

Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Annex A to Appendix 8 to Deadline 5 Submission:
Applicants Response to ISH8 Action Points 1(b),
3(d) and 9(b)

Relevant Examination Deadline: 5

Submitted by Vattenfall Wind Power Ltd

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Revision A

Points 1(b), 3(d) and 9(b)

Drafted By:	Vattenfall Wind Power Ltd
Approved By:	Daniel Bates
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1 Purpose of the Note

1 During Issue Specific Hearing (ISH) 8 on 16 April 2019, the ExA requested that the Applicant provide information on whether (or not) the project should progress past Stage 2 of the Habitats Regulations Assessment (HRA) process (Appropriate Assessment) for the following sites and species:

- Flamborough and Filey Coast (FFC) SPA – kittiwake (collision risk in-combination); and
- Outer Thames Estuary (OTE) SPA – red-throated diver (RTD) (displacement risk in-combination).

2 The question was clarified in the ExA's Action Points issued following the hearings, specifically to ask in Points 1(b), 3(d) and 9(b) that 'in the event that Natural England is not able to agree to the Applicant's conclusion of no Adverse Effect on Integrity (AEoI), the Applicant and Natural England should each provide a written view on the following question:

'If the Secretary of State as Competent Authority was to conclude that there may be an adverse effect on integrity (in-combination), then what alternative solutions and compensatory measures have been considered? To what extent is it necessary to proceed to stages beyond Stage 2 of the HRA assessment process, i.e. alternative solutions and Imperative Reasons of Overriding Public Interest?'

3 The Action Points clarified that the question relates to the FFC SPA (kittiwake) and the OTE SPA (RTD) as noted above, but also in relation to:

- Southern North Sea (SNS) SAC – harbour porpoise (underwater noise in-combination).

4 It is the Applicant's position that it is not necessary to progress past Stage 2 for any designated site or species with respect to Thanet Extension, including those noted above (FFC SPA and kittiwake, the OTE SPA and RTD and the SNS SAC and harbour porpoise). The reason for that conclusion is that the Report to Inform Appropriate Assessment (RIAA) (REP2-018 and REP2-019), together with recent RIAA Addenda (REP4-027 and REP4B-015), have all concluded no AEoI, both alone and in-combination, for all designated sites and species screened in for assessment.

2 Advice and Guidance

5 Overarching guidance on the HRA process was provided by the EC in 2018¹, within the document titled 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC'. Effectively, Article 6(3) provides for the requirements for Screening and Appropriate Assessment, with Article 6(4) addressing alternatives, Imperative Reasons of Overriding Public Interest (IROPI) and compensation. Further guidance on Article 6(4) specifically was provided in a "Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC".²

6 In the UK and for the purposes of NSIPs, the provisions of Article 6(3) are found within:

- Regulation 28 of the Conservation of Offshore Marine Habitats & Species Regulations 2017 (as amended) (the "Offshore Habitats Regulations"); and
- Regulation 24 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the "Terrestrial Habitats Regulations").

7 With the provisions of Article 6(4) found within:

- Regulation 29 of the Conservation of Offshore Marine Habitats & Species Regulations 2017 (as amended) (the "Offshore Habitats Regulations"); and
- Regulation 62 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the "Terrestrial Habitats Regulations").

8 At national level, PINS Advice Note 10 (November 2017)³ addresses Habitats Regulations Assessment relevant to Nationally Significant Infrastructure Projects (NSIPs), such as Thanet Extension. The overarching HRA process is divided into 4 stages in the note, as summarised in Figure 1.

¹http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_.nov.2018_english.pdf

² http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en.pdf

³http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_.nov.2018_english.pdf

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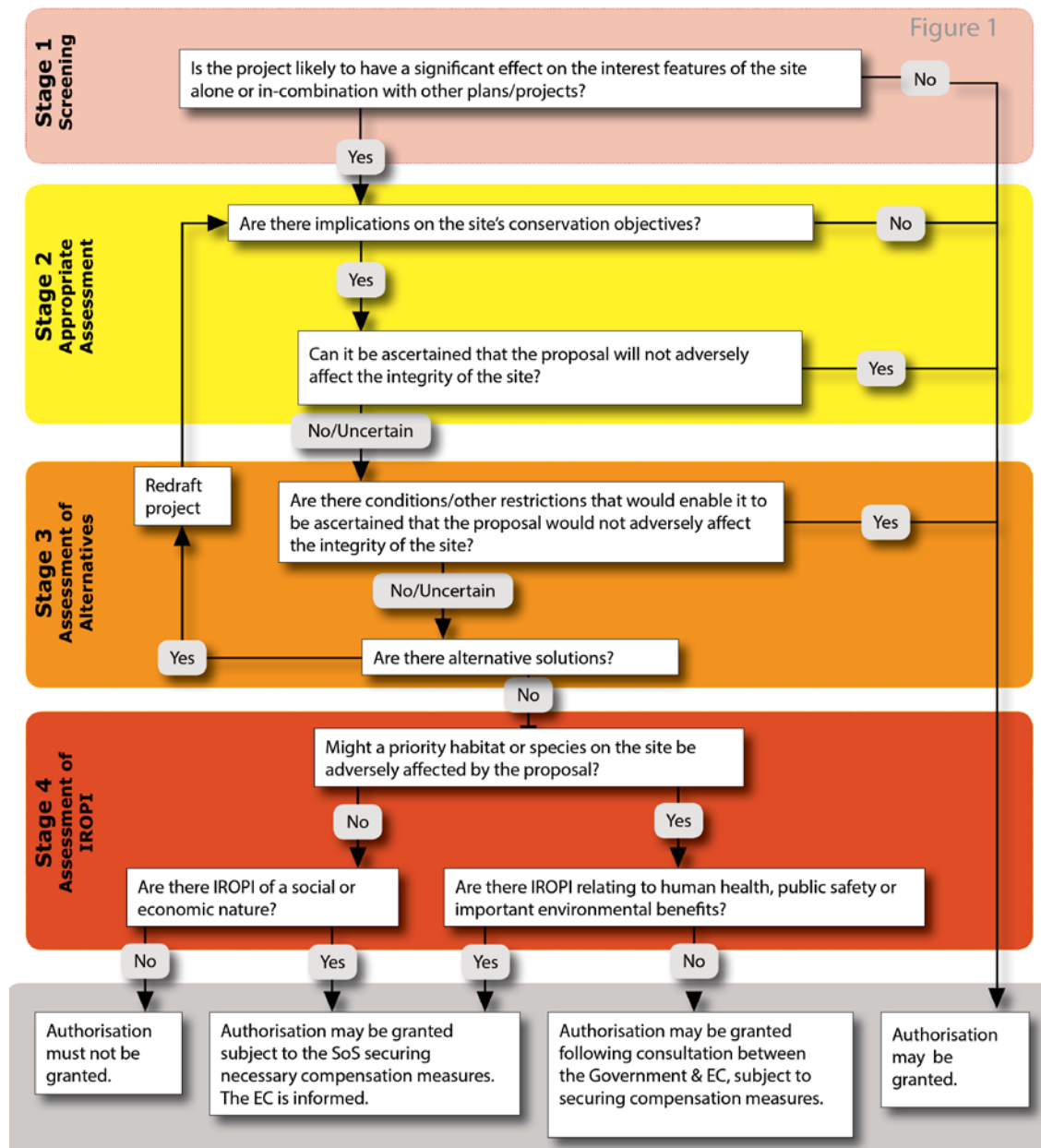


Figure 1: the HRA process (from PINS Advice Note 10)

9 Effectively Stages 1 and 2 of the PINS Advice Note correspond to Article 6(3), with Stages 3 and 4 of the PINS Advice Note corresponding to Article 6(4).

