kittiwake mortality alone and in-combination to the FFC SPA, was recently successful (with Natural England noting in their 14 September 2018 response to the NMC application that 'we advise that any future projects entering the consenting process should take into account the revised Dogger Bank Creyke Beck project envelope in their in-combination assessment, should this non-material change to the DCO be accepted'<sup>4</sup>. The NMC was authorised in 19 April 2019).</p> <p>Whilst the Applicant recognises Natural England's position that there may be some uncertainty around the current estimates of the in-combination totals, it is also noted that Natural England recently agreed that significant decreases in kittiwake mortality were attributable to the non-material change to Dogger Bank Creyke Beck. Therefore, despite differences in the approach to consider changes from consented to as built projects it must be agreed that the recent changes to Dogger Bank Creyke Beck provide additional headroom.</p>
<p>As set above, Natural England's position is that Thanet Extension will not have an adverse effect on the integrity on the kittiwake population of the Flamborough &amp; Filey Coast SPA when considered alone. However, Natural England considers that it is not possible to rule out an adverse effect beyond reasonable scientific doubt on integrity when the project is considered in combination with other plans and projects. Although Thanet Extension is some distance</p>	<p>The Applicant agrees with NE's position on the project alone (i.e. of no AEoI). However, the Applicant disagrees with NE's position on the project in-combination, instead finding no AEoI, for the reasons given above. Namely existing legal conclusions of no AEoI in all cases (including the recent confirmation of Creyke Beck in April 2019), the headroom available in assessments due to</p>

<sup>4</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010021/EN010021-002309-Natural%20England%20comments%20on%20nmc%20DCO.pdf>

Natural England Comment (summary)	Applicants Response
<p>beyond the likely foraging range of kittiwake from the SPA during the breeding season, there is the potential for the proposal to make a contribution to the overall collision mortality total. This contribution is likely to be small in the context of an in-combination total arising from a number of operational, consented or proposed projects, several of which are larger and/or closer to the SPA, including projects within the likely foraging range during the breeding season.</p>	<p>precaution built in, the pending decommissioning of Beatrice Demonstrator, the findings by Vanguard that, at a most precautionary level, the in-combination effect would be a slowing of the rate of growth in the population (and not a reduction), and the very small contribution to the in-combination totals by Thanet Extension.</p>
<p><i>c. The Applicant and Natural England to set out their views about the degree of accuracy of the collision model at very low values, such as figures of between 0.6 and 1.6 birds. Can these figures be considered to be statistically robust?</i></p> <p>As highlighted in our relevant and written representations there is uncertainty around input parameters including flight height and nocturnal activity, which will influence the collision risk modelling outputs, and there are also assumptions around how birds are apportioned to Flamborough and Filey Coast SPA. However, whilst it may not be possible to state that the figures are robust, we accept that the estimates are likely to be within that range.</p>	<p>The Applicant acknowledges that the collision mortality rates of between 0.6 and 1.6 kittiwakes, attributed to the FFC SPA per annum, represents the range using the Applicant's and Natural England's preferred CRM parameters, respectively.</p>
<p>In response to part (b), NE presents their views on IROPI, alternatives and compensation. Comments provided below.</p>	<p>N/A</p>
<p>In the context of kittiwake collision mortality, alternatives at the project scale could involve the consideration of 'different scales or designs of development' that would address the project's potential contribution to the predicted annual in-combination collision mortality total for kittiwakes</p>	<p>The Applicant acknowledges Natural England's suggestion to consider potential alternatives at the project scale that could provide potential reductions in the project's contribution to the in-combination collision mortality total for kittiwakes from the Flamborough &amp; Filey Coast SPA.</p>

Natural England Comment (summary)	Applicants Response
<p>from the Flamborough &amp; Filey Coast SPA, for example opting to use turbine specifications that reduce the number of collisions. Natural England would be pleased to discuss these with the Applicant.</p>	<p>The design change that has been used in other projects (such as Hornsea 2) to provide significant reductions to collision risk included raising the minimum air draft (the distance between sea level and the lowest tip of the rotor swept area of the proposed wind turbine generators). However, due to Thanet Extension having such a low collision risk in the first instance, any such reductions would be minimal.</p> <p>Preliminary CRM results from considering alternate project designs were undertaken by the Applicant, which included raising the height of the rotor swept area by 2.5 m and 5 m, respectively. These potential changes provided reductions to collision risk of 17% and 39%, respectively. However, when these reductions are apportioned to kittiwake mortality rates for the project attributed to the FFC SPA this translates to the original mortality estimate of 0.60 birds decreasing to between 0.37-0.50 birds or of 1.63 birds decreasing to between 0.99-1.36-birds.</p> <p>This demonstrates that for projects such as Thanet Extension with very small contributions, such alternate project designs may provide reduced risk, but any such reductions are only minimal, and as a consequence and would not provide a material change to the overall minimal effect or the existing conclusion.</p>
<p>The relevant SNCB(s) role is to advise on the effectiveness of the proposed compensatory measures and whether they are likely to achieve the objectives.</p>	<p>The position of NE is slightly different to the understanding of the Applicant, which comes from Defra (2012)<sup>5</sup> as follows: <i>‘Early engagement with SNCBs is strongly recommended, since their view should be</i></p>

<sup>5</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf)

Natural England Comment (summary)	Applicants Response
	<p><i>obtained on the extent of any AEoI and the compensatory measures required. The Government expects SNCBs to have a role in helping applicants and competent authorities to identify and assess the adequacy of compensatory measures.'</i></p> <p>And as:</p> <p><i>'Competent authorities and SNCBs should help applicants to identify suitable compensatory measures.'</i></p> <p>In the event that Article 6(4) is triggered, the Applicant would be pleased to discuss these with Natural England.</p>

## 4 Response to matters associated with the OTE SPA and RTD

- 5 Comments addressed here are limited to those made in Section 7 of NE’s response at Deadline 5 (REP5-064), together with NE’s response to ISH8 Action Points (REP5-066), specifically those contained in question 1 and those in Appendix 1 as they relate to OTE SPA and RTD. Table 3 below summarises the Applicants response on a paragraph by paragraph basis.

**Table 3: Applicants Response to NE Deadline 5 Response (APP5-064) and NE Appendix 1 (APP5-066) – OTE SPA and RTD**

Natural England Comment (summary)	Applicants Response
APP5-064	
Comments in section 7	As per the Applicant’s response to Appendix 1 below
APP5-066	
We acknowledge that the SEZ ... will have the effect of reducing the impacts of any potential disturbance effects of the SPA. However, it is noted that that the majority of the SEZ is now closest part of the array to the SPA boundary.	Noted.  The relevance of the point that the SEZ is now the closest part of the array to the SPA boundary is unclear.
We accept that Thanet Extension’s in-combination contribution is in all likelihood, to be very small in the context of impacts from other OWF projects which lie within, rather than some distance beyond, the SPA. The fact that the array will be further still from the SPA boundary, coupled with the presence of the existing Thanet OWF, which may already be exerting displacement effects within the SPA in this general area, strengthens the argument that this project’s additional influence on the in-combination displacement effect is likely to be very small indeed. Nevertheless, as the extension has the potential to result in additional displacement effects within the SPA beyond those from the Thanet	Noted that NE agree with the conclusion for the project alone.  As regards to NE’s position with respect to it not being possible ‘beyond reasonable scientific doubt’ to rule out an adverse effect on integrity when the project is considered in combination with other plans and projects the Applicant does not agree due to the following;  (1) It is acknowledged that the relevant in-combination projects are existing projects, which have been approved by the Secretary of State on the basis that there would be no in-combination AEol on the SPA (as noted in REP4-023 most recently in 2017, with no relevant projects consented since that time);