10 Thanet Extension has progressed through the Advice Note 10 stages depicted within Figure 1 as follows:

- Stage 1 – Screening (**COMPLETE** – Original Screening Report APP-032, as updated within the RIAA submitted at Deadline 2 REP2-018 and REP2-019);

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- Stage 2 – Appropriate Assessment (**to be completed by the Competent Authority**, in this case the Secretary of State for BEIS, with **the Applicant providing information necessary** for the AA – **Applicants contribution COMPLETE** – REP2-018 and REP2-019 and Addenda REP4-027 and REP4B-015);
 - Stage 3 – Assessment of Alternatives. Only required if the relevant test under Stage 2 cannot be met – **see section 3 below**;
- 9 Stage 4 – Assessment of IROPI. Only required if the relevant test under Stage 3 cannot be met – **see section 3 below**.
- 11 Given that the Applicant has in all RIAA documentation concluded no AEoI alone and in-combination for all sites and features screened in, it is the Applicants position that, under Stage 2 as depicted in Figure 1 above, the question ‘Can it be ascertained that the proposal will not adversely affect the integrity of the site’ can be answered ‘yes’ in all cases, thus removing the need for both Stage 3 and 4 and providing for the conclusion ‘authorisation may be granted’.
- 12 The following section 3 provide the evidence base for that conclusion.
- 13 In terms of relevant guidance, for completeness but not withstanding the Applicants view that progress beyond Stage 2 is not relevant or required for Thanet Extension, note is provided here on the relevant guidance on the application of Article 6(4) of the Habitats Directive, which provides for Stage 3 (alternative solutions) and Stage 4 (IROPI), together with compensatory measures. That document has been issued by the Department for Environment, Food and Rural Affairs (Defra, 2012)⁴. Specifically, the note finds:
- ‘article 6(4) of the Habitats Directive provides a derogation which would allow a plan or project to be approved in limited circumstances even though it would or may have an AEoI on a European site. Article 6(4) applies to sites protected under both the Habitats and Wild Birds Directives.’*

⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf

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14 The three tests of alternative/IROPI/compensation (as covered under Stages 3 and 4 in PINS Advice Note 10) can only be formally considered once an Appropriate Assessment (Stage 2 of PINS Advice Note 10) in line with article 6(3) of the Directive has been undertaken. The process to be applied for Article 6(4) (i.e. Stages 3 and 4 of PINS Advice Note 10) is summarised in Defra (2012) as follows here in Figure 2. Given the conclusions throughout of no AEoI alone and in-combination, it is the Applicant’s view that there is no need to follow the process outlined in Figure 2.

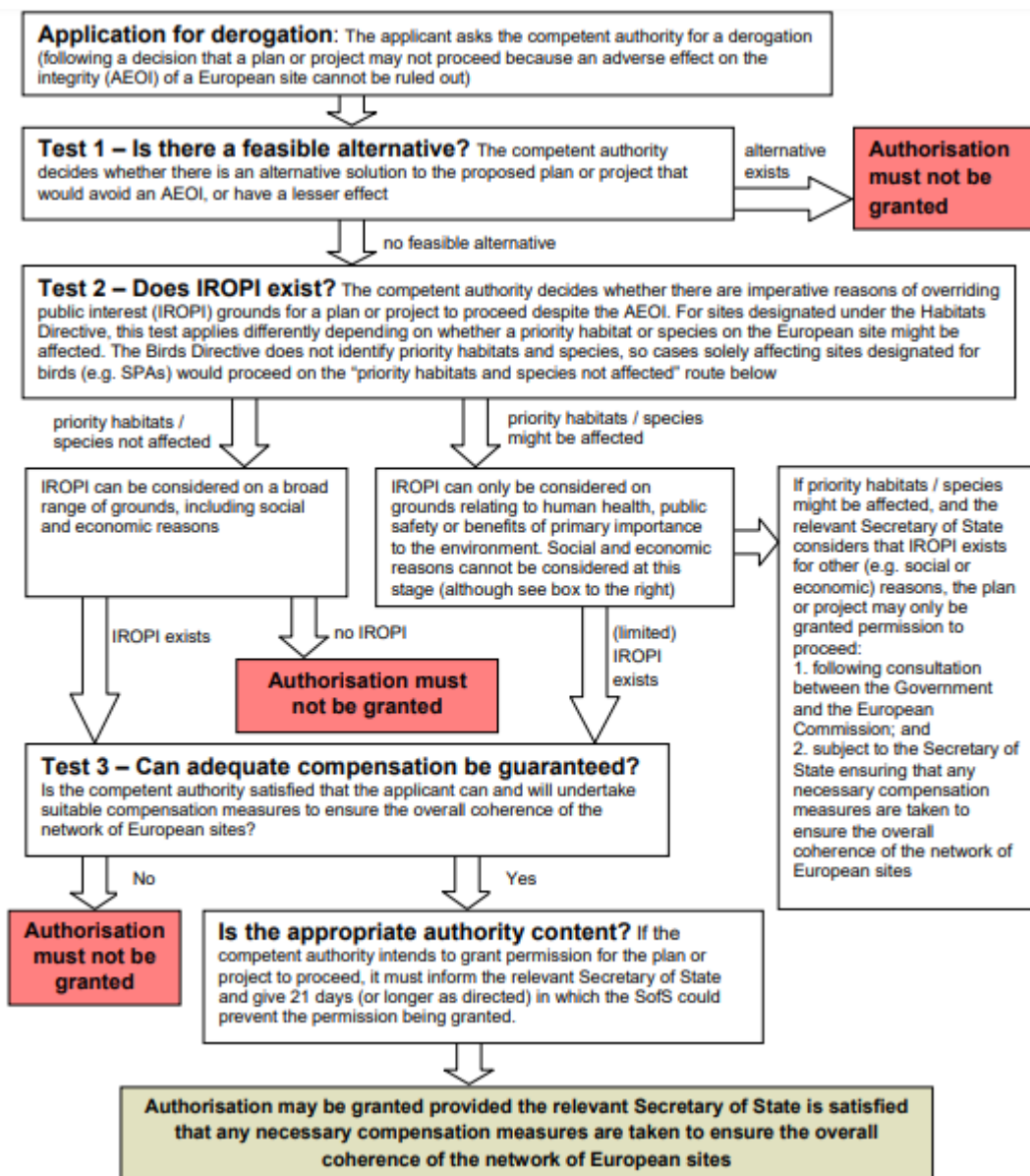


Figure 2: The Derogation Process under Article 6(4) (from Defra, 2012)

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'Article 6(4) of Directive 92/43 can apply only after the implications of a plan or project have been studied in accordance with Article 6(3) of that directive. Knowledge of those implications in the light of the conservation objectives relating to the site in question is a necessary prerequisite for application of Article 6(4) since, in the absence thereof, no condition for application of that derogating provision can be assessed. The assessment of any imperative reasons of overriding public interest and that of the existence of less harmful alternatives require a weighing up against the damage caused to the site by the plan or project under consideration. In addition, in order to determine the nature of any compensatory measures, the damage to the site must be precisely identified'

- 19 The supporting documents for the Applicants position of no AEoI alone and in combination for all relevant sites and features, are summarised in Tables 1, 2 and 3 below (with respect to Table 2, the OTE SPA and RTD, including a note to identify where documents were submitted after the implementation of the SEZ).

Table 1: Summary of the Evidence Presented by the Applicant to Support the Conclusions of no AEol with respect to the FFC SPA (kittiwake)

Document	PINS Reference	Section	Site/ feature	Conclusion
RIAA	REP2-019	11.4 (paragraph 11.4.146 inter alia, concluding 11.4.149)	FFC SPA Kittiwake	Collision risk during operation. Concluded no AEol alone .
		12.4 (paragraph 12.4.26 inter alia, concluding 12.4.33)	FFC SPA Kittiwake	Collision risk during operation. Concluded no AEol in-combination .
Deadline 4 Submission - Appendix 23: Review of the ES and RIAA in relation to the Structure Exclusion Zone	REP4-027	Table 2	FFC SPA Kittiwake	Screened out - no increase in the maximum adverse scenario assessed (small increase in range from 311.47km to 312.07km).
Appendix 25 to Deadline 4 Submission: Offshore Ornithology In-	REP4-029	Section 1.2	FFC SPA Kittiwake	(1) The absence of an AEol on the kittiwake feature of FFC SPA from Thanet Extension alone ; (2) The absence of AEol on the kittiwake feature of FFC SPA from Thanet Extension in-combination , given the absence of any appreciable contribution from Thanet Extension; and

Document	PINS Reference	Section	Site/ feature	Conclusion
combination Effects Position Paper on Kittiwake and the FFC SPA				(3) The findings with respect to kittiwake are between 0.60 and 1.63 birds per annum for FFC SPA, which is agreed as not adverse on this site. The existing baseline with regards other consents is such that there has been no finding of an existing AEol in-combination, and the contribution of Thanet Extension does not alter this position. Where Natural England consider there to be a potential existing AEol (although the reasons behind that view point are not clear or quantified) there is no suggestion from either party that the ~1 kittiwake contribution made by Thanet Extension to FFC SPA causes any appreciable effect.
		Table 1	FFC SPA Kittiwake	Provides evidence that: (1) All existing consented offshore wind farms were consented on a basis of no AEol alone or in-combination with respect to the FFC SPA; and (2) Two existing OWF shortly to be decommissioned (Blythe (licence to decommission Blyth granted November 2017 ⁷ , with decommissioning work commencing April 2019 ⁸ , expected to last 4-6 weeks ⁹) and Beatrice Demonstrator planned for complete decommissioning as part of the decommissioning of the oil platform (to which it supplies power), with removal of the wind

⁷ <http://portofblyth.co.uk/decommissioning-licence-approved/>

⁸ <https://www.offshorewind.biz/2019/04/24/first-uk-offshore-wind-farm-disappears-from-horizon/>