Natural England Comment (summary)	Applicants Response
<p>OWF, it is not possible for Natural England to state that there is no adverse effect in-combination beyond reasonable scientific doubt.</p>	<p>(2) The evidence from post construction monitoring of the existing Thanet OWF demonstrates that the distance at which the percentage displacement of RTD falls to zero at this particular site is less than 4 km. Further, RTD were recorded within the array itself; evidence that displacement is not 100% even within Thanet OWF;</p> <p>(3) The Applicant strongly disagrees with Natural England’s view that Thanet Extension has the potential to result in additional displacement effects within the SPA, as when considering the additional distance between the OTE SPA and the Thanet Extension is now 7.65 km (when accounting for the recent SEZ) the site is at a distance that would now be considered to be too great for any direct displacement to occur. The Applicant is also mindful that the evidence of displacement out to 8 km is very precautionary, as this came from a study on RTD from an offshore wind farm that is greater in size (both in terms of area and the number of WTGs), is actually within the OTE SPA itself, and is within an area of much higher diver densities.</p> <p>(4) In the particular circumstances of this case, the Thanet Extension would not cause any appreciable effect or any effect at all on the wider in-combination effects relating to the mortality of this species which arise from those projects;</p> <p>(5) Thanet Extension would not cause an AEol to arise as a result of this project being included as part of an in-combination assessment; and</p> <p>(6) The conclusion of the updated Norfolk Vanguard assessment for the OTE SPA is no AEol due to RTD</p>

Natural England Comment (summary)	Applicants Response
	displacement during operations and maintenance alone or in-combination (noting that Thanet Extension formed part of that in-combination assessment).
<p>The paper ‘red throated diver cumulative (EIA) and in-combination (HRA) impact assessment methodology’ was submitted as Appendix 1, Annex C, at Deadline 1 by the Applicant. It is not clear how Thanet Extension’s relative contribution to the total RTD displacement is reduced from 0.31% (Table 12) to zero. There are no updated calculations provided to demonstrate that the relative contribution from Thanet Extension is now 0.0%, though it will clearly be less than the 0.31% originally predicted.</p>	<p>The reduction to zero effect on the OTE SPA is in relation to the direct line of impact on RTD that reside within the SPA from Thanet Extension itself. As the site is now close to 8 km from the OTE SPA, the drop off in potential displacement values at that range is near to if not zero. Coupled with site specific data, which demonstrates that displacement associated with Thanet OWF is less than 4km, then the development of Thanet Extension itself would not have any displacement effect on RTD residing within the OTE SPA itself.</p>
<p>In Paragraph 13 it states that “... the array area is now very close to the 8 km distance that Natural England has advocated as the outer limit for any potential influence of a constructed OWF on red-throated diver. This outer limit was defined by Natural England based on a post-construction study of the London Array OWF (APEM 2016) that identified that the displacement effect decays from 100% displacement at 0 km from the OWF to 0% displacement at 8 km from the OWF.” This statement is inaccurate, as we do not consider 8 km as the outer limit for influence of windfarms, as some studies have detected displacement beyond 8 km (Petersen et al., 2014). In the evidence plan meetings Natural England advocated that evidence suggests that red throated divers may exhibit displacement from offshore wind farms at distances greater than 4 km, and for</p>	<p>The Applicant reviewed multiple sources of evidence to estimate potential displacement distances from the proposed Thanet Extension project, in line with SNCBs guidance. This evidence-led approach identified that studies within the southern North Sea undertaken within or in close proximity to the SPA of interest (the OTE SPA) were of most relevance to the assessments for Thanet Extension.</p> <p>Therefore, consideration of displacement out to 8 km was determined to be the maximum effect from offshore wind farm activities in general, as no studies undertaken within nor in close proximity to the OTE SPA provided evidence of displacement beyond this distance. However, the Applicant also recognised that the distance of 8 km was from a larger scale offshore wind farm, within an area of high diver density inside of the OTE SPA</p>

Natural England Comment (summary)	Applicants Response
<p>screening purposes a distance of up to 10 km should be used to screen in SPAs for assessment.</p>	<p>and that smaller scale offshore wind farms located in lower density diver areas within or outside of the OTE SPA provided evidence of far less displacement (as is the case from monitoring at Thanet and Kentish Flats – for example as noted above, for Thanet OWF the distance at which the percentage displacement of RTD falls to zero at this particular site is less than 4 km, with RTD recorded within the array itself).</p> <p>Either way, the Applicant recognised the OTE SPA site of being of interest to the assessment of potential effects from displacement on RTD and screened it in.</p>
<p>We note the applicant’s view that this project may now be considered to be outside of any influence on this species when in the SPA. However, whilst this may be this case, the applicant’s assertion that the project’s contribution to displacement of RTD from OTE SPA is zero as a result of the implementation of the SEZ is not evidenced in this paper. Nevertheless we do acknowledge that there is some uncertainty regarding the probability of there being any displacement effect at all, given the distance that the project is now planned to be from the SPA, and the presence of the existing Thanet windfarm.</p>	<p>The reduction to zero effect on the OTE SPA is in relation to the direct line of impact on RTD that reside within the SPA from Thanet Extension itself. As the site is now close to 8 km from the OTE SPA, the drop off in potential displacement values at that range is near to if not zero. Coupled with site specific data, which demonstrates that displacement associated with Thanet OWF is less than 4km, then the development of Thanet Extension itself would not have any displacement effect on RTD residing within the OTE SPA itself.</p>
<p>We note the error in our previous reference to the project being 8 km from the Outer Thames Estuary SPA. We confirm that Applicant’s assumption that Natural England’s “...concerns arise from consents for OWFs that have already been granted and not from the</p>	<p>The consequence of the SEZ is two fold on considering potential diver displacement from Thanet Extension; the first is related to any direct displacement of divers that are within the OTE SPA; the second is related to the extent of any displacement of</p>

Natural England Comment (summary)	Applicants Response
<p>predicted impacts of Thanet Extension” is correct. However, we have not seen the implications of the SEZ assessed as part of the revised RTD in-combination assessment (originally presented by the Applicant at Deadline 1). Therefore we are unable to agree with the Applicant’s assertion that “Thanet Extension will therefore make no contribution to any in-combination assessment of potential displacement of red-throated diver in the Outer Thames Estuary SPA”, although clearly there will be a reduction of the effect previously predicted due to the array being further from the SPA boundary.</p>	<p>divers from outside of the OTE SPA that may be considered to be within functional habitat associated with the OTE SPA.</p> <p>The first point is explained in the above response, whilst the second is explained below;</p> <p>For the purpose of estimating the potential in-combination displacement effect on RTD from the OTE SPA from offshore wind farms both within and outside of the SPA a set of assumptions were agreed with Natural England. Where the proposed, consented or constructed offshore wind farm is inside the OTE SPA then 100% of the displaced population was attributed to the SPA. Where the proposed, consented or constructed offshore wind farm is outside the OTE SPA then a proportioning exercise was undertaken, based on the percentage of birds that the OTE SPA classified population is out of the total population that was estimated to occur in the UK waters from Kent to east Norfolk (more northerly populations are apportioned to the Greater Wash SPA). This apportionment was undertaken to recognise that areas outside of the OTE SPA may provide functional habitat to RTD from the OTE SPA population.</p> <p>As a result of the SEZ, the area of Thanet Extension plus a 4 km buffer reduces by approximately 25.61 km<sup>2</sup> or 8.1% in comparison to the area used in the post-submission assessments undertaken for cumulative / in-combination displacement for RTD (the area used in original assessments was 316.22 km<sup>2</sup> for Thanet Extension and a 4 km buffer, whilst the post-SEZ plus 4km buffer area is 290.61 km<sup>2</sup>).</p>