⁹ <https://www.eonenergy.com/about-eon/media-centre/eons-blyth-offshore-wind-farm-to-be-decommissioned-bringing-to-a-close-its-pioneering-contribution-to-the-development-of-renewable-technology/>

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>turbine ‘topside’ (including the blades) decommissioned before the ‘jackets’ (foundation) in 2025-2027¹⁰. Beatrice decommissioning was approved by BEIS in January 2019¹¹). The two projects have a combined predicted collision risk of 0.65 (i.e. directly comparable to the Applicant’s predicted collision risk for Thanet Extension);</p> <p>(3) A number of projects have not built out (or will not be built out) to the maximum WTGs assessed, e.g. Triton Knoll (288 turbines assessed, reduced to 90 through a non material change), EAONE (325 turbines assessed, 102 foundations installed), Rampion (175 turbines assessed, 116 installed), Hornsea One (240 turbines assessed, 174 foundations installed), Hornsea Two (300 turbines assessed, 165 foundations expected to be installed). The result is a significant over estimate in the in-combination collision risk totals when comparing the assessed projects to the constructed projects (a conclusion supported by The Crown Estate’s ‘Headroom’ report¹².</p> <p>[The overall aim of The Crown Estate’s ‘Headroom report’ was to understand ‘<i>how much potential wind farm capacity [in terms of collision risk] is currently ‘locked-up’ in existing wind farm consents. This results from differences between impact assessments for proposed wind farm designs, which are typically derived using worst-case options for turbine dimensions and numbers, and as-built wind farms, which to date have invariably been smaller or</i></p>

¹⁰ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/772806/Beatrice_Decommissioning_Programmes.pdf

¹¹ <https://www.gov.uk/guidance/oil-and-gas-decommissioning-of-offshore-installations-and-pipelines#table-of-approved-decommissioning-programmes>

¹² MacArthur Green (2017). *Estimates of Ornithological Headroom in Offshore Wind Farm Collision Mortality*. The Crown Estate, London.

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p><i>make use of advancements in turbine technology to achieve planned power generation with fewer, larger turbines.’ This report provided evidence of available headroom on the basis of recalculating the collision risk from consented, as-built and planned offshore wind farms for kittiwake at the FFC SPA of 40 individuals (i.e. the difference between the original and updated collision estimates). The evidence provided in The Crown Estate’s headroom report strongly suggests that current collision risk estimates for kittiwake are an overestimate. It was also concluded that further headroom could be found for kittiwake in relation to considering evidence that supports continuing revisions to CRM input parameters such as nocturnal flight activity rates.]</i></p>
<p>Deadline 4C Submission - Appendix 6: Statement of Common Ground – Natural England - Offshore ornithology</p>	<p>REP4C-008</p>	<p>Table 3</p>	<p>FFC SPA Kittiwake</p>	<p>No AEoI of FFC SPA is agreed for the project alone.</p> <p>In-combination – not agreed.</p> <p>Applicants position:</p> <p>The Applicant recognises that Natural England’s opinion is that it is not possible to rule out the potential of an AEoI on the kittiwake population of the FFC SPA from other plans and projects. However:</p> <p>(1) It is acknowledged that the relevant in-combination projects are other plans and projects, including projects which have been approved by the Secretary of State on the basis that there would be no AEoI in-combination on the SPA;</p> <p>(2) Thanet Extension would not cause any appreciable effect on</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>the wider in-combination effects relating to the mortality of this species which arise from those plans and projects; and</p> <p>(3) Thanet Extension would not cause an AEoI to arise as a result of this project being included as part of an in-combination assessment.</p>
Norfolk Vanguard Offshore Wind Farm Offshore Ornithology Assessment Update for Deadline 6 ¹³	Submitted by the Applicant at Deadline 5	Executive Summary	FFC SPA Kittiwake	<p>A post-submission note for Norfolk Vanguard, presenting an updated assessment 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 was assessed from Thanet Extension’s perspective. The assessment provides predictions using Natural England’s preferred precautionary approach and the Norfolk Vanguard’s preferred evidence based methods.</p> <p>The findings from this post-submission note 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). The post-submission note 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>
		Paragraph 67 and	FFC SPA	The in-combination (including Hornsea Three) all age class total

¹³ [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010079/EN010079-002764-ExA;%20AS;%2010.D6.17 Norfolk%20Vanguard%20Offshore%20Wind%20Farm%20Offshore%20Ornithology%20Assessment%20Update%20for%20Deadline%206.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010079/EN010079-002764-ExA;%20AS;%2010.D6.17%20Norfolk%20Vanguard%20Offshore%20Wind%20Farm%20Offshore%20Ornithology%20Assessment%20Update%20for%20Deadline%206.pdf)

Document	PINS Reference	Section	Site/ feature	Conclusion
		69	Kittiwake	<p>annual kittiwake collision estimate apportioned to FFC SPA is 495.2, of which Thanet Extension was considered to contribute 1.4 (towards the precautionary end of the Thanet Extension predicted contribution).</p> <p>The PVA model was an update of similar models produced for Hornsea Project Two, with the addition of a matched-run approach for calculating counterfactual outputs and an extended simulation period (35 years). Simulations were conducted with and without density dependence and were summarised as the counterfactual of population size and population growth rate. The outputs from this model were presented as additional adult mortality, therefore the total FFC SPA estimates were converted to adults by multiplying by the adult proportion (53%). Thus, the all age class estimate including Hornsea Project Three of 495.2 comprises 262.4 adults, and without Hornsea Project Three the all age total of 337.4 comprises 178.8 adults. The outputs from these models for adult mortality levels of 200 and 300 (the closest upper values to these totals).</p>
		Paragraphs 70 and 72	FFC SPA Kittiwake	<p>The maximum reduction in the population growth rate (including Hornsea Three), a mortality rate of 300 individuals per annum, using the more precautionary density independent model was 0.3%. Using the more realistic density dependent model, the maximum reduction in growth rate (including Hornsea Three) was 0.1%.</p> <p>The kittiwake breeding population at the FFC SPA has remained</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>relatively stable around an average of approximately 40,000 pairs over the last 20 years. The RSPB also reported that since 2000 the population has grown by 7% which would equate to 0.4% annual growth rate (RSPB unpublished report), with the latest population estimate for kittiwake at the FFC SPA being 45,504 pairs (91,008 individuals) in 2017. Therefore, the kittiwake population appears to be in favourable conservation status and the relevant conservation objective is to maintain this status, subject to natural change.</p> <p>On the basis of the population model predictions the number of predicted in-combination kittiwake collisions attributed to the FFC SPA is not at a level which would trigger a risk of population decline, but may result in a slight reduction in the growth rate currently seen at this colony.</p> <p>[The findings from this report demonstrate that no AEol is apparent with respect to the kittiwake feature of the FFC SPA, with respect to Thanet Extension alone or in-combination with other projects. It also makes it very clear that there is only a very small contribution made by Thanet Extension to the in-combination totals, with the 0.60 to 1.63 individuals representing 0.20% to 0.54% with respect to the maximum mortality rate of 300 individuals per annum in the more precautionary density independent model assessed.]</p> <p>The worst case in-combination effect will therefore not be sufficient to prevent the FFC SPA kittiwake population from continuing to grow. It is therefore difficult to reconcile how, even</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>as a highly precautionary worst case, a predicted in-combination impact that would not prevent the continued growth of that population, could be viewed as being an AEol on site integrity (as maintained by Natural England). It is the position of the Applicant that such an in-combination impact does not represent an AEol on kittiwake from the FFC SPA.</p>

Table 2: Summary of the Evidence Presented by the Applicant to Support the Conclusions of no AEol with respect to the OTE SPA (RTD)

Document	PINS Reference	Section	Site/ feature	Conclusion
RIAA (pre SEZ)	REP2-019	11.4 (paragraph 11.4.7 inter alia, concluding 11.4.14)	OTE SPA RTD	Risk of disturbance and displacement during construction and decommissioning. Concluded no AEol alone .
		11.4 (paragraph 11.4.66 inter alia, concluding 11.4.72)	OTE SPA RTD	Risk of disturbance and displacement during operation. Concluded no AEol alone .
		12.4 (paragraph 12.4.3 inter alia, concluding 12.4.10)	OTE SPA RTD	Risk of disturbance and displacement during construction and decommissioning. Concluded no AEol in-combination .
		12.4 (paragraph 12.4.12 inter alia, concluding 12.4.25)	OTE SPA RTD	Risk of disturbance and displacement during operation. Concluded no AEol in-combination .
Appendix 1, Annex C of Deadline 1 Submission: Red-	REP1-023	Paragraph 32	OTE SPA RTD	The report considered two scenarios for Thanet Extension: (1) The SNCBs default scenario of 100% displacement within the array area and 100% displacement out to 4 km from the boundary of the turbine array (SNCBs, 2017); and

Document	PINS Reference	Section	Site/ feature	Conclusion
throated diver cumulative (EIA) and in-combination (HRA) impact assessment methodology (pre SEZ)				(2) The scenario developed from the local site based evidence that results from the monitoring of the Thanet Offshore Wind Farm of 73% displacement within the turbine array and no displacement outside the boundary of the turbine array.
		Paragraph 64		Displacement may result in the mortality of a proportion of the RTD displaced. Definitive mortality rates associated with displacement for any seabird are not known and precautionary estimates have to be used. The approach taken in the assessment of Thanet Extension is to consider a range of mortality rates, for this species the lower limit is 1% mortality resulting from displacement and the upper limit is 5% .
		Table 13		Change in background mortality predicted to result from Thanet Extension alone giving rise to 1% or 5% mortality, scenario no displacement outside OWF (scenario 2 above): 0.05 RTDs (1% mortality) to 0.25 RTDs (5% mortality), which equates to an increase in mortality of 0.005% to 0.024% relative to background mortality.
		Table 14		Change in background mortality predicted to result from Thanet Extension alone giving rise to 1% or 5% mortality, scenario 100% displacement in 4 km buffer (scenario 1 above): 0.2 RTDs (1% mortality) to 1.01 RTDs (5% mortality) which equates to an increase in mortality of 0.020% to 0.098% relative to background mortality.
Appendix 1, Annex D to Deadline 1 Submission:		Paragraph 1		Focus on providing evidence in support of the unique nature of Thanet Extension with respect to potential displacement of RTD , with that potential being less than that found at other, larger OWFs studied elsewhere across its non-breeding range.

Document	PINS Reference	Section	Site/ feature	Conclusion
Displacement of red-throated divers for Thanet Extension project alone (pre SEZ)		Paragraph 14		<p>The assessment of displacement for Thanet Extension is aided by extensive post-consent monitoring survey data, analysis and reporting available on non-breeding seabirds (particularly RTD) within and in close proximity to the Thanet OWF.</p> <p>Given the data on RTD disturbance and displacement was recent and site-specific, it was given greater weight over other data sources from constructed OWFs in more distant parts of the North Sea.</p>
		Table 3		<p>Average monthly density of RTD in the spring migration season (birds/km²):</p> <p>Thanet OWF: 0.32</p> <p>Thanet OWF 4km buffer: 0.81</p> <p>Thanet Extension OWF: 0.74</p> <p>Thanet Extension OWF 4km buffer: 0.91</p>
		Paragraph 25		<p>From site specific data, an estimate for displacement rate of RTD within Thanet Extension is 57%, dropping to 11% within the 4km buffer (i.e. not 100% within the array, as advocated by NE, and dropping rapidly outside the array boundary)</p>
		Paragraphs 35 and 37		<p>The Kentish Flats Extension OWF monitoring report recommended that the observed displacement rates (89% within an OWF and 70% within 0-500 m buffer of an OWF) should be the primary values used</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
				for future assessments of wind farm disturbance to wintering RTD (not 100% within and out to 4km). The 70% displacement over 0.5 km recorded at Kentish Flats Extension OWF is equivalent to 9% displacement over 4 km if the density of birds were even across that buffer prior to the construction of the OWF.
Appendix 19 to Deadline 4 Submission: The consequences of the SEZ on assessment of Red throated Diver interest feature of OTE SPA alone and in-combination (post SEZ)	REP4-023	Section 1.1	OTE SPA RTD	This note provides that the SEZ to the west of the Array Area, even when assessed using the very precautionary approach advocated by Natural England, results in the elimination of any displacement effect on RTD. The Thanet Extension will therefore make no contribution to any in-combination assessment of potential displacement of RTD in the OTE SPA.
		Section 1.2		The key reasons are: (1) Significant reduction in the array area and buffer in extent, resulting in the array area being at an even greater distance from the OTE SPA boundary (at least 7.65km) , a 48% increase in distance from that considered at Screening, substantially reducing the potential that any displaced birds are associated with the OTE SPA, even based on the precautionary measure of 8km advocated by Natural England, and particularly in the context of site specific evidence for bird displacement provided above). (2) agreed no AEoI alone (with Natural England).
		Table 1		Provides evidence that: (1) All existing consented offshore wind farms were consented on a

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>basis of no AEoI alone or in-combination with respect to the OTE SPA.</p> <p>These include the 7 August 2017 Appropriate Assessment by BEIS for East Anglia THREE, which found (in agreement with Natural England) no AEoI alone or in-combination for the OTE SPA and RTD.</p>
		Paragraph 7		<p>Post the East Anglia Three decision, the only relevant project other than Thanet Extension to the in-combination assessment is Norfolk Vanguard. Although still progressing through planning, there is agreement in the SoCG with NE that mitigation is available to avoid the risk of an AEoI to OTE SPA RTD.</p>
		Paragraph 12		<p>The assessment in terms of numbers of RTD potentially displaced remains based on the RTD numbers calculated assuming the PEIR boundary. The SEZ means the area has been reduced by 18.3%, with the 4km buffer reduced by 7.94%.</p>
		Paragraph 13		<p>The SEZ means the distance between the Array Area and the OTE SPA, 7.65 km at its nearest point, is very close to the 8 km distance advocated by Natural England as the outer limit for any potential influence of a constructed OWF on red-throated diver.</p> <p>This outer limit identified that the displacement effect decays from 100% displacement at 0 km from the OWF, to 0% displacement at 8 km from the OWF. Following that example, the potential for displacement by the time a distance of 7.65km is reached is very small.</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>The Applicant is of the view that the ‘8km’ study is not relevant due to the particular site circumstances of Thanet Extension, and instead represents a highly precautionary approach. The reasons are evidenced under the Deadline 1 reference (REP1-023) above.</p> <p><i>[It should also be noted that shipping route lies between Thanet Extension and the OTE SPA – the presence of which, especially for a species sensitive to disturbance and displacement, effectively separates the OTE SPA from Thanet Extension.]</i></p>
		Paragraph 16		<p>At a distance of 7.65km, the scale of any displacement effect will certainly not be 100%. With a very high degree of certainty, even when based on an examination of the highly precautionary evidence that Natural England rely on, it can be stated to be very close to, if not, zero percent displacement.</p>
		Paragraph 17		<p>The 8km range advocated by Natural England is based on data from London Array. It remains the Applicant’s position that evidence from post-construction monitoring of the existing Thanet OWF, that the distance at which the percentage displacement falls to zero at this particular site is less than 4 km (i.e. well within the 7.65km range to the OTE SPA). It is also the Applicant’s position that birds have been recorded within the array itself; evidence that displacement is not 100% even within Thanet OWF.</p> <p>These facts identify the highly precautionary nature of the approach to assessment of effects either alone, or more importantly in-combination, by Natural England.</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
Deadline 4 Submission - Appendix 23: Review of the ES and RIAA in relation to the Structure Exclusion Zone (post SEZ)	REP4-027	Table 2	Ote SPA RTD	Highlights that the inclusion of the SEZ increases the minimum distance from the site from 6.15 km to 7.65 km, which offers a reduction in any potential impact on RTD.
		Table 3	Ote SPA RTD	Highlights that the inclusion of the SEZ offers a net benefit to the previous potential impacts assessed for RTD at the OTE SPA.
Deadline 4B Submission - Appendix 4: Addendum to the RIAA (post SEZ)	REP4B-015	Section 2.2	Ote SPA RTD	The RIAA submitted at Deadline 2 for the OTE SPA is based on the PEIR distance between the SPA boundary and the closest WTG (4km). That distance, following the SEZ, is now very precautionary—now being 7.65km. The additional mitigation afforded by the increase in distance does not, however, change the existing conclusions of no AEoI alone or in-combination) but does provide greater weight to them.
Deadline 4C Submission - Appendix 6: Statement of Common Ground – Natural England - Offshore ornithology (post SEZ)	REP4C-008	Table 3	Ote RTD	No AEoI OTE SPA is agreed for the project alone. In-combination – not agreed. Applicants position: The Applicant recognises that Natural England’s opinion is that it is not possible to rule out the potential of an AEoI on the RTD population of the OTE SPA from existing operational projects. However:

Document	PINS Reference	Section	Site/ feature	Conclusion
				<p>(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;</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) 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>(4) Thanet Extension would not cause an AEol to arise as a result of this project being included as part of an in-combination assessment.</p>
Norfolk Vanguard Offshore Wind Farm Offshore Ornithology Assessment	Submitted by the Applicant at Deadline 5	Executive Summary	OTE SPA	The conclusion of this updated assessment for the OTE SPA is no AEol due to RTD displacement during operations and maintenance at Norfolk Vanguard alone or in-combination (noting that Thanet Extension formed part of that in-combination assessment).

Document	PINS Reference	Section	Site/ feature	Conclusion
Update for Deadline 6 ¹⁴ (pre SEZ)				

¹⁴ [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010079/EN010079-002764-ExA;%20AS;%2010.D6.17 Norfolk%20Vanguard%20Offshore%20Wind%20Farm%20Offshore%20Ornithology%20Assessment%20Update%20for%20Deadline%206.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010079/EN010079-002764-ExA;%20AS;%2010.D6.17%20Norfolk%20Vanguard%20Offshore%20Wind%20Farm%20Offshore%20Ornithology%20Assessment%20Update%20for%20Deadline%206.pdf)

Table 3: Summary of the Evidence Presented by the Applicant to Support the Conclusions of no AEol with respect to the SNS SAC (harbour porpoise)

Document	PINS Reference	Section	Site/ feature	Conclusion
RIAA	REP2-019	11.3 (for UXO: paragraph 11.3.17 inter alia, concluding 11.3.24, for piling: paragraph 11.3.43, concluding 11.3.66, vessel traffic: paragraph 11.3.66, concluding 11.3.84, other construction noise: paragraph 11.3.88, concluding 11.3.93, geophysical survey: paragraph 11.3.94, concluding 11.3.96, use of ADDs, paragraph 11.3.98 and multiple activities, 11.3.102.)	SNS SAC harbour porpoise	Underwater noise during construction and decommissioning. Concluded no AEol alone .
		12.3 (paragraph 12.3.15 inter alia,	SNS SAC harbour	Underwater noise during construction and decommissioning. Concluded no AEol in-combination .

Document	PINS Reference	Section	Site/ feature	Conclusion
		concluding 12.3.47.	porpoise	
Appendix 26 to Deadline 3 Submission: Statement of Common Ground – Natural England Technical Topics (excluding Offshore Ornithology, Saltmarsh, and Site Selection)	REP3-042	Table 3	SNS SAC Harbour porpoise	<p>Applicant concluded no AEoI alone and in-combination.</p> <p>NE consider that a mechanism needs to be developed by the regulators to ensure continuing adherence to the thresholds over time. Until a mechanism by which the Site Integrity Plans (SIPs) will be managed, monitored and reviewed is developed, NE are unable to advise that this approach is sufficient to address the in-combination impacts and therefore the risk of AEoI on the SNS SCI [SAC] cannot be fully ruled out. While NE agrees that SIPs are a method to prevent an AEoI, there is also a need to put a timeframe on the SIP and a mechanism for assessing multiple SIPs at the same time. At what stage will the developer be required to reassess whether the parameters that have been assessed have been exceeded?</p> <p>Natural England agree [on the mitigation measures and SIP] if there is the production of a SIP by the applicant and there is clear guidance from the regulator on how this process will be managed strategically.</p>
Appendix 18 to Deadline 4 Submission: Draft Site Integrity Plan	REP4-022	Paragraph 3	SNS SAC Harbour porpoise	<p>The proposed timeframe for the SIP is as follows:</p> <p>(1) First review/ update of the SIP (and RIAA Addendum) to be issued to the MMO at least 4 months prior to the start date of the first geophysical survey</p> <p>(2) Second review/ update of the SIP (and RIAA Addendum) to be issued to the MMO at least 4 months prior to the start date of the</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
				next 'noisy activity'
		Paragraph 10		Adherence to that timetable , including delivery of the SIP and RIAA Addenda for agreement with the MMO , will ensure discharge of Schedule 11, Condition 12(1)(k) and Schedule 12, Condition 10(1)(l) of the DCO.
		Paragraphs 22-24		<p>Committed (in the DCO) mitigation in the SIP for Thanet Extension will ensure an AEoI alone and in-combination is avoided because:</p> <p>(1) It is only noisy works at Thanet Extension in the winter season (October to March inclusive) that have the potential to contribute to the thresholds.</p> <p>(2) As a worst case, a complete winter season restriction on noisy activity would result in no contribution to the thresholds and effectively remove Thanet Extension from all HRA considerations for the SNS SAC.</p> <p>(3) The inclusion in the mitigation of a seasonal restriction means the mitigation is wholly within the ability of the Applicant to control, commit to and deliver, is independent of other projects and there is therefore no need to engage in management activities outside the project (or for the Thanet Extension SIP to be assessed against other SIPs).</p> <p>(4) The DCO provides that the SIP must be approved in writing by the MMO prior to the activities commencing.</p>

Document	PINS Reference	Section	Site/ feature	Conclusion
Deadline 4 Submission - Appendix 23: Review of the ES and RIAA in relation to the Structure Exclusion Zone	REP4-027	Table 2	SNS SAC harbour porpoise	Screened out - no increase in the maximum adverse scenario assessed (no change in the range, remaining 0km)
Deadline 4B Submission - Appendix 4: Addendum to the RIAA	REP4B-015	Section 2.2	SNS SAC Harbour porpoise	Increase in underwater noise – no change in the number, type or duration of activities resulting in underwater noise, and no change in the minimum range from the designated site. Therefore no change in the assessment and conclusion of no AEoI.

3.2 Flamborough and Filey Coast SPA (kittiwake)

- 41 Key to the conclusion of no AEol alone and in-combination for FFC SPA and kittiwake (collision risk during operation) are the following points:
- Conclusion of no AEol alone and in-combination in the RIAA;
 - Agreement on no AEol alone (with Natural England);
 - All existing offshore wind farms consented on the basis of no AEol alone and in-combination (most recently in the revised HRA for Sofia in March 2019¹⁵);
 - A lack of an appreciable contribution to the in-combination collision risk totals for FFC SPA from Thanet Extension, being 0.6-1.63 per year (depending on the level of precaution applied);
 - Of the in-combination collision risk totals, the imminent decommissioning of Blyth and Beatrice Demonstrator contribute approximately 0.65 (i.e. a similar contribution to that predicted for Thanet Extension);
 - The in-combination totals assume wind turbine numbers ‘as assessed’ and not the frequently much reduced numbers ‘as built’ and are therefore extremely precautionary;
 - Most precautionary numbers for in-combination collision risk (including Thanet Extension and Hornsea Three, as assessed by Vanguard) would result in at most a 0.3% reduction in annual growth of the FFC kittiwake population, being more likely to be a 0.1% reduction in annual growth rate – both values within an overall 0.4% average annual growth rate over the last 20 years (i.e. the most precautionary in-combination totals will not result in a population decline, but instead a slowing of the rate of population increase);
 - Thanet Extension would therefore not cause an AEol to arise as a result of this project being included as part of an in-combination assessment.
- 42 The summaries above all provide certainty that the conclusions drawn by the Applicant, specifically of no AEol alone or in-combination (with respect to the operational collision risk to the kittiwake feature of the FFC SPA), are correct. No substantive, analytical evidence has been submitted to refute the position of the Applicant during the Examination process. It is therefore considered that there is no need to progress beyond Stage 2 of the PINs Advice Note 10 with respect to the FFC SPA for kittiwake.

¹⁵ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010051/EN010051-002380-FINAL%20-%20Sofia%20NMC%20Application%20HRA%20March%202019.pdf>

3.3 Outer Thames Estuary SPA (RTD)

43 Key to the conclusion for OTE SPA and RTD (displacement during construction & decommissioning and operation) are the following points:

- Conclusion of no AEol alone and in-combination in the RIAA;
- Agreement on no AEol alone (with Natural England);
- All existing offshore wind farms consented on the basis of no AEol alone and in-combination (most recently East Anglia Three in August 2017¹⁶);
- No additional relevant OWF progressed since that point;
- The SEZ places the Thanet Extension Array boundary at the extreme limit of the (very precautionary) Natural England 8km screening distance, some 7.65km;
- The '8km' range is not relevant and overly precautionary for Thanet Extension, with site specific data indicating displacement falling to zero within 4km and displacement less than 100% even within the existing wind farm area;
- Thanet Extension would not cause an AEol to arise as a result of this project being included as part of an in-combination assessment.

44 The summaries above all provide certainty that the conclusions drawn by the Applicant, specifically of no AEol alone or in-combination (with respect to the construction & decommissioning and operational displacement risk to the RTD feature of the OTE SPA), are correct. No substantive, analytical evidence has been submitted to refute the position of the Applicant during the Examination process. It is therefore considered that there is no need to progress beyond Stage 2 of the PINs Advice Note 10 with respect to the OTE SPA and RTD.

3.4 Southern North Sea SAC (harbour porpoise)

45 Key to the conclusion of no AEol alone and in-combination for SNS SAC and harbour porpoise (underwater noise during construction) are the following points:

- Conclusion of no AEol alone and in-combination in the RIAA;
- Agreement on no AEol alone (with Natural England);

¹⁶ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010056/EN010056-002381-East%20Anglia%20THREE%20Habitats%20Regulations%20Assessment%20Dated%207%20August%202017.pdf>

- DCO commitment to mitigation (the MMMP and the SIP) to ensure no AEol on the harbour porpoise (with the DCO condition requiring final mitigation to be agreed by the MMO prior to relevant activities commencing);
- Mitigation measures proposed provide certainty that no AEol would result (given that the extreme end of the mitigation, if required, would be a complete winter seasonal restriction, which would remove Thanet Extension from all HRA considerations for the SNS SAC for harbour porpoise);
- The mitigation is wholly within the ability of the Applicant to deliver and does not require discussion or liaison with other parties (other than MMO and NE) and therefore no need to form part of wider strategic management of SIPs;
- A strategic management of SIPs would require no change to the conclusions of no AEol alone and in-combination, no change in the secured mitigation and no change in the certainty of delivery of that mitigation;
- Thanet Extension would therefore not cause an AEol to arise as a result of this project being included as part of an in-combination assessment.

46 The summaries above all provide certainty that the conclusions drawn by the Applicant, specifically of no AEol alone or in-combination (with respect to construction & decommissioning noise and the harbour porpoise feature of the SNS SAC), are correct. No substantive, analytical evidence has been submitted to refute the position of the Applicant during the Examination process. It is therefore considered that there is no need to progress beyond Stage 2 of the PINs Advice Note 10 with respect to the SNS SAC and harbour porpoise.

3.5 Conclusion

47 Natural England (NE), as the Statutory Nature Conservation Body (SNCB), has not agreed with all the conclusions of no AEol made by the Applicant (specifically in-combination effects for OTE SPA (RTD), FFC SPA (kittiwake) and SNS SAC (harbour porpoise)).

48 With respect to the OTE SPA and FFC SPA, it is unclear why NE has drawn a different conclusion to the Applicant and substantively why it is considered that an AEol on these sites cannot be excluded. However the Applicant will however continue further discussions with NE.

- 49 As regards the SNS SAC, the position is different, as NE are waiting for the Regulator (Marine Management Organisation, MMO) to confirm the implementation of management measures to deliver on the mitigation offered by the Applicant. That mitigation is deemed sufficient to avoid an AEoI alone and in-combination. It appears that the outstanding issue is the lack of such strategic management measures and not the conclusion of no AEoI or the mitigation in itself. It is understood that the concern over a lack of strategic management is the expectation that multiple SIPs will come forward, with potentially conflicting measures that will need strategic management to ensure in-combination effects remain within the thresholds.
- 50 The Applicant deems such strategic management measures as unnecessary for Thanet Extension, with any such strategic measures not affecting the existing mitigation offered by the Applicant. That position is a reflection of the geographic location of Thanet Extension relative to the SNS SAC and the potential for the Applicant to introduce a seasonal restriction on works at Thanet Extension, if the SIP deems it necessary. Effectively, the mitigation offered at Thanet Extension is wholly within the control of the Applicant and can, if deemed necessary by the SIP, entirely remove Thanet Extension from the equation for the SNS SAC. The Applicant has therefore provided mitigation measures (within the MMMP and SIP) that provide certainty that an AEoI will be avoided without the need for strategic management, with an existing DCO condition to ensure delivery of the mitigation in agreement with the MMO. Strategic management of the SIP process would not change the situation for Thanet Extension. The Applicant seeks further discussions with NE to determine if the measures proposed provide sufficient certainty to enable agreement on no AEoI in-combination.

4 Post Stage 2

51 It is the Applicants position that Article 6(4) (post Stage 2 of PINS Advice Note 10) has not been triggered for Thanet Extension. The reasons for that position are provided above in section 3, but can be summarised as follows. All conclusions drawn by the applicant with respect to the HRA process result in a finding of no AEoI alone and in-combination, for all sites and features screened in for assessment. The conclusions are based on sound science, as presented, with no substantive, analytical evidence presented by other parties to dispute the Applicants position. There is therefore no need to trigger Article 6(4) of the Habitats Directive.

52 Notwithstanding the above, and in response to the ExAs questions noted in section 1 above, consideration is made in subsequent sections of the current note to Article 6(4) (post Stage 2 of PINS Advice Note 10). The derogation provisions contained in Article 6(4) are summarised in Figure 2 above. Article 6(4) provides as follows:

'If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.'

53 Article 6(4) above applies to SPAs. It should be noted however that the Birds Directive does not identify priority habitats or species. Further, the harbour porpoise is not classed as a priority species in the UK¹⁷. Therefore, the second paragraph of Article 6(4) does not apply to any of the designated sites/features under consideration here (namely the FFC SPA (kittiwake), OTE SPA (RTD) and the SNS SAC (harbour porpoise)). It can therefore be confirmed that the application of IROPI is not constrained by Article 6(4) in this instance.

¹⁷ <http://jncc.defra.gov.uk/page-1523>

- 54 The Applicant, respectfully, considers that consideration of Article 6(4) is premature. Formally, these matters only arise if the ExA and, in turn, the Competent Authority (in this instance the Secretary of State for BEIS) do not accept the Applicant's position and, through the preparation of the AA, instead identify an AEoI of one or more European sites/ features. As noted above, it is the Applicant's position that no such AEoI exists.
- 55 Further, as explained above, the precise basis for the position of NE is at this stage unclear, along with the extent of effect to the integrity of the SPA which is alleged to arise from the project, which makes more difficult any consideration of Article 6(4). The EC (2018) guidance referred to above advised that *"In its ruling in case C-304/05,¹⁸ paragraph 83, the Court clearly stated that: 'Article 6(4) of Directive 92/43 can apply only after the implications of a plan or project have been studied in accordance with Article 6(3) of that directive. Knowledge of those implications in the light of the conservation objectives relating to the site in question is a necessary prerequisite for application of Article 6(4) since, in the absence thereof, no condition for application of that derogating provision can be assessed. The assessment of any imperative reasons of overriding public interest and that of the existence of less harmful alternatives require a weighing up against the damage caused to the site by the plan or project under consideration. In addition, in order to determine the nature of any compensatory measures, the damage to the site must be precisely identified' (see also C-399/14, C387&388/15, C-142/16)"* (paragraph 5.2).
- 56 The following sections therefore seek to respond to the ExA's questions so far as reasonably practicable in these circumstances. The information is, however, provided without prejudice to the Applicants position, established under section 3 above. In the event of a negative AA, the Applicant would respectfully seek sufficient time to make further detailed representations.

4.2 IROPI and Alternatives

- 57 PINS Advice Note 10¹⁹ identifies that:

'If Stage 2 concludes that the project will adversely affect the integrity of the site(s), or is inconclusive; consideration of alternatives, compensatory measures and whether the project is justified by IROPI will be required. This will also form part of the HRA Report.'

¹⁸<http://curia.europa.eu/juris/showPdf.jsf?text=&docid=62977&pageIndex=0&doclang=en&mode=lst&dir=&cc=first&part=1&cid=81536>

¹⁹<https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/06/Advice-note-10v4.pdf>

58 It is for the Applicant to demonstrate a case for IROPI and provide consideration of alternatives as part of the HRA process, to be submitted to the Competent Authority. Despite the Applicants position (of no AEoI and therefore no requirement for progression beyond Stage 2 of PINS Advice Note 10), that information is presented in sections 5 and 6. Compensation is addressed separately in section 7.

59 It is noted that PINS Advice Note 10 lists assessment of IROPI under Stage 4, with assessment of alternatives preceding it under Stage 3. The information is presented here in the other order (with IROPI under section 5 and Alternatives under section 6), given a comment in an Advocate General's Opinion in CJEU case C-441/03,²⁰ where it was noted as follows:

'An obligation to assess alternatives therefore only arises if, in such a situation [i.e. having failed the integrity test], the plan or project is nevertheless to be carried out for reasons of overriding public interest.'

60 However the initial assessment of alternatives set out below would also apply in the event that it were considered before the question of IROPI. Section 5 below therefore provides the outline case for IROPI, with the following section 6 presenting the outline case for alternatives. As noted above in section 3, the Applicant does not consider that the need for such information has been triggered, as no AEoI has been identified.

²⁰ <http://curia.europa.eu/juris/liste.jsf?language=en&num=c-441/03>

5 Imperative Reasons of Overriding Public Interest

61 The precise nature of IROPI is not circumscribed by the Habitats Directive, with final decision on IROPI to be made by the Competent Authority (in this case, the Secretary of State (SoS) for BEIS). Sources of guidance:

- EC (2001): Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC²¹;
- EC (2007): Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: clarification of the concepts of: Alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission.²²
- Defra (2012): Habitats and Wild Birds Directives: guidance on the application of article 6(4) Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures²³; and
- EC (2018): Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC²⁴.

62 Although none of the above documents provide a methodology for the assessment of IROPI, they do identify key points to consider. Under paragraph 23 of the Defra (2012) guidance, the following points are provided:

- **Imperative:** it must be essential (whether urgent or otherwise), weighed in the context of the other elements below, that the plan or project proceeds;
- **Overriding:** the interest served by the plan or project outweighs the harm (or risk of harm) to the integrity of the site as identified in the appropriate assessment; and
- **Public Interest:** a public benefit must be delivered rather than a solely private interest. Public interest can occur at national, regional or local level; as can IROPI provided the other elements of the test are met.

63 EC (2001) is clear that public interest can only be overriding if it is long-term. Paragraph 26 of Defra (2012) goes on to say:

²¹http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

²²http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en.pdf

²³https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69622/pb13840-habitats-iropi-guide-20121211.pdf

²⁴http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_.nov.2018_endocx.pdf

'In practice, plans and projects which enact or are consistent with national strategic plans or policies (e.g. covered by or consistent with a National Policy Statement or identified within the National Infrastructure Plan) are more likely to show a high level of public interest. However consideration would still need to be given to whether, in a specific case, that interest outweighs the harm to the affected site(s) and therefore whether IROPI can be demonstrated. Plans or projects which fall outside national strategic plans, including those at a lower geographic scale, may also be able to show IROPI. Plans or projects which only deliver short term benefits are unlikely to be able to show IROPI.'

- 64 EC (2018) highlights the importance of whether (or not) the project falls within existing frameworks, such as frameworks with a focus on health, safety or the environment. Other key points highlighted are a demonstrable public or environmental need, and projects targeting public health and safety.
- 65 As noted in section 4 above, IROPI is not circumscribed. The reasons for consideration of IROPI for Thanet Extension may therefore include those of human health, public safety, beneficial consequences of primary importance for the environment **and** a range of socio-economic benefits (without the need for an opinion from the EC).
- 66 The following sub-sections set out the Applicant's position with regard to IROPI and confirm in outline terms why the Applicant considers that, should it be deemed necessary, the SoS can be satisfied that in the case of Thanet Extension, there are IROPI which would support the approval of development consent for the scheme.

5.2 Existing Project Information

- 67 Existing project literature provides much of the case for IROPI, particularly issues around the need for the project. The following project documents are key to any case for IROPI:
- Thanet Extension Environmental Statement, Volume 1 Chapter 2 Policy and Legislation (PINS REF: APP-037);
 - Thanet Extension Environmental Statement, Volume 1 Chapter 4: Site Selection and Alternatives (PINS REF: APP-040);
 - Thanet Extension Environmental Statement Volume 3 Chapter 3: Socio-Economics (PINS REF: APP-059); and
 - Thanet Extension Offshore Wind Farm: Planning Statement (PINS REF: APP-134).

68 A number of key policy, legislative and international commitments are referenced in the above project literature. Central to these references (noting that the list is by no means exhaustive) are the following:

- Conference of the Parties 21 (2015 Paris Climate Conference);
- European commitments for climate and energy, including in October 2014, in the 2030 framework for climate and energy, targets and policy objectives for the period between 2020 and 2030;
- Directive 2009/28/EC on the promotion of the use of energy from renewable sources (the Renewable Energy Directive);
- The Climate Change Act 2008, which commits the UK to a net reduction in greenhouse gas emissions against the 1990 baseline by 2050;
- The Energy Act 2013, which makes provisions for low carbon electricity generation, security of supply, and the UK emission reduction and renewables targets;
- The Carbon Plan (DECC, 2011), which states that electricity demand may rise by between 30% and 60% by 2050, and may need a doubling in electricity capacity, with renewable energy, particularly onshore and offshore wind farms likely to be key; and
- Relevant National Policy Statements (NPS), particularly EN-1 Overarching NPS for Energy and EN-3 Renewable Energy, which are clear on the urgent need for such projects.

69 The following text summarises the relevant content from the above documents.

- The local, national and international drive towards combating climate change – including legally binding national and international targets committed to by UK government as regards low carbon energy generation. Renewable energy is a key tool in the UK Governments strategy for addressing climate change;
- UK Government drive to increase energy security, both in terms of generating affordable electricity in the UK but also in terms of diversity of supply in the UK; and
- Maximising benefits to the UK from development of renewable energy, including social, economic and environmental.

70 Overall, Thanet Extension will contribute towards the national and international drive towards low carbon energy, including binding targets agreed by the UK government to reduce carbon emissions. Offshore wind has a critical role to play, in delivering long term, cost effective, UK based low carbon electricity. The importance of offshore wind to the UK was further highlighted in March 2019, published by the UK Government, which expects significant growth in offshore wind to 2030²⁵. Thanet Extension is consistent with, and indeed supported by, National Policy, including the relevant NPS's and the process for the strategic planning for licensing and leasing of sites for offshore wind development.

5.3 The IROPI Test

71 Thanet Extension meets the three IROPI test measures set out in Defra (2012), as follows:

- **Imperative:** in response to the increasing demand for long term, cost effective, low carbon electricity generated in the UK, required to meet existing obligations for low carbon energy (and set against recent announcements of new build nuclear projects being halted), the growing need for energy security and continued requirement for affordable power, the UK government expects significant growth in offshore wind within the UK to 2030. Further, Thanet OWF was identified through a strategic site selection process, with Thanet Extension being one of a group of extensions to existing projects currently being brought forward. Project Extensions are considered by The Crown Estate to be a '*successful way of deploying more offshore wind capacity in an efficient manner*'²⁶ and form a key part of the required significant growth in offshore wind, and will generate long term, low carbon energy within the UK;

²⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786278/BEIS_Offshore_Wind_Single_Pages_web_optimised.pdf

²⁶<https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/offshore-wind-extension-projects-2017/>

- **Overriding:** the environmental and social benefits to the UK from increasing the generation of low carbon energy are clear, with Thanet Extension forming a key part. The environmental benefits are long term, local (e.g. local air pollution) and wider (e.g. climate change, in itself a key influence on populations of seabirds²⁷), with social and economic benefit from the growing employment and affordable energy delivered. It is recognised that consideration of IROPI is considered against the risk to a designated feature(s), having regard to the nature and extent of the harm identified to relevant N2k interests. None of the features in question are priority features (which would receive the highest level of protection), and there are considerable environment benefits to be gained from Thanet Extension, compared to the very small risk posed to individual bird species (which the Applicant does not consider to be an AEol); and
- **Public Interest:** Thanet Extension is a NSIP, defined as an energy project important on the national scale. The project has been identified by a State-led programme to identify development sites. The delivery of long term, affordable low carbon energy from Thanet Extension, together with benefits such as employment, result in a strong public interest in the project at local, regional and national level. The development of Thanet Extension will deliver on national and international policy objectives, thus meeting the requirement for public interest.

72 Overall, Thanet Extension would deliver clear, long term benefits including significant beneficial consequences for the environment. The point is particularly pertinent for Thanet Extension, given the significant benefits offered by the project when compared to the very small (considered not adverse by the Applicant) risk to non-priority species identified in section 3.

²⁷ <http://jncc.defra.gov.uk/page-7455>

6 Alternatives

- 73 The requirement to consider ‘alternatives’ is provided for under Stage 3 of PINS Advice Note 10.
- 74 The EC and Defra guidance referred to under section 5 above also addresses alternatives, with EC (2018) finding that *“the competent authorities should examine the possibility of resorting to alternative solutions which better respect the integrity of the site in question. All feasible alternatives that meet the plan or project aims, in particular, their relative performance with regard to the site’s conservation objectives, integrity and contribution to the overall coherence of the Natura 2000 network have to be analysed, taking also into account their proportionality in terms of cost”* (page 57).
- 75 The Defra guidance advises that *“Alternative solutions are limited to those which would deliver the overall objective as the original proposal”* (paragraph 11) and *“The consideration of alternatives should be limited to options which are financially, legally and technically feasible”* (paragraph 18).
- 76 The identification of alternative solutions involves a comparison between any such alternative and the existing project, with respect to the anticipated effect on site integrity. Given that the Applicants position (set out above) is that no AEoI exists with respect to any of the sites/features under consideration, and that as no case has been presented that quantifies any risk to site integrity, determination of the benefit of any alternatives identified is not fully possible.
- 77 However, in response to the ExA’s question, consideration is made below to the question of alternatives.

6.2 Delivery of Project Objectives

- 78 Thanet Extension is an NSIP, with a very strong IROPI case as outlined in section 5 above. It is therefore considered that should consideration of alternatives be required under Article 6(4), that the Competent Authority is clear that such alternatives need to meet the project objectives.
- 79 It is therefore clear that any alternative(s) identified need to deliver on the projects objectives, as a NSIP supported through relevant National Policy Statements (specifically EN-1 and EN-3), as follows:
- Delivery on national and international commitments towards combating climate change, through long term generation of low carbon energy;

- Delivery on increased energy security; and
- Maximising the benefits to the UK from renewable energy.

80 It is the Applicants case that all potential offshore wind farms, including Thanet Extension, are required if the above is to be delivered, particularly given the UK Governments drive for 30GW of electricity to be delivered by offshore wind by 2030²⁸. The need for offshore wind as a low carbon energy source should also be viewed in the context of recent announcements of nuclear new build projects being halted, notably Wylfa and Oldbury.

81 Effectively, although alternatives should not be ruled out purely based on cost or inconvenience, there is a limit beyond which the alternative would be so unreasonable to deliver that it would cease to be feasible. Cost is particularly relevant for offshore wind, for example in the context of the Contracts for Difference (CfD) regime operated by the Government, established to drive down the cost of renewable energy at national level. Effectively, a project has to be cost effective if it is to be viable and to stand a chance of success in the CfD bidding process.

82 In this context, the Applicant is a key developer globally of offshore wind, with some 590MW of existing offshore wind energy capacity in the UK alone. The Applicant has significant, practical experience in the feasibility of alternative solutions, with that experience drawn on when the project design was established (as evidenced by the ES Volume 1 Chapter 4: Site Selection and Alternatives, APP-040).

83 Defra (2012) does acknowledge that ‘do nothing’ (i.e. do not build) should be included for consideration of alternatives, but that it would not normally be considered acceptable as it would fail to deliver the projects objectives. Instead it typically forms the baseline against which other alternatives can be assessed. In the Able Marine Park decision, the SoS concluded that *‘The zero option would clearly fail the objectives of the development to decarbonise the means of electricity production, to provide secure energy supplies for the UK and to improve EU competitiveness by creating jobs and growth in a sector in which European business is a global leader’*²⁹.

²⁸https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786278/BEIS_Offshore_Wind_Single_Pages_web_optimised.pdf

²⁹<https://infrastructure.planninginspectorate.gov.uk/document/TR030001-002225>

84 Given that the targets for renewable energy within the UK do not have a set limit, a project cannot be ruled out on the basis that alternatives exist (in terms of alternative projects) – since all available projects are required. Indeed, it is apparent from recent announcements on further Rounds of offshore wind (and increasing government aspirations) that more offshore wind is required. Doing nothing is therefore not an alternative option to Thanet Extension.

85 The Defra (2012) guidance specifically considers alternative energy sources to offshore wind under paragraph 13, as follows:

‘In considering alternative solutions to an offshore wind renewable energy development the competent authority would normally only need consider alternative offshore wind renewable energy developments. Alternative forms of energy generation (e.g. building a nuclear power station instead) are not alternative solutions to this project as they are beyond the scope of its objective.’

86 As noted above, development of all offshore wind projects are required to meet national and international targets set by the UK Government. As regards alternative sources of energy generation, the Applicant agrees that these are not viable alternatives, for the following reasons:

- The UK Government has determined that an energy mix is required for energy security, including a substantial proportion of offshore wind;
- Recent announcements on nuclear new build have brought two projects to a halt (Wylfa and Oldbury), substantially reducing the potential for nuclear new build to contribute to low carbon energy generation in the UK;
- The UK Government is mindful against onshore wind at present, with neither onshore wind or solar able to be developed to the same scale as offshore wind; and
- Conventional forms of energy generation cannot be alternatives to offshore wind, as they do not deliver on the renewable energy targets.

87 Other forms of energy are therefore not an alternative option to Thanet Extension.

88 Nor are other locations. The UK Governments targets for low carbon energy and renewables means that alternative locations outside the UK would not deliver on the Projects objectives and therefore proposals outside the UK cannot be considered as alternatives to Thanet Extension. Consideration of alternative locations within the UK needs to be considered in the following context:

- The identification of sites for potential development of offshore wind farms is undertaken in the UK on a strategic, State-led basis. The process includes Strategic Environmental Assessment and as such identified zones and sites are subject to considerable scrutiny before being open for lease (such leases are offered exclusively by The Crown Estate). Therefore locations outside those already identified for potential development could not be viewed as alternative as they are not available for lease and could not deliver on the project objectives; and
- Development of all OWF projects currently leased by The Crown Estate will be required to meet the existing long term, low carbon, affordable, UK based energy generation aims of the UK Government, with no fixed target for offshore wind (and therefore no limit on its potential).

89 In relation to the project design, the Applicant has clearly stated its position in section 3 that no AEoI applies to all three of the sites/features under consideration. No detail has been provided by NE as regards, in their opinion, the nature and extent of the AEoI that they consider applies with respect to the following:

- FFC SPA (kittiwake) – collision risk during operation (NE consider AEoI to apply in-combination);
- OTE SPA (RTD) – displacement during construction & decommissioning and operation (NE consider AEoI to apply in-combination); and
- SNS SAC (harbour porpoise) – underwater noise during construction & decommissioning (NE appear to consider that no AEoI in-combination cannot be concluded until and unless overall management of the SIP process is determined).

90 Without such information as regards the nature and extent of AEoI (total in-combination and the Thanet Extension contribution to that), it is not possible to determine what alternatives there may be to the project to address any contribution to an overall in-combination effect. This difficulty applies particularly in circumstances where, in the case of SPA impacts, NE have accepted that the project would make no material difference to any in-combination assessment and where it appears to be accepted that the project would not have any appreciable effect on the conservation objectives of the SPAs. In these circumstances it is difficult to envisage feasible alternatives to the proposed project which would avoid or reduce effects which are agreed to have no relevant implications for any in-combination assessment. In relation to the SAC, it appears that the underlying concern relates to a management issue rather than the project itself and again it is difficult to see how this would be addressed by any alternative to the project as proposed.

7 Compensatory Measures

- 91 Article 6(4) finds that the relevant Member State must ‘take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected’ but does not provide for how that should occur. As noted previously, the Applicants position is that in the absence of a conclusion of AEoI in all cases, Article 6(4) has not been triggered and compensatory measures are not required. The following information is, however, provided in response to the question posed by the ExA (section 1).
- 92 Key to the uncertainty around the identification of compensatory measures is the need for any AEoI to be identified and quantified. NE has not explained the specifics of their concern for the FFC SPA (kittiwake) and OTE SPA (RTD). For example, no threshold has been provided by NE above/below which an AEoI would be considered – making it difficult to determine the degree to which Thanet Extension may contribute to the NE view of an AEoI in-combination. This applies in particular in circumstances where NE has accepted that the proposal would not make any difference to any in combination assessment and therefore it is not possible to identify how any compensatory measures might be devised to address whatever contribution the project is perceived to be making to any in-combination effect. It is unclear therefore what compensation, in the case of the Thanet Extension, could be regarded, under Article 6(4), as “necessary to ensure that the overall coherence of Natura 2000 is protected”.
- 93 The information that would be required to determine the need for, and nature of, compensatory measures would include the following:
- Which designated site/ feature is of concern (NE highlight FFC SPA (kittiwake), OTE SPA (RTD) and SNS SAC (harbour porpoise) in-combination, but it does not follow that the ExA and/ or SoS will hold the same concern for all or any of the sites/ features);
 - The extent to which the predicted effect is considered adverse – i.e. how far above the acceptable threshold is the effect considered to be (given that no threshold has been provided by NE for the FFC SPA (kittiwake) or OTE SPA (RTD));
 - Where an AEoI is identified in-combination, to what extent does Thanet Extension contribute; and

- What form of compensation is considered “necessary” in the circumstances of the Thanet Extension project to ensure the “overall coherence” of Nature 2000 is protected, in circumstances where NE advise that the scheme would make no material difference to any in-combination assessment.
- 94 In the case of the SNS SAC (harbour porpoise), although there is no apparent concern regarding the conclusion of no AEoI alone and in-combination, NE do not feel able to sign off on the in-combination conclusion until and unless strategic management measures are established (a process outside the control of the Applicant). For the SNS SAC, it is the position of the Applicant that no AEoI exists alone and in-combination and the existing mitigation, secured by the DOC, will ensure that – a strategic management measure would not change the existing conclusion of no AEoI nor would it change the mitigation measures contained within the MMMP and SIP and secured through the DCO. It is therefore unclear what proportionate compensatory measures could be required in this instance.
- 95 The Applicant is open to further discussion on this matter with NE should it be necessary. It should be noted that the Defra (2012) advice is for Competent Authorities and SNCBs to help applicants to identify suitable compensatory measures (see e.g. paragraphs 9 and 30). Paragraph 29 advises that “the competent authority is initially responsible for ensuring that suitable compensation is identified”.