Natural England Comment (summary)	Applicants Response
	<p>Accounting for the previous estimates of between 0.20 and 1.01 birds potentially being subject to mortality as a consequence of displacement from Thanet Extension attributed to the OTE SPA per annum, following implementation of the SEZ these would now reduce to 0.18 and 0.93 birds per annum.</p>
<p>Natural England’s conclusion remains that Thanet Extension alone has no adverse effect on the integrity of the RTD feature of the Outer Thames Estuary SPA. There is some uncertainty whether there is likely to be any contribution to in-combination displacement effects given the distance between Thanet Extension and the OTE SPA, now that the SEZ forms part of the application, but due to the existing displacement effects from operational projects it is not possible for Natural England to state that there is no adverse effect in-combination beyond reasonable scientific doubt.</p>	<p>The Applicant recognises Natural England’s conclusion that Thanet Extension alone has no AEoI on the integrity of the RTD feature of the OTE SPA.</p> <p>However, the Applicant would further underline that there is no evidence in support of an AEoI in-combination on the RTD feature of the OTE SPA.</p> <p>The Applicant’s conclusion, of no AEoI in-combination, is supported by the evidence provided by the Applicant to determine the potential range of effects on RTD from the OTE SPA and from previous decisions made by the SoS that concluded no AEoI for RTD from the OTE SPA for all other projects consented within or in close proximity to the OTE SPA.</p>
<p>In this context, Natural England highlights the importance of the need for any post consent ornithological monitoring, should this project be consented, to focus on the extent of red throated displacement in and around Outer Thames Estuary SPA.</p>	<p>Noted.</p>
<p>In response to part (b), NE presents their views on IROPI, alternatives and compensation. Comments provided below.</p>	<p>N/A</p>

Natural England Comment (summary)	Applicants Response
<p>In the context of red-throated diver displacement, alternatives at the project scale could involve the consideration of 'different scales or designs of development' that would address the project's potential contribution to the in-combination displacement effects on red-throated divers using the Outer Thames Estuary SPA, for example by further modifications to the SEZ. Natural England would be pleased to discuss these with the Applicant.</p>	<p>The SEZ as presented has been formulated taking account of commercial viability while attempting to provide shipping/navigation interested parties with comfort regarding the need to ensure qualitative concerns were addressed, in addition to quantitative analysis. The rationale for this was presented at Appendix 14 to the Applicant's Deadline 4 submission (REP4-018). It is apparent that any further expansion of the SEZ would not deliver any substantial change in the existing conclusions with regards RTD and the OTE SPA (i.e. it may reduce a fraction of a bird to a slightly smaller fraction of a bird), and would instead place the objectives of the project at risk – such an approach is not considered proportionate.</p> <p>Further, it is noted that the boundary of the SEZ places the closest a turbine can be to the OTE SPA at some 7.65km from the limit of the OTE SPA. In addition, there is a commitment to no 'oversail' within the SEZ, which means that blades cannot cross the SEZ boundary. That effectively means that foundations need to be set back from the SEZ boundary by a blade length – being 80-110m, thus increasing the effective range to the OTE SPA to 7.73-7.76km.</p> <p>It is considered by the Applicant that monitoring of OWF and RTD displacement has revealed a range of displacement, with site specific monitoring at Thanet OWF (as evidenced by REP4-023) clearly demonstrating that 8km does not apply at Thanet Extension; indeed it has been noted in multiple submissions that RTD are found within the existing Thanet OWF and accepted therefore that</p>

Natural England Comment (summary)	Applicants Response
	<p>Thanet may be somewhat unique with regards limited displacement at all.</p>
<p>The relevant SNCB(s) role is to advise on the effectiveness of the proposed compensatory measures and whether they are likely to achieve the objectives.</p>	<p>The position of NE is slightly different to the understanding of the Applicant, which comes from Defra (2012)<sup>6</sup> as follows:</p> <p><i>'Early engagement with SNCBs is strongly recommended, since their view should be obtained on the extent of any AEol and the compensatory measures required. The Government expects SNCBs to have a role in helping applicants and competent authorities to identify and assess the adequacy of compensatory measures.'</i></p> <p>And as:</p> <p><i>'Competent authorities and SNCBs should help applicants to identify suitable compensatory measures.'</i></p> <p>In the event that Article 6(4) is triggered, the Applicant would be pleased to discuss these with Natural England.</p>

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<sup>6</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf)

## 5 Response to matters associated with the SNS SAC and harbour porpoise

6 In NE's response at Deadline 5 (REP5-064), section 13 paragraph 13.1 reference is made to the draft Site Integrity Plan (SIP) (REP4-022), specifically to section 6, paragraph 27, first bullet point. Natural England is correct, the reference should be to 'injury' and not 'disturbance'. Thank you for highlighting the typo, which will be corrected on subsequent versions, however the typo does not alter the SIP in itself. The section refers to additional licencing requirements, that have not yet been applied for, and will require consultation in their own right at the relevant time.

7 In the following paragraph, 13.2, the following is noted:

*'Natural England welcomes the commitments made within the SIP regarding the mitigation methods described in section 4, specifically; undertaking management of project activities to ensure the project remains within thresholds, AND/OR liaison with MMO to determine if the in-combination effect could be managed so as to remain within the thresholds, AND/OR a seasonal restriction for Thanet Extension, enabling works to be planned in a manner that avoids exceeding the thresholds. Natural England considers these commitments should be secured in the DCO/DML to ensure they are enforceable. This would also allow Natural England to conclude no Adverse Effect on Integrity on the harbour porpoise feature of the Southern North Sea SAC.'*

8 The Applicant welcomes the recognition by NE that these mitigation measures would allow NE to conclude no AEol on the harbour porpoise feature of the SNS SAC, provided they are secured in the DCO/DML to ensure they are enforceable. The Applicant would respectfully highlight that the mitigation measures are currently provided for within the DCO/DML, as these form the key point of the SIP. Specifically, Schedule 11 of the Generation Assets DML, Part 4 Condition 12((k) the DCO (REP4-003) states:

*(Condition 12(1) 'The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO'*

*(Condition 12(f)) 'A site integrity plan, which must be approved in writing by the MMO prior to the commencement of operation of the licensed activities and which must accord with the outline site integrity plan (as certified in accordance with article 35).'*

9 Followed by Schedule 12 of the Export Cable System DML, Part 4 Condition 10((l) the DCO (REP4-003) states:



*(Condition 12(1) 'The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO'*

*(Condition 12(l)) 'A site integrity plan, which must be approved in writing by the MMO prior to the commencement of operation of the licensed activities and which must accord with the outline site integrity plan (as certified in accordance with article 35).'*

- 10 It is therefore clear that the above DML conditions refer specifically to the Draft/Outline Site Integrity Plan (REP4-022), which contains the mitigation measures referenced by NE, and that licensed activities cannot commence until the SIP has been approved in writing by the MMO within the required timeframe. It is not considered necessary or proportionate to list the precise mitigation measures contained within the Draft SIP within the DCO – no other plan has all mitigation measures listed within the DCO.
- 11 In NE's response to ISH8 questions (REP5-066), question 9 refers to the SNS SAC and harbour porpoise. NE note under 9(a) that discussions are still ongoing with the Applicant as regards the SoCG, with an aim to submit the latest version as soon as possible.
- 12 NE's response to question 9(b) is provided in Appendix 2, with Table 4 below summarising the Applicants response on a paragraph by paragraph basis.

**Table 4: Applicants Response to NE Appendix 2 (REP5-066) – Marine Mammal Action Points**

Natural England Comment (summary)	Applicants Response
<p>In response to part (b), NE presents their views on IROPI, alternatives and compensation. Comments provided below.</p>	<p>N/A</p>
<p>The relevant SNCB(s) role is to advise on the effectiveness of the proposed compensatory measures and whether they are likely to achieve the objectives.</p>	<p>The position of NE is slightly different to the understanding of the Applicant, which comes from Defra (2012)<sup>7</sup> as follows:</p> <p><i>‘Early engagement with SNCBs is strongly recommended, since their view should be obtained on the extent of any AEoI and the compensatory measures required. The Government expects SNCBs to have a role in helping applicants and competent authorities to identify and assess the adequacy of compensatory measures.’</i></p> <p>And as:</p> <p><i>‘Competent authorities and SNCBs should help applicants to identify suitable compensatory measures.’</i></p> <p>In the event that Article 6(4) is triggered, the Applicant would be pleased to discuss these with Natural England.</p>

<sup>7</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf)